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Case No: 2009 Folio 83

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
COMMERCIAL COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 8th November 2013

Before:

MR JUSTICE COOKE

- -

Between:

Deutsche Bank AG	**Claimant**
- and -	
Sebastian Holdings Inc.	**Defendant**

- -
- -

David Foxton QC, Sonia Tolaney QC, Henry King, James MacDonald (instructed by Freshfields Bruckhaus Deringer) for the Claimant
David Railton QC, Simon Birt, Thomas Plewman SC, Oliver Jones and Max Schaefer (instructed by Travers Smith) for the Defendant

Hearing dates: 22nd, 23rd, 25th, 26th, 29th, 30th April,
1st, 2nd, 3rd, 7th, 8th, 9th, 10th, 14th, 15th, 16th, 20th, 21st, 22nd, 23rd May,
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1st, 2nd, 3rd, 4th, 8th, 9th, 15th, 16th July,
2nd August 2013

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Judgment Approved by the court for handing down (subject to editorial corrections)

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Mr Justice Cooke:

1. Introduction

1. The claimant bank ("DBAG") is incorporated in Germany with branches around the world including London and New York. Its wholly owned subsidiary Deutsche Bank Suisse SA ("DBS") is based in Geneva. The defendant ("SHI") is a special purpose vehicle, incorporated in the Turks and Caicos Islands, which has at all material times been owned and controlled by Mr Alexander Vik, who is its sole director and a man

of considerable means, (a multi-billionaire) with recognised business acumen and money-making skills.

2. SHI was from 2003 onwards a private wealth client of DBS, dealing with its Private Wealth Management section (PWM), on an "execution only" basis. Mr Vik carried out different types of investment and trades through DBS, including investments in shipping, drilling and related equities (where he utilised the services of Mr Harald Hanssen), a special situation hedge fund and currency transactions (FX). He also engaged Mr Bokias as his full-time investment manager who provided him with financial analysis and market views by reference to it, with regular updates, graphs and spreadsheets. His major contact at DBS in 2005 was Mr Meidal, who left DBS in about September 2007. Mr Brügelmann, who had worked with Mr Meidal then became Mr Vik's point of contact and his "go to" man for the effecting of trades through DBS and later in 2008 through DBAG in respect of his (Mr Vik's) own trading.

3. In May 2006 SHI and DBAG entered into an ISDA Master Agreement (the Equities ISDA) essentially for the purpose of allowing SHI to carry out a CDS transaction with DBAG, which DBS was not equipped to facilitate.

4. In November 2006 SHI and DBAG concluded a Prime Brokerage Agreement enabling SHI to act as DBAG's agent in executing FX transactions and Precious Metals transactions, including in particular currency and Precious Metals options. The main purpose of this agreement (the "FXPBA"), was to allow Mr Klaus Said, an individual with experience in FX, to trade in FX on SHI's behalf, using the medium of the Prime Brokerage arrangements furnished by DBAG. Another ISDA Master Agreement was concluded between SHI and DBAG and signed by Mr Vik on 28th November 2006 (the "FX ISDA"), with a Schedule of specific terms and a Credit Support Annex ("CSA"). Both that Schedule and an Amendment Agreement to the 2006 Equities ISDA, also signed on 28th November 2006 made it plain that "unless otherwise agreed between the parties, any transactions other than Foreign Exchange Transactions and Currency Options Transactions shall be governed by the ISDA Master Agreement dated 8th May 2006" and that the November 2006 ISDA Master Agreement should govern only Foreign Exchange Transactions and Currency Option Transactions. As part and parcel of the arrangements for trading in FX and currency options, a Pledge Agreement was concluded dated 28th November 2006 by which SHI, DBAG and DBS agreed that all assets deposited or relating to an account of SHI with DBS would be held as collateral for all claims that DBAG might have against SHI.

5. On the same date (or, at least, as it appears from the document itself) Mr Vik for SHI and Mr Said signed a letter of authority (the Said Letter of Authority), addressed to DBAG authorising Mr Said to trade FX transactions and currency options on behalf of SHI. On 7th December DBS undertook, without SHI being privy to it, to hold assets in the pledged account in accordance with the terms of the Pledge Agreement and to monitor the lending value according to its own margining requirements and to advise DBAG if that value should fall below US$35 million (the TPMCA). The NOK equivalent of the sum of US$70m (approximately) was paid into the account.

6. From this point on, Mr Said did carry out FX trading through the Prime Brokerage arrangements set up by DBAG in New York, although the account was technically a

London account. It was generally referred to as Mr Said's account or the New York account. Mr Said was not technically employed by SHI, but by another creature company of Mr Vik's which provided him with health benefits and a salary which were to be set off against financial compensation paid to him by SHI in the shape of 10% of the profits he made for SHI on his trading. Mr Said worked (when not working from home or from his holiday house during the month of August) in the office annexed to Mr Vik's wife's house in Greenwich Connecticut, where others engaged by SHI also worked and where Mr Vik himself also had an office, on a different floor, from which he worked when not in his main Monaco office or travelling around the world. Mr Vik was in the USA for 60 days a year or less, because of his residency in Monaco. He had three personal assistants.

7. Mr Vik continued to trade, on behalf of SHI, through DBS in equities and other investments, including FX transactions of his own which were concluded as over the counter (OTC) trades with DBS. To effect these different investments, the normal pattern was for him to give instructions to Mr Meidal or Mr Brügelmann who would then execute the deals for SHI. Wishing to indulge in more sophisticated forms of transaction, and in particular the shorting of equities, Mr Vik caused SHI to conclude a further Prime Brokerage Agreement with DBAG on 30th January 2008, but in this case operating through its London branch (the Equities PBA). This prime brokerage (often referred to as the "London Account") related to "transactions in respect of Securities" as defined in the agreement itself, including any instrument as agreed between the parties from time to time. Under the Equities PBA, DBAG was to provide financing and settlement services to SHI against cash or securities to enable SHI to enter into transactions, primarily in stocks or bonds, but also futures and options in respect of either. Under this arrangement, SHI could enter into purchase and sale transactions of Securities with third parties, nominating DBAG as its agent for settlement purposes, whilst DBAG could, at its discretion, provide cash or securities financing, against collateral in the Securities Account held by it, with a security interest over those assets.

8. On the same date SHI and DBAG also concluded a Listed Futures and Options Agreement, "the F&O Agreement" under which DBAG would enter into transactions as principal (with a back-to-back transaction with SHI) when entering into exchange traded listed Futures and Options on the orders or instructions of SHI.

9. Additionally, on the same date a Master Netting Agreement was made between DBAG and SHI in respect of the Equities ISDA Master Agreement of 8th May 2006, the Equities PBA and the F&O Agreements. These agreements are together referred to as "the 2008 Agreements".

10. DBAG treated Mr Said's FX transactions alone as governed by the FXPBA, which was administered out of New York and New Jersey, although the account was technically a London account. All transactions concluded by Mr Vik were, prior to 30th January 2008, effected through DBS and, after January 2008, his FX transactions, his transactions in equities and in options and listed futures and options were all treated as governed by the suite of agreements reached on 30th January 2008 and handled in London on what was referred to as the GPF Platform, which provided for margining of these different types of transaction together under what was known as the DBX system. As appears hereafter there is an issue between the parties as to whether Mr Vik's FX transactions were governed by the FX ISDA to which the

FXPBA (which indubitably governed Mr Said's FX transactions) referred and any collateral agreements relating thereto, or by the 2008 Agreements. Mr Brügelmann was authorised to execute trades on the GPF account on Mr Vik's instructions and had access to DBX.

11. In the global financial storm in the autumn of 2008, the FX trades conducted by both Mr Said and Mr Vik became severely loss making. DBAG issued margin calls totalling over US$500 million in respect of Mr Said's trading. These were mostly paid by SHI by transfers of cash from the GPF account from available assets and proceeds of sales, in order to meet the premium needed to close out Mr Said's FX trades and the collateral required whilst doing so, whilst SHI also closed out substantial loss making positions on Mr Vik's own FX trades and profitable positions on his Futures trades, until the money available to SHI in its DBAG and DBS accounts ran out. DBAG claims sums as due to it, amounting to US$118,474,958, under the FX ISDA and the FX Close Out Agreement allegedly reached with SHI and US$125,523,086 under the 2008 Agreements, as sums due on the close out of transactions.

12. DBAG now admits a number of failings on its part in the course of handling SHI's trades. First, in circumstances which I shall describe more fully later, it accepted, when it had a discretion whether to accept or reject them, particular types of trades under the FXPBA (EDTs and OCTs), which, by reason of their terms, could not be booked, valued or margined on its GEM and ARCS VaR computer systems at the time. When the market moved against SHI in the course of 2008, and in particular in the autumn of that year, on its case DBAG became entitled to call for margin in substantial sums. It did not do so until it became apparent to it, as a result of another bank, Morgan Stanley (MS), seeking collateral in respect of Mr Said's trades with it (using DBAG's name and credit under the FXPBA) and from 2 direct trades that Mr Said had concluded with DBAG, that there was a deficiency in margin put up by SHI, which then led to the margin calls under the FXPBA to which I have already referred. These were made between October 13th and October 17th 2008 and were paid between 14 and 22 October 2008, without protest.

13. Furthermore, in the course of reporting the situation to SHI and making these margin calls, DBAG discovered two other major computational errors on the GPF account under the DBX system (the Russell Multiplier Error and the Ignored Payments Error) which reflected other deficiencies in that computer set-up. Although the latter would have impacted on earlier trading in amounts not calculated by the experts, on discovery on 16 October and 22 October 2008 respectively the errors were corrected. The effect of the errors was that assets in the Cash and Securities Accounts on the GPF platform had been overstated by US$115m and US$315m respectively. It is in these circumstances that a deficit emerged on the GPF account which led to a disputed margin call on that account on 22 October 2008. DBAG was less than straightforward about its margining and computational difficulties.

14. It is agreed between the expert forensic accountants that none of the FXPBA margin calls were overstated on the true state of the FX account with margining effected in accordance with the contractual position on new computer models built by the parties' experts. On DBAG's case, on 22nd October 2008 it also issued a margin call in respect of the GPF account but SHI denies ever receiving this. In circumstances which are the subject of dispute, the balance of Mr Said's FX transactions were closed

out and assets subject to the Pledge Agreement and other SHI funds held by DBAG were applied to recoup the losses incurred, so far as possible, leaving the amounts now claimed by DBAG as the alleged deficit under all the agreements.

15. DBAG also informed DBS that it was enforcing the Pledge Agreement on 23rd October and served notice of termination of the FXPBA the same day. By close of business on 24th October all the FX positions had been closed out.

16. On 30th October there was a meeting in London between Mr Vik and high ranking DBAG personnel where DBAG sought payment of sums claimed to be due and Mr Vik raised complaints about DBAG's actions in allowing SHI to incur such large losses when he had allocated only US$35m to the Pledged Account as capital for Mr Said's trading. He sought but did not obtain a report on the daily MTM and margin requirements for the "Structured Options" traded by Mr Said under the FXPBA from August 1st 2008 – October 13th 2008 (as to which, see below). DBAG did not admit the deficiencies referred to in paragraph 12 above.

17. On 4th December DBAG sent a letter to SHI terminating the Equities PBA on the ground of failure to pay the GPF margin call of 22 October, stating that 4th December 2008 was the termination date applicable. It also demanded immediate payment of the deficit on the FXPBA, said to be US$120,650,166. On 20th January 2009 DBAG sought payment from SHI in respect of the Equities PBA, the Equities ISDA Agreement and the Master Netting Agreement, in the sum of US$125,523,086.

18. SHI alleges that a series of trades, referred to in this action as "Exotic Derivative Transactions" (EDTs) and referred to by other banks and Mr Said by a variety of names, "TPFs" ("Target Profit Forwards"), "Target Forward Structures", "TARNs", "Pivot Range accruals" and "Range Bets", were all concluded by Mr Said outside the scope of the authority given to him under the Said Letter of Authority or FXPBA and are not binding on SHI. These 41 EDTs were a major contributor to the huge margin figures to which DBAG claimed to be entitled under the terms of the FXPBA, the FX ISDA and its CSA, as calculated by the expert forensic accountants, and to the losses incurred on close out. Additionally, although not responsible for any losses (in fact giving rise to a small profit), it is said by SHI that there were 53 "Other Complex Transactions" ("OCTs") which also fell outside Mr Said's authority. SHI maintains that none of such transactions were "currency options" within the meaning of the Said Letter of Authority or the FXPBA. This gives rise to issues of construction, as affected by relevant market usage, of the terms "currency options" and "Structured Options" as those terms appear in those contractual documents.

19. Furthermore SHI alleged two additional oral agreements, concluded at or about the time of the FXPBA which limited Mr Said's authority to trade on behalf of SHI:

    i) The first is said to have limited Mr Said to trading "vanilla options" only, which are said to be straightforward options involving nothing more than a put or call or a series of put or call options.

    ii) The second is said to have limited Mr Said to concluding transactions which did not give rise to losses in excess of US$35m. This is also expressed as an agreed trading limit of US$35m or an agreement restricting DBAG's recourse to that sum (the Capital Limitation Agreement).

20. Such agreements are said to have been concluded between Mr Vik and Mr Said and between SHI (in the person of Mr Vik) and DBAG, in the persons of Mr Meidal and/or Mr Brügelmann (as pleaded) or Mr Meidal alone (according to Mr Vik's evidence).

21. A yet further oral agreement is alleged as between Mr Vik and Mr Meidal/Mr Brügelmann to the effect that all SHI's FX trading would be subject to a trading limit constituted by the amount standing to the credit of the Pledged Account plus SHI's FX profits, which were or should have been paid into that account, insofar as not removed from the account on Mr Vik's instructions. This became known as the Pledged Account Limit or PAL.

22. SHI denies liability for the sums claimed by DBAG and pursues a counterclaim for damages in excess of US$8 billion based on these agreements. Although these agreements are put forward as oral agreements, it was alleged that Mr Vik understood them to be encapsulated in the written agreements which he signed, because he was assured that this was the effect of their terms. Additionally, by an amendment made in 2012 SHI also maintains that it was agreed that DBAG would give a warning to SHI whenever the margin approached US$35 million (the Collateral Warning Agreement).

23. SHI further alleges that, in accordance with the FX ISDA Schedule and the Amendment Agreement, Mr Vik's own FX transactions for SHI (although concluded directly with DBAG, rather than with third parties through DBAG, using its name) after January 2008, were governed by the FX ISDA and "the Pledged Account Limit" ("the PAL") and were not governed by the Equities PBA, under which DBAG had in fact been operating his FX trading in 2008 and, according to its own understanding of margining procedures, margining those transactions. It is said that DBAG wrongly margined Mr Vik's own FX transactions with his and SHI's other transactions on the GPF platform (supposedly under the Equities PBA), which led him to close out various Equities Futures and FX transactions which he would not otherwise have done, on receiving notification on September 3 2008 from Mr Brügelmann that he was near to SHI's GPF margin limits, as calculated by DBAG. If DBAG had margined Mr Vik's FX transactions separately from the rest of his transactions on the GPF platform, there would have been no such warning as it was those FX transactions which were the subject of large market movements, with the consequent effect on the calculation of variation margin on the Equities PB Account. SHI maintains that, in the absence of any warning on 3rd September, its Equity Futures and FX trades would otherwise have been held until profitable once again, and it thus incurred losses from the wrong margining and the wrong warning. These failures were exacerbated by one of the two huge computational errors made by DBAG in respect of the GPF account.

24. Moreover, if Mr Vik's transactions had been margined under the PAL, that limit would have been reached much earlier than September 3, with consequent effect on Mr Vik's and potentially Mr Said's trading.

25. SHI contends that the GPF margin warning was wrongly made and that DBAG failed to give a warning on the FXPBA margin situation. It maintains that the FXPBA margin calls were wrongly made, because of the breaches already outlined, so that SHI's other positions were closed out when they should not have been. There would have been no Equities Margin call either. Had none of this happened, SHI would

have continued with its trading strategies and, over the course of the years from 2008 to date, made profits of over US$7 billion in accordance with a Notional Portfolio which SHI has maintained during that period, showing the trading decisions it would have made.

26. In response, DBAG contends that the parties agreed by word or conduct or conducted themselves on the basis of a common assumption (regardless of the words of the FX ISDA Schedule or Amending Agreement) that Mr Vik's FX trading for SHI was to be effected under the terms of the Equities PBA and the 2008 Agreements and margined accordingly. Alternatively DBAG relies on some form of waiver or estoppel in this respect.

27. SHI also contends for implied terms in the FXPBA to the effect that DBAG was obliged properly and accurately to record the details of the transactions concluded by Mr Said, properly to record the cash flows, the profit and loss, the mark to market value (MTM) and the collateral required (margin) for Mr Said's trading and to make accurate reports to Mr Said and/or Mr Vik of these matters.

28. It has been accepted by DBAG since February 2012, but not before, that it did not accurately record the details of the EDTs and OCTs and that it did not accurately value them on a mark to market basis nor require collateral in respect of them at any stage prior to the margin calls in October 2008. The computer system operated by DBAG and its Prime Brokerage (PB) desk was not capable of recording transactions of such complexity nor of producing valuations on a MTM basis nor of calculating margin requirements by reference to exposure (MTM) or what is known as VaR (value at risk), which is intended to reflect the loss involved in the liquidation of the assets in question. SHI says that, in consequence of this inability to record and report on the exposure and margin generated by Mr Said's trading, whether or not there was an agreed limit on Mr Said's authority to US$35 million worth of exposure or an agreement to limit SHI's liability to that figure, the effect of DBAG's failures was that SHI was ignorant of the true figures (in the persons of both Mr Said and Mr Vik) and was unable to appreciate the risks being run on the EDTs. Had there been any appreciation that the exposure and margin requirement exceeded US$35 million, and in particular to the extent that it did, steps would have been taken to close out those transactions and reduce the exposure to manageable levels. Although the forensic accountancy experts instructed by the parties differ on matters of detail, both agree that by April 2008 the collateral requirement of Mr Said's trading, if properly calculated in accordance with DBAG's maximum entitlement would have been of the order of US$90 million and, after dropping below the US$35 million limit in May and June 2008, from July onwards fluctuated between US$50-100 million until September and October when it leapt, with some fits and starts, to US$400 million and, at its peak at the time of the margin calls, to US$800-$900 million.

29. Questions of fact arise as to what would have happened if DBAG had valued the TPFs and OCTs and provided reasonably accurate MTM figures to Mr Said and sought an increase in collateral to match the exposure. If additional collateral had been required, Mr Vik would have had to be asked to procure its provision.

2. The Key Issues

30. First, as should be plain from the above summary, there are key issues relating to oral agreements reached between Mr Vik on the one hand and, as pleaded, with Mr Meidal and/or Mr Brügelmann on the other. Those agreements are said to be linked with agreements between Mr Vik and Mr Said to the same effect.

31. Mr Meidal acted as DBS' relationship manager for the SHI accounts until July 2007, whereupon Mr Brügelmann who had been working almost exclusively on the SHI accounts since September 2006 as an investment manager, took on Mr Meidal's role. On Mr Vik's evidence, Mr Meidal, since leaving DBS in November 2007, has been angling for a business relationship with Mr Vik, both during his time at Goldman Sachs and now whilst at Lombard Odier. Mr Vik said that Mr Meidal, who had moved to London, agreed with his complaint against DBAG in the course of a number of meetings he had had with him since 2007. He had asked him to give evidence but he had declined to do so without the approval of DBS, which had not been forthcoming. Mr Vik considered that his evidence would be helpful but had not subpoenaed him.

32. In his witness statements, Mr Vik said that the oral agreements he reached in relation to limits on Mr Said's trading were made with Mr Meidal in the course of telephone conversations and, he thought, two meetings at his wife's home in Greenwich Connecticut, with Mr Said present for part of those meetings. No longer was it said that Mr Brügelmann was a party to these agreements.

33. Mr Meidal was, of course, an employee of DBS, not DBAG but Mr Vik said that he did not draw any such distinction, particularly given the "one bank" philosophy advanced by DBAG and its subsidiaries in advertising. Mr Meidal was not called by either party to give evidence nor was he deposed in the New York proceedings which SHI began on 24 November 2008 in which it served its complaint on 20th January 2009.

34. Mr Said was also not called as a witness by either party. He had formerly been engaged by SHI to trade on its behalf. He was however extensively deposed in the United States in the context of the New York litigation, the subject matter of which overlaps with this action and to which I shall refer later in this judgment. Both parties relied on various parts of his deposition under the Civil Evidence Act whilst denying the truthfulness of other parts. In circumstances where Mr Vik alleges that he made agreements with Mr Meidal and Mr Said in the context of the latter's FX trading, and where Mr Brügelmann is now no longer said to be a party to any such arrangement, the key issue of the oral agreements turns essentially upon the credibility of Mr Vik's evidence in the light of the written agreements and their proper construction, the surrounding documents and the commercial probabilities, as well as Mr Said's deposition evidence.

35. Secondly, the proper construction of the various agreements to which I have referred is a key issue, particularly in the context of the disputes about the oral agreements to which I have just referred. The question of implied terms in those agreements also looms large because of the failure of DBAG to book the EDTs and OCTs correctly and/or at all (until they settled, whereupon cash settlement entries could be made). In consequence DBAG failed to value or margin these transactions or to report their MTM or to include them in the margin requirements reported to Mr Said and SHI. The terms about booking, valuing, margining and reporting are, as alleged, to be

implied into the FXPBA which is governed by the law of New York. Experts in the New York law of contract were not called to give oral evidence for cross-examination but their reports on New York law were in evidence before me.

36. The third key issue which arises relates to Mr Said's authority to bind SHI in a number of different contexts. The question of his authority to conclude the EDTs and OCTs turns on construction of the Said Letter of Authority (arguably in conjunction with the FXPBA) and evidence of market understanding as to what is included in the term "currency options", a subject upon which I heard expert market evidence from Mr Malik and Professor Wystup. Questions also arise as to the authority of Mr Said to bind SHI to new margin terms and to waive compliance with the implied terms alleged of booking, valuing, margining and reporting on such matters to SHI.

37. The fourth key issue relates to the agreement by words or conduct or common assumption between DBAG and SHI, as alleged by DBAG, about the collateralisation of Mr Vik's FX trading with DBAG on the GPF account. The Amendment Agreement to the Equities ISDA and the Schedule to the FX ISDA (both concluded in November 2006) provided that, "unless otherwise agreed between the parties", transactions other than FX transactions and currency options transactions should be governed by the Equities ISDA and that FX transactions and currency options transactions (as defined in the 1998 ISDA FX and Currency Option Definitions) should be governed by the FX ISDA. DBAG maintains that, notwithstanding this, the parties proceeded on the basis of Mr Vik's FX trading being governed by the Equities PBA concluded in 2008.

38. The existence of the agreement or understanding of the parties to Mr Vik's FX trading being governed by or margined under the 2008 Agreements turns essentially on the evidence of Mr Brügelmann and Mr Vik as to the conduct of the parties and their understanding and on the contemporaneous documents, which reveal the exchanges between them. Although there was a dispute as to how the margining was done and whether it was truly cross margining or merely an aggregation of FX margin with margin under the Equities PBA and the Listed F&O Agreement, it is clear that DBAG did margin Mr Vik's FX trading under the suite of 2008 Agreements and not under the FXPBA, whether by reference to the Capital Limitation Agreement or PAL. In cross-examination, Mr Vik said that he did not apply his mind to this issue at the time and that it was an argument for the lawyers about construction and contemporaneous exchanges between the parties. There is here therefore a question of objective construction of documents to show what was or was not "otherwise agreed", and questions of fact as to the conduct of the parties and/or the understanding of the parties, in the context of common assumption, waiver or estoppel.

39. A considerable number of other issues relating to liability were raised by the parties in a trial involving 45 days of hearing, opening submissions in writing of 930 and 845 pages and closing submissions of 1530 and 1336 pages. The parties' stance on some of these issues was not to my mind realistic and I invited the parties to reconsider that stance on more than one occasion early on in the trial. There were no concessions of any substance at any stage, as revealed by the extensive closing submissions which took just about every possible point, however good or bad, including many fall-back arguments. The parties and their representatives are to be commended for adhering to the scheduled timetable for witnesses but the extent of their closing submissions meant that neither was in a position to analyse the other's volumes of argument in the

time available before scheduled final oral submissions. I therefore allowed one day, on the second day of the long vacation, for making key submissions about the credibility of the witnesses and similar major points and had to postpone further argument until the new term, when it was agreed between the parties that short additional submissions in writing on new points would be made, as they then were in mid-October 2013.

40. A range of further issues arise in the context of the quantum of DBAG's claim and SHI's counterclaim in the event of success on liability. Much labour and expense were incurred on these points, on which the parties adduced expert evidence from experts in valuation, forensic accounting and computers. It was recognised that much of this work would inevitably prove to be redundant, depending on my findings. I have sought to deal not only with all the points necessary to determine this action but also some other major issues which would have arisen had my findings been different.

3. The Bank Audit Report

41. Following the events of 2008, DBAG conducted an internal "Group Audit" in which investigations were carried out to ascertain the lessons to be learned from the events of October 2008 in relation to SHI. Many of the witnesses who gave evidence before me were interviewed for that process. A draft of that report was disclosed by DBAG but the final version was subject to redaction by lawyers and is less informative. The draft available, dated 19th January 2009, referred to "inadequate FXPB systems infrastructure, business and support functions management oversight and a lack of clear roles and responsibilities [resulting] in four Critical Issues."

42. The first of those issues was the acceptance by FXPB of TPF products without access to the right systems to manage those trades. No FXPB New Product Approval Process had been completed for the product. FXPB had since conducted a review and confirmed that no other TPFs were held by it and had stopped accepting complex trades including TPFs. The second issue referred to the lack of defined and implemented clear roles and responsibilities over the set up of new accounts for margining purposes, as between GPF, GES (responsible for F&O), and IBO (the IT team). A review was being conducted of existing accounts to ensure that they were being margined correctly as well as implementing control over the set up of new accounts. The third issue was that inadequate credit risk management technology was utilised to manage the risks as a result of products traded by PWM (Private Wealth Management) clients operating primarily on the GM (Global Markets) infrastructure. In particular the specific processes used to stress the exposures in a credit environment were not employed. The fourth issue was the need for clear definition of PWM and GM responsibilities for clients managed under the PIC (Private International Client) desk framework. It was said that PWM had no defined clear guidance on acceptable email correspondence with clients and in particular portfolio overviews were provided without clearly defining the scope of the reports or including disclaimers.

43. In the discussion of detailed issues and action plans relating to TPFs, it was said that the systems infrastructure and trade approval and monitoring processes for TPF trades were inadequate. Specifically it was said that FXPB had accepted TPF transactions without completing the NPA process, that FXPB systems' functionality was insufficient to capture the margin or report to the client and that TPF give-up trades

were accepted from the client/executing brokers without an adequate approval and oversight review by Front Office (by which was meant the business/sales side of FXPB). It was further said that IBO did not have a process to track and escalate trades booked (as proxies) for review and approval (TPFs booked as Resurrecting Fader Options) and a report to monitor the timely capture of proxy trades was absent. System feed exceptions reports were incomplete and the GEM margin system contained trades with valuation errors marked as "N/A" which were not included on the IBO exception report.

44. In relation to Credit Risk Oversight, it was said that PWM Credit Risk Management's (CRM's) focus was on stressing the collateral rather than stressing the transaction as well with stress tests. TPFs had not been stressed since the first transaction was concluded and "no independent function was assigned specific responsibility for stressing transaction exposures and assessing the results against the margin levels and collateral held".

45. Mr Roesch, the regional head of Group Audit, set out, in an email, his "final" reading of the investigation. He referred to a "multi organ failure" which had contributed elements to the risk situation. The key contributors the conclusion of into TPFs without NPA and appropriate infrastructure report and the resulting failure to margin TPFs at all which were booked as proxies as Resurrecting Faders in circumstances where they were not margined until October 10th/13th. Other contributors were late bookings (although that was almost irrelevant in the light of the failure to margin), incorrect mapping of GES into the DBX system (the Ignored Payments error), the Russell Multiplier error and "the back-and-forth" with regards to PIC, GM and PWM.

46. Mr Eggenschwiler, the Global Head of CRM PWM commented that the suggestion that margin levels were insufficient to collateralise the exposures told less than half the story because the reality was that the FXPB process and systems did not and could not reflect the true position or exposure. As their systems could not handle the TPFs, it did not matter how diligent CRM was or how much collateral they might have had because the margin requirement was unknown as a result of the absence of proper booking. He made much the same point in relation to stress testing, commenting, as indeed was the fact, that what was booked on GEM had very probably been stress tested but the TPFs were not correctly reflected in GEM or were completely absent which meant that they would not be subject to such tests. If trades were not booked properly onto the systems, everything was affected downstream so far as CRM was concerned. These appear very fair points to make.

4. The New York Action

47. On 24 November 2008 SHI commenced an action in New York against DBAG by the filing of a Summons with Notice. SHI's Complaint was filed and served on January 20th 2009. The key allegations in that complaint relate to what is there referred to as the "Collateral Limitation Agreement" which corresponds in large measure with the "Capital Limitation Agreement" alleged in the English action. It was alleged that between September 2006 and November 2006 there were discussions between DBAG and Mr Said, sometimes with a representative of SHI present, about a prime brokerage arrangement for the bank to provide services to SHI in connection with Mr

Said's FX trading. This would include the provision of information about the performance of Mr Said's trading account upon which SHI would rely in order to allow it to monitor the risks involved in the account. In those discussions it was agreed that US$35 million would be pledged as collateral in Geneva and that "Sebastian Holdings' maximum exposure in connection with the FX trading … was limited to US$35 million". Reliance was placed upon Clause 2 of the FXPBA and it was alleged that DBAG was obliged to report the net exposure on the account to SHI on at least a daily basis to ensure that its collateral limitation or exposure would not exceed US$35 million.

48. The Complaint alleged that DBAG had acted in breach of contract in failing to report the MTM figures and net exposure of SHI on the FX trading account on a net basis and that if there had been such reporting, Mr Said would not have been permitted by the bank to make the trades at all or, if SHI had sufficient collateral and chose to make the trades, they would have been liquidated earlier than they were with less or no loss. It was further alleged that the margin calls were wrongful, that DBAG had converted SHI's assets in consequence of such calls and in closing out SHI's transactions had acted in breach of fiduciary duty. Both fraud and negligence were alleged against DBAG and claims in restitution were also made.

49. The only reference to "Structured Options" in the Complaint was the allegation that DBAG had informed Mr Said that it was willing to accept the transactions and had approved them under the FXPBA but had never advised SHI that such trades would create the need for collateral in excess of the US$35 million limit. No allegation was made in the Complaint that such trades were outside the scope of Mr Said's authority nor was any allegation made in relation to Mr Vik's FX transactions and the arrangements for them, save that it was said that the margin call of 23rd October 2008 on the GPF account had never been received. Mr Said's FX trading was expressly said to be entirely separate from any other trading of SHI, which was referred to as taking place in London. There was no trace of the multiple allegations which SHI has pursued in the English action.

50. DBAG filed a motion to dismiss the Complaint or, in the alternative, to stay the action and on December 10th 2009 Justice Kapnick issued a decision dismissing SHI's causes of action for breach of fiduciary duty, fraudulent concealment, fraud and negligent misrepresentation, whilst denying DBAG's motion to dismiss the Complaint based on forum non conveniens and its request for a stay on that basis. In denying the motion to dismiss on the grounds of forum non conveniens, she found that the contracts alleged to have been breached in SHI's Complaint were the FXPBA and an oral Collateral Limitation Agreement which was alleged to have been made in New York and related to the FXPBA. She dismissed the cause of action for breach of fiduciary duty because, in her view, SHI was a sophisticated investor engaged in arm's length transactions with DBAG and such transactions did not give rise to fiduciary duties under New York law. Without a fiduciary or other special relationship, the claims for fraudulent concealment and negligent misrepresentation also failed.

51. The First Department of the Supreme Court, Appellate Division, affirmed Justice Kapnick's decision on 9th November 2010. This decision was not appealed.

52. On 10th January 2011 SHI filed an Amended Complaint alleging fourteen causes of action, eight of which were for breach of contract, including breach of the Said Letter of Authority, breach of the implied covenant of good faith and fair dealing, negligence, conversion, money had and received and unjust enrichment. Many of these allegations mirror the allegations made in the current action in this country.

53. DBAG filed a motion to dismiss some of the claims in the Amended Complaint and, on 8th November 2012, Justice Kapnick granted DBAG's motion to dismiss one of the breach of contract claims, a second breach of contract claim to the extent that it relied on a purported breach of the Said Letter of Authority and claims for the breach of the implied covenant of good faith and fair dealing, negligence, conversion, money had and received and unjust enrichment. The other causes of action for breach of contract survived on the basis that there were factual issues to be resolved. The reasons for dismissing the negligence claim are discussed in this judgment in the context of the New York law of tort, but in essence, the judge held that there was no independent duty upon DBAG outside the parties' contracts. She also accepted DBAG's submissions that the Said Letter of Authority acted as a "complete defence to [SHI's] allegations that [DBAG] could be held liable for Said's trading activities". DBAG had submitted that SHI had expressly granted Mr Said the authority to trade on behalf of SHI and that DBAG assumed no responsibility for that trading under the terms of the Said Letter of Authority. It was incumbent upon SHI to rein in Mr Said's trading and it could not disclaim knowledge of its own agent's actions.

54. On 2nd July 2013 the First Department of the Supreme Court, Appellate Division, upheld Justice Kapnick's decision, holding that SHI's sixth and ninth claims for breach of contract arising from unauthorised trades were properly dismissed: "The agreements expressly absolved defendant (DBAG) from any liability for unauthorised trades by the plaintiff's agent. Indeed, as a general matter, the agent's knowledge and conduct would have been imputed to plaintiff at any rate, under basic agency principles." The court held that the negligence claim was properly dismissed, not only as being duplicative of the contract claims but because DBAG was not shown to be subject to duties outside the written contracts.

55. On 15th October 2013 the First Department of the Supreme Court, Appellate Division denied SHI's motion for leave to appeal against its rulings to the Court of Appeals.

5. The Law of the Case

56. It is agreed between the New York lawyers instructed by the parties that, as a matter of New York law, there is no *res judicata* or collateral estoppel applicable to the decisions of Justice Kapnick or the Appellate Division, First Department in the New York action since those decisions were not final. No *res judicata* or issue estoppel can arise in this jurisdiction unless the effect of the decisions in New York is effective in New York to preclude further argument on the subject matter of those decisions.

57. There is a doctrine under New York law, recognised by both sets of New York lawyers, known as the law of the case. The New York Court of Appeals explained this doctrine in *People v Evans* 94. NY.2d 499 (2000): "The law of the case addresses the potentially preclusive effect of judicial determinations made in the course of single litigation before final judgment". It is "a judicially crafted policy that expresses the practice of courts generally to refuse to reopen what has been decided."

It is not however a limit on the court's power but directs a court's discretion. Thus the law of the case doctrine precludes the relitigation of questions already decided by the same court or a court of co-ordinate jurisdiction unless there are extraordinary circumstances warranting a departure from the principle.

58. Despite the submissions of SHI's lawyers, it appears to me that the decisions taken in the New York action to dismiss various grounds of complaint are decisions on the merits of the issues put before the courts for decision, though not decisions on the merits of the action as a whole. Nonetheless, the application of the doctrine is a discretionary one and, if an amended pleading is subsequently filed, it supersedes the original pleading and the allegations made in it, unless identical in practice to those previously dismissed, are not affected by the prior decisions of the court. The issues which then arise are different. SHI states that it is in the process of reformulating its complaints in the New York action to tally with many of the complaints made in this jurisdiction. Furthermore, the decision of the Appellate Division on 2nd July 2013 apparently can be the subject of appeal after final judgment in the New York action.

59. There are essentially therefore two reasons why I cannot find that the "law of the case" has the effect of conclusively determining any of the issues which I have to decide.

60. The first is the nature of the law of the case doctrine which is recognised as directing a court's discretion, not its authority. It is not a mandatory doctrine but acts as guidance that will generally but not invariably be followed. A change in the circumstances or a change in the law could give rise to a court later departing from its earlier decisions. During the pendency of an action every New York court retains jurisdiction to reconsider its prior, intermediate or interlocutory orders, however rare it may be for any departure from them subsequently to take place.

61. The second reason is the approach set out in *Carl Zeiss Stiftung v Rayner (No. 2)* [1967] 1 AC 1853. In order to found issue estoppel in this country there must be a judgment which is final and conclusive and a decision on the merits of an issue which is identical in the two sets of proceedings and which was necessary for decision in the foreign court. The House of Lords emphasised the need for a cautious approach in regard to issue estoppels based on foreign judgments in the light of different procedures and rules in other jurisdictions. There is a need for the English court to be satisfied that the issues in question cannot be relitigated in the foreign country.

62. I cannot be satisfied about that in relation to the decisions taken. Not only are pleadings to be amended in New York and the appeal process not yet exhausted in relation to the most recent decision of the Appellate Division but the applicability of the principle is in any event, as I have just set out, a discretionary one, which does not give rise to the necessary finality for this Court to accept that issue estoppel arises in relation to any finding made.

63. As matters stand however, there is a considerable overlap between the allegations made in the current New York pleadings and the allegations made in the English action. I have had the advantage of hearing many days of evidence, both factual and expert, on the allegations made in the English action whereas the New York court had to assume the truth of the facts alleged when deciding whether or not specific claims should be dismissed. Nonetheless the best evidence of New York law in relation to

allegations which are common to both actions must be the decisions of the New York court, to which I am entitled to have regard, without treating them as being binding upon me.

6. The Key Witnesses

64. In addition to the absence of Mr Meidal and Mr Said as witnesses who, on SHI's case, were key participants in the oral agreements (and for whose absence each party criticised the other) SHI noted the absence of Mr Quezada and Ms Liau, both of whom were employed by DBAG with responsibilities in relation to FXPB. Ms Liau was the Chief Operating Officer of Fixed Income Prime Brokerage and Head of Product for FX Prime Brokerage whilst Mr Quezada performed the same role as Mr Giery (who did give evidence) as a member of the Sales and Product Team in FX and Electronic Trading under Ms Liau (the FXPB front office, sometimes referred to as "Business"). Those three worked at DBAG's offices at 60 Wall Street, New York in close proximity to one another. The FXPB Operations Team was based in New Jersey where Steven Kim was the Global Head of FXPB Operations and was ultimately, through intermediate line managers, responsible for Mr Walsh. The latter's job title was "analyst" but his task was to oversee the trade flow of FXPB accounts by checking that trades had been matched in the TRM system (the automated matching engine used by DBAG) and, when required, by booking trades into DBAG's FX booking system, RMS, on behalf of clients for whom he was the designated Client Services Representative. He was the Client Services Representative for SHI and was in contact with Mr Said in relation to his FX trading. Mr Said also had dealings with Mr Quezada to whom Mr Walsh looked for assistance and guidance in relation to the EDTs and OCTs. Whilst the other persons mentioned in this paragraph did give evidence, neither Mr Quezada nor Ms Liau did, although once again passages in Mr Quezada's deposition were relied on by both parties. An organisational chart of DBAG's Fixed Income Prime Brokerage (FIPB) and FXPB personnel appears in Annex 2.

65. Additionally, SHI criticised DBAG for not producing Mr Gunewardena to give evidence (although he was deposed). He was at the time the Global Head of Fixed Income Prime Brokerage to whom Ms Liau and Mr Quezada were ultimately responsible. The comment can be made that Mr Walsh, who took up permanent employment at DBAG from about the middle of December 2006, having graduated earlier that year, was left exposed to the full force of criticism for the acceptance of EDTs and OCTs which were known by Mr Quezada, Mr Kim, Mr Manrique and possibly others to be incapable of being properly booked, valued or margined by DBAG on its systems at the time, leaving this junior employee with an insoluble problem which he resolved by booking them under a "place holder" as "Resurrecting Faders" or, from mid 2008 onwards, largely by not booking them at all until the transactions had concluded with cash settlement, whereupon the cash entries could be and were made. When all this came to light in October 2008 because MS were asking for collateral from DBAG in respect of exotic trades booked with SHI, Mr Walsh hurriedly booked the outstanding unbooked EDTs and OCTs, once again as Resurrecting Faders, as place holders.

66. I did not have any difficulty in accepting the vast majority of the evidence of Mr Walsh who was about 24 or 25 at the material time and out of his depth when dealing with someone like Mr Said who was a dominant, forceful personality experienced in

FX trading and a man who insisted on getting his own way, insisted on conducting the trades that he wished to do and threatened to complain to Mr Vik and take SHI's business elsewhere if Mr Walsh, Mr Quezada and DBAG did not play ball. Mr Walsh's own understanding of the transactions effected by Mr Said which gave rise to the major issues was, it appears, somewhat limited, since he had to have those trades explained to him by Mr Said in October 2008, with the possibility of huge losses far from his mind until the collateral call came in from MS for sums in excess of US$100 million. He was, it seemed to me, straightforward in the evidence he gave, although, not unsurprisingly, he could not recall detailed day to day events in 2007-8. It was plain from the contemporaneous recorded telephone calls that he went through agonies at the time in not knowing what to do and he squarely faced up in the witness box to his failings, without casting blame on to Mr Quezada or Mr Kim, as well he might have done, with justification. As will appear from a more comprehensive review of the evidence later in this judgment, the issue as to whether or not to accept these types of transaction was something well above Mr Walsh's pay grade and was effectively taken by Mr Quezada, with acquiescence from Mr Kim, in the full knowledge of the problems in booking the trades and the hope of finding a solution to them in time. Mr Quezada too was anxious not to upset Mr Said and to go along with his demands that he should be able to effect these trades through the prime brokerage arrangements. The extent to which Ms Liau was aware of what was going on remains uncertain but since Mr Quezada sat next to Mr Giery and they both sat opposite Ms Liau, about a metre or so away, it is hard to believe that they were all unaware of at least some of the problems which arose in relation to the disputed transactions, although Mr Giery's focus was different in 2008 and he had left by September of that year. Whilst attempts were made to resolve the booking issues, Mr Walsh was essentially left to manage the situation as best he could, whilst those issues remained unresolved and had little prospect, it would appear, of resolution, whether in a period of 6 months, as envisaged by Mr Kim, or at all. Mr Quezada and to a lesser extent Mr Spokoyny were aware of this.

67. Mr Brügelmann, as the client relationship manager at DBS and the man with whom Mr Vik dealt most, was a man who sought to manage relationships and smooth over issues. He sought to find solutions rather than simply face customers with a problem or hard facts. He was polite, calm and personable and would seek to avoid confrontation. He was undoubtedly in awe of Mr Vik and conscientiously sought to fulfil his every instruction. I found him essentially an honest witness although I did not think he had much real recollection of the detailed history. His failure to recall that he had books of notes/jottings until shortly before the trial was extraordinary but not, I am satisfied, sinister. Much of his evidence was a learned recital of the documents which he had read with care. He sought to reconstruct what had happened, at times following his reading of the documents when answering questions, which led him into errors both favourable and unfavourable to DBAG.

68. Further, it seemed to me that there were times during the history of events when he told people what they wanted to hear rather than the unvarnished truth. He was loyal to Mr Vik and throughout the relevant history often took his part when dealing with others in DBAG but, when everything went wrong in October 2008, he, along with his superiors who had taken control of the situation by then, toed the party line. Although he came to know of the issues after the margin calls, he was not straightforward in dealing with Mr Vik and telling him of the Ignored Payments Error

or of the booking, valuation and margining problems that DBAG had and their failure to margin the disputed trades properly and/or at all during the preceding months. At that stage more senior people at DBAG were controlling what was said and he was not to know how much Mr Vik's knowledge was superior to his own with regard to Mr Said's FX trading.

69. Where however there was any issue between him and Mr Vik in relation to instructions given by Mr Vik and his fulfilment of them, I have no hesitation in accepting his evidence that he would only ever do what Mr Vik instructed him to do. However when transferring NOK 290m from DBS in August 2008 to the GPF account, I find that he did so without express instructions at the time, moving assets in order to avoid a problem for Mr Vik, based on what he thought Mr Vik would want and what would solve the issue, relying on an outdated instruction for transfer at the opening of the GPF account. When seeking to justify transfers in October 2008 he seized on a "standing instruction" which was nothing of the sort, but, as it transpired, there was in fact a telephone transcript that showed that he had Mr Vik's agreement to the transfer.

70. There was an attempt by DBAG not to reveal to Mr Vik in the period from October 13th onwards the fact that DBAG's systems had not been capable of booking, valuing or margining the trades or reporting on them. A number of witnesses employed by DBAG and DBS participated in this attempted "cover up", which was in any event futile because Mr Said was well aware of the position, as should have been obvious to the individuals concerned, and he had in fact told Mr Vik. Given the size of the margin calls, it should also have been obvious that he must have told Mr Vik the position. It is the more senior employees who must take responsibility for this, as Ms Serafini's evidence confirmed, because decisions were being taken at a high level about the margin calls, about the basis on which they were to be made and the explanations to be given in an effort to keep the payments coming. By the time of the second margin call, the problems were known to all the FXPB team who were dealing in any way with SHI. They knew that recent market movements alone could not account for the sums now required by way of margin. Attempts by Mr Gunewardena and Ms Liau to explain the calls on this basis were ridiculous. The approach adopted by DBAG does it no credit at all. Misleading and inaccurate statements were made and made to the knowledge of those concerned which was both dishonest and senseless in the circumstances. If they thought that Mr Vik was being deceived, they were themselves deluded. They were, it seems, surprised that Mr Vik paid up on the first five margin calls but the reason was not that they had deceived him but that he considered that he had entrusted Mr Said with considerable trading authority for SHI and felt that SHI was bound by his commitments, as indeed it was.

71. In October 2008 the financial world was in turmoil. There was doubt as to the solvency of banks of considerable size. Losses of the amounts involved in this action could cost individuals their jobs if responsibility fell on them for such losses. FXPB was keen not to let on to PWM in the shape of Mr Brügelmann or its Credit department, CRM, Messrs Halfmann and Lay that it had been at fault. Mr Gunewardena must take the blame for his own attempts to deceive SHI in telephone calls to Mr Vik, but Ms Serafini, Ms Liau, Mr Quezada, Mr Kim and Mr Spokoyny were not forthcoming in internal dealings with DBS and CRM, nor in conversations with Mr Vik, insofar as they were involved. What they were seeking to do was to

hide the deficiencies of FXPB for which each must have considered he or she or the FXPB team had some responsibility. Those who gave evidence were protective of their own positions. Ms Serafini sought to suggest that Mr Cloete or some other similar figure lay behind the decision not to tell Mr Vik the truth about failures to margin but Mr Cloete denied that he played any part in that and the evidence did not go far enough for me to conclude who might have been involved, apart from those I have named.

72. DBAG's other witnesses were all straightforward in the evidence they gave, which was, in so far as they had real recollection, reliable.

73. Mr Quezada did not give evidence but SHI relied on his answers in deposition, as did DBAG. I was unable to place any reliance on anything much he said in those answers because of the inconsistency with the record revealed in the contemporaneous documents. He appears to be doing business currently with Mr Said and, as the prime individual responsible for deciding to take in the EDTs, knowing that they could not be booked, he had good reason to pretend ignorance of matters which were, on the documents, plainly known to him, to be defensive of his reputation and to seek to blame others at DBAG rather than to blame Mr Said or to tell the whole truth. When the extent of Mr Said's MTM position came to light in October 2008, in revealing conversations with Mr Said, Mr Quezada wanted matters kept under the radar.

74. At first sight Mr Vik had a genuine grievance in respect of Mr Said's trading which exposed SHI to large losses. He provided collateral of US$35 million for Mr Said's FX trading.

   i) He knew the basis upon which banks operated and how margin was ordinarily required to support such trading. He could readily have expected that, as DBAG calculated the margin requirements for Mr Said's FX trading, if and when the requirement rose to US$35 million, Mr Said and SHI would be notified and asked to put up further collateral or reduce positions so as to bring margin down within the US$35 million provided. According to the bank's promotional documents relating to its systems, MTM valuation was meant to take place about every 15 minutes of the day so that the scope for collateral requirements to exceed the US$35 million figure by much before notification was very limited if all trades were being booked, valued and margined correctly.

   ii) On October 13th Mr Vik was faced with a margin call for approximately US$98.8 million. The following day there was a further call for about US$202 million. This was followed by a call for US$125 million (approximately) the next day which was rolled into a margin call the following day of US$175 million and on 17th October an additional call was made of nearly US$35 million. Since Mr Vik had already decided the previous weekend to close down transactions as opposed to just putting up additional margin, these figures included large premium figures for the closing out of transactions, but, on the face of it, without some knowledge of what was going on, he might have expected margin calls to be limited to a reasonably small excess over and above US$35 million, even given the extraordinary state of the markets in October 2008, following the collapse of Lehman Brothers in September and the events which followed.

iii) Mr Vik was given a clear idea of the likely total of calls on 16th October in a telephone conversation with Mr Gunewardena and others. Mr Vik paid all the FXPBA margin calls and only refused to come up with more cash when told of the bank's accounting errors (amounting to some US$430 million) and/or when faced with the GPF margin call which he maintains he did not receive.

75. Mr Vik had a genuine grievance but at issue here is whether that grievance was properly directed at Mr Said, SHI's agent, at DBAG or at both. Furthermore the question arises as to whether he himself was also to blame because of his knowledge and/or approval of Mr Said's trading. The timing of his knowledge of different aspects of Mr Said's activities may assume some importance in this connection. As Mr Said himself said at the time, however, there is no doubt that the prime cause of the losses was Mr Said's own market misjudgments in the torrid circumstances of the autumn of 2008.

76. As appears below, by the time Mr Vik caused SHI to pay margin calls in excess of US$500 million, he must have known from Mr Said why those calls were being made and why there had not been any earlier substantial margin requirement – namely that DBAG's systems were incapable of accurately valuing and margining the Structured Options, the EDTs and OCTs, which gave rise to the huge margin requirements, as suddenly brought home to DBAG by MS's demand for inter-bank collateral in respect of some of them. Whatever his state of knowledge at an earlier stage, as a result of exchanges with Mr Said, he knew by 9th October that DBAG had failed to margin the EDTs and by October 10 that closing out the trades was likely to cost hundreds of millions of US$. That was the course which, over the weekend of 10th-13th October, he decided to take. By the time that DBAG issued its first margin call, Mr Said must have alerted him to the true position, in so far as it was known to Mr Said. So it was that thereafter Mr Vik kept pressing DBAG to inform him of the history of margining, knowing that it could not do so without revealing its inability to book, value and margin the disputed trades correctly. He must have known, because Mr Said must have told him, that Mr Said had agreed to DBAG not providing MTM figures in respect of the disputed trades with consequent impact on margin reports. He knew that SHI had been getting a "free ride" on margin because Mr Said told him that. Because of the terms of the authority which had been given to Mr Said by SHI, Mr Vik must have known that there were problems for SHI in relation to waiver of compliance with any implied terms as to accurate booking, valuation, margining and reporting of the trades.

77. Consequently SHI has looked for other ways of putting the case which would not run foul of any arguments based upon Mr Said's authority to bind SHI. I regret to say that in these circumstances I have concluded that Mr Vik has invented oral agreements that were not and could never have been made by Mr Meidal, or Mr Brügelmann, and has instructed his lawyers to pursue contrived arguments which bear no relation to the agreements made in writing, nor to reality.

78. It is possible that he has deceived himself into thinking that some such agreements must have been made because of the US$35 million collateral put up in the first place, which he would, at the outset, have expected to be close to the maximum he would actually lose on Mr Said's trading. He undoubtedly considered that he had allocated a US$35m fund as capital to support Mr Said's trading, which would act as a something of a brake, if DBAG's calculations of margin reflected the market situation with a

degree of accuracy and if it demanded collateral according to its maximum entitlement, but, along with most traders, he regarded collateral as something to be minimised in order to obtain maximum leverage against it and he entrusted Mr Said with authority in dealing with DBAG on issues of margin as well as trade.

79. At all times he knew the difference between liability for trading losses on the one hand and the provision of margin as collateral in respect of any liability on the other. He knew that the two were not coincident and that assessment of market value (MTM) was not a science. If he had understood the concept of 95% VaR he would have realised that, ex hypothesi, it was not expected to cover 5% of the situations which might arise (although the application of a multiple to the VaR figure might be anticipated to cover the deficit in most situations, to which October 2008 might well be an exception). If Mr Said incurred trading losses on trades otherwise within his authority, the amount of collateral supplied could not be or act as a trading limit in itself, though it might in practice act as a brake on losses, because of DBAG's expected desire to insist on protecting itself by obtaining security in respect of potential losses caused by SHI's trading. The fact that some DBS and DBAG individuals, including Mr Brügelmann, referred to the US$35m as a "risk budget", a "VaR budget", an "equity chip", a "maximum position limit" or even as a "trading limit" has provided SHI with something on which to seize to support an argument but it merely reflects a loose use of language and the view that this was the amount of capital Mr Vik wished to provide by way of collateral for Mr Said's trading. They understood that Mr Vik had set up Mr Said with US$35m as trading capital – as the money available to him as security for his trading – but neither he nor they could reasonably regard that as a limit on SHI's liability for his trading, if it was otherwise authorised.

80. No mitigation is available in relation to the allegation of a specific agreement that Mr Said would only trade vanilla options. If that had been the case, the email exchanges between Mr Vik and Mr Said in 2008 about the very disputed transactions, where reference is made to "range bets", "range trades" and the discussion of their terms, could not have taken place. These were, as described, obviously not vanilla trades in anyone's parlance and Mr Vik could not have thought otherwise. Furthermore, if he had thought that these were outside the scope of Mr Said's authority, Mr Vik would have told Mr Said and DBAG that this was the case when he says he first heard of them. He did not. On the contrary, he appears (in email exchanges) to have supported and encouraged Mr Said to continue in these trades in the light of the profits then being made which it was hoped would continue from mid 2008 onwards and he raised no issue about them throughout the margin calls, when it is clear that he knew that they were the main cause of the losses.

81. It is noteworthy that, in the original Complaint filed by SHI in New York, the only claim put forward is made on the basis of the US$35 million collateral limit, constituted by the CLA. This Complaint was filed in January 2009, by which time on any view Mr Vik must have had a full picture of what Mr Said had done and Mr Said's state of knowledge of what had gone on at DBAG. There is no suggestion of any of the other alleged agreements restricting Mr Said to vanilla trades, to the PAL, to margining his own trades under the FXPBA or FX ISDA or anything else. The Complaint is based on an agreement to a US$35m limit of exposure and DBAG's failure to monitor the risk and keep SHI informed of margin calculations of its

maximum entitlement with consequent failure to prevent Mr Said trading beyond such limit by demanding more margin.

82. Furthermore, the fact that Mr Vik caused SHI to pay over US$500 million in margin calls in respect of the transactions and to close out those transactions that he now says were unauthorised, in circumstances where he now maintains that he had an agreed "trading limit" with DBAG for Mr Said's FX trading of US$35 million, speaks for itself. If Mr Vik had made the agreements to which he testified in the witness box, his conduct is inexplicable.

83. SHI disclosed no notes of any conversations or meetings of Mr Vik with others and no internal documents of the kind that would be expected to exist as set out elsewhere in this judgment. Mr Vik's evidence, however, in lengthy statements and in cross-examination was argumentative in the sense that he put forward a case by reference to documents which he had not seen at the time. His actual recollection of events was limited and much of his statements consisted of a running commentary on DBAG's documents rather than evidence of what he saw, heard or knew at the time.

84. Later in this judgment I will explore in more detail the reasons why I cannot accept Mr Vik's evidence on these and other areas, but I am driven to the conclusion that he is not a reliable witness and that where there are conflicts of evidence I would need to be very careful in accepting anything Mr Vik said in preference to the evidence of other witnesses. Of course, a witness may be inaccurate or lie about one matter and not be inaccurate or lie about another. The motivation for lying in one area is highly relevant in determining whether a witness is lying on another aspect. Apart from the desire to protect SHI's assets by refusing disclosure and making misleading statements the only motivation here is the advancement of SHI's case against DBAG in respect of the trading losses incurred by SHI's own agent, Mr Said, and I am clear that this was Mr Vik's motivation. Although Mr Vik sought, when he came to give evidence, to avoid some of the conflicts of evidence presented by the way that SHI's case had been framed in the pleadings, whether by limiting the party to the oral agreements to Mr Meidal in his witness statements or by diluting some of the evidence which was in his six witness statements, the documents, the written formal contracts and the commercial realities meant that his evidence, even when standing uncontradicted by any DBAG or DBS witness, is incapable of acceptance on the crucial issues. I have concluded that in some respects he was simply dishonest.

85. Mr Said, whilst still employed by one of Mr Vik's companies, swore an affidavit (one of three) for use in the New York proceedings, in support of SHI's case about the types of trade he effected. When he came to give evidence on deposition, he abjured that part of that affidavit, recognising that the "under orders" defence would not mitigate his responsibility for making false statements and saying what he had. Whilst SHI maintained that the stance he took in his depositions was adopted to defend himself against potential claims by SHI and his affidavit was truthful in all matters and respects, the documents and all the commercial probabilities support his evidence in those depositions about the absence of any agreement with Mr Vik limiting his trading in any relevant way and about the extent of his discussions with Mr Vik concerning the different types of exotic trades that he pursued. Once again, when it comes to a conflict between Mr Vik's evidence and Mr Said's evidence, albeit that the latter's evidence is on deposition alone, there is good reason to accept his evidence, backed up as it is by the documents, in preference to that of Mr Vik who is

looking to defeat DBAG's claim and to pursue his own counterclaim against DBAG for sums vastly in excess of anything that he could possibly think of recovering from Mr Said, who could not be good for a fraction of the sums in issue in this action, were he to be sued for breach of authority, and who would not therefore be likely to fear such an action against him.

86. I am conscious that many of the answers given by Mr Said on deposition however were self-justificatory. He was happy to blame others for the results of the trading judgments he made, which, at the time, he had acknowledged were the sole cause of the losses, combined with the "perfect storm" of the market conditions of October 2008. With the passing of time, his "bounce" had returned and, as with most issues in this action, it is the documents which provide the surest guide to the truth, coupled with the commercial probabilities.

7. The Contractual Documents

87. The starting point must be the written contracts concluded between the parties. I need not dwell on the Equities ISDA at this stage, nor the Amending Agreement. It is the contracts concluded with the date of signature of 28th November 2006 with which I am most concerned – the Said Letter of Authority, the FXPBA, the FX ISDA, Schedule and CSA and the Pledge Agreement. As they were entered into as part of a suite of contracts which were intended to govern the situation between them, each forms part of the matrix for the others and each can be read in the light of the others. Whilst each must be examined for its own language and terminology and its provisions and obligations construed for what they are, they could be expected to fit together, so that a commercial reading would give rise to a consistency of result. The TPMCA was an additional agreement between DBAG and DBS, to which SHI was not a party, the terms of which were unknown to SHI and therefore falls into a different category with no effect on construction of the other agreements.

7(a) The Principles of New York Law applicable to the construction of contracts and the implication of terms therein

88. It is agreed that both the FXPBA (expressly) and the Said Letter of Authority (impliedly) are governed by the law of New York. The principles of construction applicable are agreed by the parties' respective experts in large part and, equally, for the most part, are familiar to English lawyers, subject to different emphases and nuances.

89. The first basic principle is known as the "four corners rule": "When parties set down their agreement in a clear, complete document, their writing should as a rule be enforced according to its terms. Evidence outside the four corners of the document as to what was really intended but unstated or misstated is generally inadmissible to add to or vary the writing." *W.W.W. Associates Inc v Giancontieri* 77 N.Y.2d 157 (1990). Both the professors of law engaged by the parties were aware of no case in which the court had admitted evidence "as to what was really intended" outside the four corners of a clear and complete document in order to add to or vary an agreement set down in that document. They were agreed that contracts fall to be construed in accordance with the manifested intent of the parties in the light of the surrounding circumstances.

90. It is further agreed that contemporaneous agreements made between the same parties relating to the same subject matter are to be read together and interpreted as forming part of one and the same transaction.

91. If a term is ambiguous however, and its meaning is not revealed by examination of the written contract, extrinsic evidence of the parties' intentions may be considered, including evidence of custom and usage in the relevant trade. There was a measure of difference between the experts as to the need for ambiguity for evidence of trade usage to be admissible, but, in the context of the use of terminology such as "currency option" and "Structured Options" where it is alleged that there is a trade meaning and the terms themselves are open to interpretation, there is ambiguity which would undoubtedly allow for the admission of evidence of that trade usage. It is agreed that evidence of custom and usage in the relevant trade may be admitted to explain the meaning of words used in a contract if the custom and usage is reasonable, meets appropriate standards of consistency and of being widely known in the particular trade, and does not conflict with the express terms of the contract or a rule of law. Courts use a variety of adjectives to express these requirements, such as "uniform", "well-settled" and "established" for the requirement of consistency and "well-known" and "notorious" for the requirement of being sufficiently widely known.

92. In addition to the admissibility of evidence of trade, custom and usage, where a contract is ambiguous, extrinsic evidence may be adduced, not just of the parties' intentions as outwardly expressed at the time of contracting, but of the dealings of the parties leading up to execution of the agreement, including the drafting history, evidence of the parties' relevant conversations and negotiations, the parties' relationship and the purpose of the contract. Furthermore, the parties' course of performance (or course of practical construction) and course of dealing are admissible as aids to construction of ambiguous provisions.

93. Ambiguity is a question of law for the court to decide but a contractual term is ambiguous if it is reasonably susceptible of more than one interpretation. One of the professors considered that it was possible that a court might go beyond the four corners of the contract to determine whether it contained a "latent ambiguity" but, for the reasons I have already given, in the context of the current action, there was no disagreement that expert evidence would be admissible as to what the terms "currency option" and "Structured Options" were generally used to mean according to the established custom and usage in the relevant trade.

94. If a contract that contains a "no oral modifications" clause has been modified orally (or in a manner otherwise inconsistent with the clause) it was agreed that the clause will be given effect in order to prevent the modification only if the modification is completely executory – i.e. it has not been performed by either party. The principle of estoppel may also apply if there is reliance by a party seeking modification sufficient to prevent the party opposing the modification from doing so. Partial performance that avoids the requirement of a written and signed modification must be "unequivocally referable" to the alleged modification. Determination of whether a modification is completely executory and whether partial performance is unequivocally referable to an alleged modification is a matter for the court.

95. So far as concerns implication of terms, the experts disagreed on the importance of the distinction between terms implied in fact and terms implied by law and on the

scope of implication and the willingness of the courts to imply terms. They agreed that, as a matter of law, there is under New York law an implied covenant of Good Faith and Fair Dealing. A breach of this covenant may occur where a defendant has acted with intent to deprive a plaintiff of its contractual rights or if the defendant has acted in reckless or neglectful disregard of such rights. Both agreed that acting without appropriate care in carrying out a contractual obligation could violate this implied duty of good faith and fair dealing, if the lack of care reflected an intention to cause harm to the other party. It was also agreed that acting without appropriate care, which was merely accidental and lacking intention, did not violate the implied duty. Whether or not the acts of a defendant were in such bad faith or in such wilful or neglectful disregard of the rights of a plaintiff as to constitute a breach of this implied term would depend on the facts presented to the Court.

96. Professor Cohen said that the duty of good faith and fair dealing was not self-defining. There have been various elucidations of the concept by New York courts but the most common formulation is that the implied covenant "embraces a pledge that neither party shall do anything which will have the effect of destroying or injuring the right of the other party to receive the fruits of the contract". Professor Fishman stated that the duty of good faith not only proscribes undesirable conduct but may require affirmative duties, including a duty not only to refrain from hindering or preventing the occurrence of the party's own duty or performance of the other party, but also to do whatever is necessary to enable him to perform. He went on to say that the claim of implied duty of good faith and fair dealing brings to light implicit duties to act in good faith which are already present but not necessarily specified in the contract. He said that "the claim cannot create new duties under a contract or substitute for an insufficient contract claim", footnoting this by saying that in order for the implied duty of good faith and fair dealing to stand as a cause of action, there has to be an underlying contractual obligation between the parties.

97. In my judgment, as Professor Cohen points out, the formulation to which he referred is made clear by subsequent New York cases that constrain the courts from going beyond the contract in applying the implied covenants. The duty of good faith cannot add to, detract from or alter the terms of the contract itself and cannot be used to create independent obligations beyond those agreed upon and stated in the express language of the contract.

98. The effect of both professors' views is that a *MacKay v Dick* type of obligation in English law is encompassed by the implied covenant of good faith and fair dealing. A party must not put it out of his power to perform his obligations or prevent performance by the other party and may be required to co-operate to enable the other party to perform. The implied covenant may attach to the exercise of a discretion or the exercise of a right as the authorities cited by Professor Fishman in his footnote 93 exemplify. Although in that sense the implied covenant is free-standing, it does directly relate to the terms of the contract and the manner in which existing rights and obligations of the parties are to be performed. It thus does not create independent substantive obligations.

99. As Professor Cohen points out, compliance with the duty of good faith in a contract is often described by the absence of its opposite, namely bad faith: "A breach of the covenant depends upon a finding that the defendant acted with intent to deprive the plaintiff of his rights under the agreement to which the defendant was a party, or, if

the same was brought about by conduct of the defendant in such reckless or neglectful disregard of plaintiff's contract rights as to justify an inference of bad faith".

100. Similarly, with fair dealing: "The law contemplates fair dealing and not its opposite. Persons invoking the aid of contracts are under an implied obligation to exercise good faith not to frustrate the contracts into which they have entered. The rule is grounded in many cases that in every contract there is an implied undertaking on the part of each party that he will not intentionally and purposely do anything to prevent the other party from carrying out the agreement on his part."

101. There is thus a requirement of intentionality and purpose in breaching the implied covenant. Acting without appropriate care in carrying out a contractual obligation can only violate a party's implied duty of good faith and fair dealing if the lack of care reflects an intention to harm the other party or something akin to reckless disregard of another party's rights.

102. A breach of this covenant may occur where a defendant has acted with intention to deprive a plaintiff of its contractual rights or if the defendant has acted in reckless or neglectful disregard of such rights. It is a question of fact whether or not an inference of bad faith can be justified. The line between intention and pure accident, which can be difficult to draw, is for the determination of the court. In the context of the present action, this distinction would not appear to matter.

103. There was greater disagreement about the circumstances in which a court would imply other terms. Thus SHI, on the basis of its own expert's view, contended that a term will be implied into a contract where a reasonable person in the position of a party to a contract would be justified in understanding that such a term was included (although not set out explicitly) in the contract. A court may imply an essential omitted term that the parties did not consider at the time of drafting the agreement or when circumstances have changed since the agreement was formed or which was implicit in the agreement at the outset. DBAG, on the basis of its expert's view, contended that, when a contract is made between sophisticated parties at arm's' length, courts are extremely reluctant to imply a term that the parties have neglected specifically to agree and (subject to custom and usage) will only do so when it is clear that the parties must have intended to include such a term but failed to do so. When parties set down their agreement in a clear, complete document, their writing should be enforced according to its terms and it is the role of the courts to enforce the agreement made by the parties and not to add, excise or distort the meaning of the terms they chose to include, thereby creating a new contract under the guise of constructional implication. Thus, a term will only be implied into a contract where a reasonable person in the position of the parties to a contract would be justified in understanding that such a term was included and where such a term, at the time of contracting, was in fact implicit in the agreement viewed as a whole. Notwithstanding that, a court would not imply a term that conflicted with the express terms of a written agreement. SHI's only real qualification of this was to say that a term could be implicit in the agreement viewed as a whole where the parties could not necessarily be taken to have intended to include such a term but failed to do so. It was sufficient if the parties had not turned their minds to a particular topic but the Court determined that, had they done so, they would have agreed to the implied term alleged.

104. There was disagreement also about the implication of a duty of reasonable care and skill. Such a term is applied to building and construction contracts and has been applied to the provision of professional services where causes of action for malpractice and breach of contract are concurrently alleged. The authorities where such an implication has been upheld typically refer to "services" or "work" to be performed under a contract where the specified duty is described more in terms of a process than in terms of a specific result. Where a contract sets out obligations which are absolute as to the result required, questions of due care and skill are irrelevant. There is no case known to either of the experts where a promise to use reasonable care and skill has been implied in connection with a contract such as the FXPBA. In practice, in the context of the current action, it would not appear that there is any real issue as to the implication of a duty of care and skill in relation to any express obligation in the FXPBA. The question is whether or not a term should be implied requiring DBAG accurately to book, value and margin the trades in SHI's portfolio and to report those matters to SHI or whether a term should be implied that DBAG should exercise reasonable care in carrying out those functions or whether no such term falls to be implied at all.

105. Under New York law, a waiver occurs where a contracting party dispenses with the performance of something that it has a right to exact or could have demanded or insisted upon if it chose to do so. A valid waiver requires no more than the voluntary knowing and intentional abandonment of a known right which, but for the waiver, would have been enforceable. A waiver may arise by either an express agreement or by such conduct or failure to act which evidences an intent not to claim the purported advantage. The experts agreed that "mere silence, oversight or thoughtlessness in failing to object" to a breach could not amount to a waiver although where acquiescence featured in this spectrum was in issue. The burden of proof of a waiver is upon the person asserting it and there must be a clear manifestation of intent to relinquish the contractual protection. Waiver does not need consideration to be effective.

106. None of the differences between the experts on the New York law of contract are significant for any decision I have to make in the light of my findings of fact in this action.

<u>7(b) The Said Letter of Authority</u>

107. On 28th November 2006, as part and parcel of the FXPB arrangements, SHI and Mr Said each signed a letter addressed to DBAG. It was headed "Re: Klaus Said". It is common ground that this Letter is governed by New York law, as is the FXPBA. The key paragraphs read as follows:

> "We, the undersigned, the directors of Sebastian Holdings Inc., (the "Company") hereby authorize Mr. Klaus Said, Vik Brothers, 10 Ashton Drive, Greenwich, CT 06831 (the "Agent"), to trade on behalf of the Company for the purpose of executing spot, tom next and forward foreign exchange transactions and currency options (herein, 'FX and Options Transactions") with Deutsche Bank AG ("DBAG"). We hereby authorize the Agent to sign and deliver on our behalf and in our name any documentation related to the execution of any such

> FX and Options Transaction, including, without limitation, ISDA master agreements, schedules, confirmations, credit support annexes, security interests or other credit support documentation (herein, as amended from time to time, "Documentation").
>
> We hereby recognize and agree that Deutsche Bank AG ("DBAG") will rely upon this letter in connection with FX and Options Transactions. We further hereby agree that we will be subject to the terms and obligations of, and liabilities contained in, any FX or Options Transaction or related Documentation executed by the Agent on our behalf to the same extent as if we were directly executing such FX or Options Transaction or were directly the signatory of any such Documentation. We further hereby recognize and agree that DBAG shall have no duty to inquire as to the nature of the relationship between us and the Agent nor as to any restrictions upon the activities of the Agent in connection with the Agent's execution of FX and Options Transactions on our behalf."

108. The best evidence of New York law on the issue of construction of this Letter might be thought to be the decision of Justice Kapnick in the Supreme Court of the State of New York dated 9 November 2012, as upheld by the Appellate Division on 2 July 2013. The Letter sets out the terms of the authority given by SHI to Mr Said to bind SHI in its dealings with DBAG to trade, and to sign and deliver documentation.

109. Justice Kapnick, in determining the sixth and ninth causes of action in the New York proceedings, accepted DBAG's argument based upon the Said Letter of Authority and the specific recognition of the absence of any duty on the part of DBAG to enquire as to the nature of the relationship between SHI and Mr Said or as to any restrictions upon Mr Said's activities in connection with the execution of FX and Options Transactions on SHI's behalf. She referred to DBAG's submission that, if SHI had intended to rein in Mr Said's trading, it was incumbent upon SHI to do so itself in accordance with the revocation procedures in the Letter whilst DBAG assumed no responsibilities thereunder. The third paragraph of the Letter, which I have not set out in full, simply provided that the letter should remain in full force and effect and the authorisation contained in it would be irrevocable "until receipt of notice in writing" from SHI to Mr Said and to DBAG, stating that the authorisation had been revoked. Despite SHI's reliance upon the FXPBA and the alleged limitation to "vanilla" FX transactions, Justice Kapnick found that the Letter of Authority acted as a complete defence to SHI's allegations that DBAG could be held liable for any of Mr Said's trading activities. She held that DBAG had no duty to regulate Mr Said's trading activities and could not be found liable for permitting him to engage in the EDTs.

110. On appeal, the Appellate Division held that "the plaintiff's sixth and ninth claims for breach of contract arising from unauthorised trades were properly dismissed. The agreements expressly absolved defendant from any liability from unauthorised trades by plaintiff's agent."

111. Whilst I do not consider, as set out elsewhere in this judgment, that these decisions create an "issue estoppel" which binds me from deciding differently in this action, the

best evidence of the application of New York principles of construction to the Said Letter of Authority must be the decisions of Justice Kapnick and the Appellate Division. These courts read the first two paragraphs of the Letter as giving authority to Mr Said to trade in the types of transactions to which they referred whilst absolving DBAG from any obligation to enquire whether or not the transactions concluded by Mr Said did or did not fall within the description of the FX and Options Transactions referred to. The Appellate Division went on to say that "As a general matter, the agent's knowledge and conduct would have been imputed to plaintiff (SHI) at any rate under basic agency principles."

112. Before me, DBAG did not restrict itself to this approach. DBAG submitted that the EDTs were "currency options" within the meaning of the first paragraph of the Letter. If reliance on the Letter meant that DBAG was on notice that Mr Said's authority was restricted to the FX and Options Transactions referred to, as opposed to permitting him to trade in such transactions, without any duty on DBAG to enquire further about the agency relationship between SHI and Mr Said, it was clear that the only question which could arise was whether or not the trades in question did fall within the definition. On the wording of the second paragraph there could be no possible obligation to enquire about any other internal restriction, whether relating to a US$35 million trading limit or a limitation to vanilla transactions, unless that was the true meaning of the Letter itself.

113. It is common ground between the parties that the EDTs and OCTs do not fall within the description of "spot, tom next and forward foreign exchange transactions". The issue is whether or not they constitute "currency options" within the meaning of the first paragraph of the Letter, either as a matter of language or market understanding. That issue may turn on questions of legal analysis of the individual trades, whatever the terminology used to describe them, and in particular whether they truly have an element of optionality within them. Alternatively, if the market understands such trades to be options, does the authority conferred upon Mr Said by SHI encompass all that the market understands to be options or understood from time to time to be options, or only what a lawyer would properly regard as options? SHI contends that the trades have no optionality whilst DBAG, with the exception of two correlation swaps, contends that they do. Moreover, whether or not there is express optionality, DBAG maintains that they have embedded optionality and as a matter of market practice in the world of FX, they are seen as "currency options" so that the wording used in the Said Letter of Authority must be construed to encompass them. The parties adduced expert evidence on this issue.

114. It can be seen that there is no express reference to "Structured Options" as there is in the FXPBA (see below) where much the same form of words is used when setting out the authority given by DBAG to SHI to act as its agent in executing FX transactions. In the context of the FXPBA, Structured Options are plainly seen as being "currency options" because the definition of a Structured Option is "any Option other than one which is a (i) put or call that does not have special features, or (ii) single barrier option". Such Structured Options, under the terms of Clause 2 of the FXPBA, required the approval of DBAG at the time when SHI concluded the deal. Whether or not an item is a Structured Option, whatever the terminology commonly used, must again depend upon the same criteria to which I have already referred. To be a Structured Option, it must first of all be an option, but DBAG prays in aid the use of

the terminology of Structured Option for a large variety of transactions which are said to include those at issue in this action. DBAG submits that the Said Letter of Authority should be read in conjunction with the FXPBA and that reference to the latter can be made as an aid to the construction of the former.

115. I set out later in this judgment the different types of trade which are in dispute and the expert evidence relating to them and the manner in which Mr Said referred to these trades when discussing them with Mr Vik in email exchanges between them, but it is the EDTs or TPFs upon which attention is focussed because they were such a major contributor to SHI's losses.

116. Mr Said's authority, as set out in the Said Letter of Authority, was to trade on behalf of SHI and extended to the signature and delivery of documentation relating to the execution of "FX and Options Transactions" "including, without limitation, ISDA master agreements, schedules, confirmations, credit support annexes, security interests or other credit support documentation". Mr Said thus had authority to bind SHI by signing and delivering documents which set out the terms upon which DBAG would extend credit or require margin or collateral. Subject to the terms of such instruments, therefore, he had authority to vary, waive or modify their terms.

117. Furthermore, the second paragraph of the Letter expressly stated that DBAG was under no duty to enquire as to the nature of the relationship between Mr Said (the Agent) and SHI, nor as to any restrictions upon his activities in connection with the execution of FX and Options transactions which were to bind SHI exactly as if SHI had executed the documents itself, whether those documents were confirmations of individual trades or documentation of a more general nature falling within the ambit of the first paragraph of the Letter.

118. DBAG was therefore entitled to look to Mr Said and to treat him as SHI for the purpose of the "FX and Options Transactions" subject only to the potential limitation of his authority to trades which fell within that definition. If there was some internal SHI limit upon Mr Said's authority which differed from the terms of this letter, such a limit was expressly to have no impact upon the liability of SHI in respect of FX and Options Transactions executed by him.

7(c) The nature of FX Prime Brokerage and the Expert Evidence thereon

119. The issues which arise in this action centre upon Mr Said's trading for SHI in FX transactions and in particular the EDTs and OCTs which were concluded through the Prime Brokerage of DBAG. The way in which Foreign Exchange Prime Brokerage (FXPB) works was set out by the expert instructed by DBAG in this area, Mr Quinn, in his report. This was largely uncontroversial but, to the extent that there was any dispute about it, I accept his evidence, founded as it was upon years of experience of FXPB and its operation. I found him a careful and thoughtful expert witness and reliable on other areas where there was more significant dispute.

120. By comparison, Ms Rahl, the expert instructed by SHI, had no direct experience of working on the buy or sell side of FXPB, although she had been consulted on matters where FXPB played a part in the scope of the consultation. As appears elsewhere, I found her change of stance in relation to customs of the market and market practice revealing, inasmuch as she initially failed to draw any distinction between direct

trades to which DBAG and SHI were parties and indirect trades effected by SHI through FXPB arrangements with DBAG, when considering the need for an explanation to be given to someone other than the trader of the risk level of products that he was contemplating. She later "clarified" that she intended always to refer to direct trades only in this context and this led to an amendment of the pleadings by SHI. I came to the conclusion that I could not rely upon her evidence, which was not candid about that change of stance, that her original stance showed a lack of understanding of how FXPB operated and that she argued a case, rather than giving independent expert opinion based on market knowledge.

121. Mr Quinn described the operation of FXPB in the following way:

> "23. FXPB is essentially a clearing function (although others may refer to it as a credit intermediation function) offered by a bank to its clients to facilitate a client's trading activities on an agency basis. The bank permits the client to use the bank's interbank credit lines, enabling the client to trade directly with several executing brokers but consolidating all positions and risk with the bank (which acts as the FX Prime Broker).
>
> 24. In summary, the process of FXPB operates as follows:
>
> (a) a client enters into a trade with an executing broker in the name of the FX Prime Broker;
>
> (b) contemporaneously the client enters into an equal and offsetting transaction with the FX Prime Broker (these transactions are known as "give up" trades) and by so doing the bank takes a credit risk on the client in respect of which the client usually posts collateral with the bank;
>
> (c) the service enables the client to post a single pool of collateral with the FX Prime Broker rather than posting collateral with each executing broker with whom the client wishes to trade. This provides a valuable benefit to the client, not just because a single pool is more convenient but, because utilizing a single pool posted with the FX Prime Broker usually allows the client to trade against a lower amount of collateral, while still being in a position to negotiate terms and conditions with a number of different executing brokers. The amount of collateral posted is a matter for negotiation by the client with the FX Prime Broker (and all sorts of factors are relevant to this, including commercial considerations); and
>
> (d) the FXPB service is therefore a highly client demand-driven service. In exchange for the authority to trade in its name, the FX Prime Broker typically charges the client a fee per transaction.
>
> 25. The basic steps of the "give-up" process are as follows:

(a) the client selects the FX trade it wishes to enter into. The sales/trading team at the executing broker negotiates the terms and conditions of the FX trade with the client (and may provide advice in this respect) and executes the FX trade on behalf of the client;

(b) after the trade has been executed, the client notifies the FX Prime Broker of the trade details. The client provides this notification using automated or manual systems put in place with the bank;

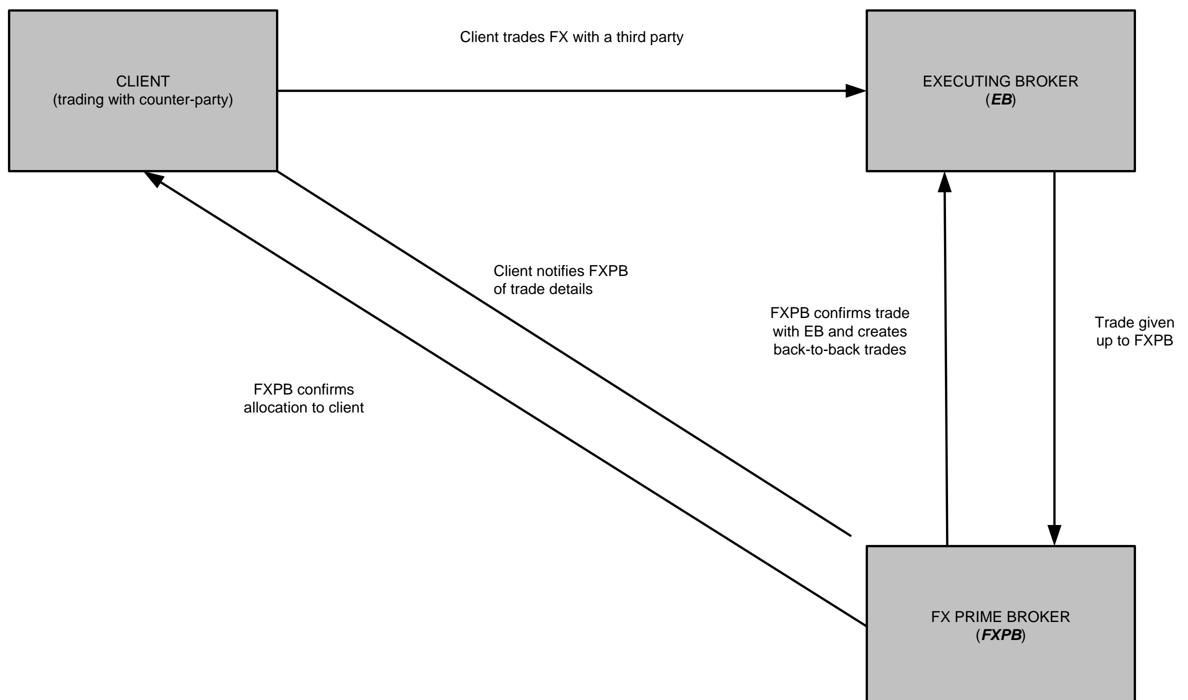
(c) the executing broker communicates the trade details to the FX Prime Broker;

(d) the FX Prime Broker confirms matching details between the executing broker and the client. If there are any mismatches, the FX Prime Broker advises both the client and the executing broker of those mismatches;

(e) the FX Prime Broker also enters into an equal and offsetting trade with the client so that its net exposure is zero and inputs the back-to-back trades; and

(f) the FX Prime Broker clears and settles the trade on the settlement date.

26. The diagram below highlights the key steps in an FX Prime Brokerage give-up transaction:



27. It is apparent from the description I set out above that the FX Prime Broker is not providing any advisory service to the client: the FX Prime Broker does not even know what trades the client has entered into until the client informs it.

28. Rather, FXPB is a low-profit margin operationally-focused business where revenues are generated by the bank charging transaction fees for trades done with other executing brokers. It is a service business that takes no market risk and differs from FX trading, which is a business that revolves around taking market risk. The service is often offered to enhance the overall FX franchise and increase the amount of trading done with the bank directly. The FXPB department within a bank is operationally-focused group which may have its own sales function and has minimal interaction in its daily operational functions with FX Sales or Trading. FXPB tends to physically sit in a different part of the bank due to confidentiality issues.

29. It is useful to compare and contrast the functions of the other various separate, but sometimes overlapping, departments involved in the FX businesses for a bank, all of which reported to the head of the FX division:

(a) FX Trading: This is an internal proprietary-focused department, which allows banks to express a view on the FX markets which is translated into market risk in the hope of being profitable on a trade-by-trade basis. This internally-focused group can generate and execute ideas through its own research team or can participate in the trade flow of clients brought to them by the FX Sales Department, and provide liquidity to a client by enabling it to transact in the product, quantity, and direction it needs. It will make a market on a proposed client trade and if they win the trade, will take on the proprietary risk of that position.

(b) FX Sales: This is a bank-offered service that manages, sources, and communicates with clients about trading opportunities. FX Sales communicates with FX Trading, which sets a price level when a client wants to execute an instrument. This group is responsible for getting the client to transact with the bank, based on its service orientation and ability to work with its FX Trading group to offer competitive pricing and liquidity on FX instruments. This FX Sales function should not be confused with any sales function which exclusively promotes the FXPB product itself."

122. In DBAG, the Trade Desk, Execution Desk or Franchise Desk for Complex Options was headed up by Mr Hutchings, and Mr Chin was the relevant trader who entered into EDTs with Mr Said as direct trades. Mr Geisker was the salesman at the Sales Desk, with whom Mr Said would make contact. FXPB was part of a combined group which handled FXPB and FIPB (Fixed Income Prime Brokerage). This was headed

up by Mr Gunewardena as Global Head of FIPB. On the credit side Ms Serafini was answerable to him and below her Mr Spokoyny was answerable to her. On the Product or Business (Sales) side of FXPB, Messrs Quezada and Giery, as Product Specialists in FXPB were responsible to Ms Liau as Chief Operating Officer of FIPB and Head of Product FXPB. She in turn was accountable to Mr Gunewardena. All of these individuals worked in the 60 Wall Street offices of DBAG in New York.

123. FXPB Operations were based in New Jersey where they were run by Mr Steven Kim, as Global Head of FXPB Operations. Under him in 2008 were two line managers who were responsible for supervising five or six client services representatives (CSRs), including Mr Walsh, the CSR for SHI and, amongst other CSRs, Ms Ng, with whom he shared confidences and the problems with which he was faced. Also under Mr Kim were Ms Ogilvie to whom Mr Manrique was accountable and Ms Greenberg, who unlike the rest of the Operations team was based in New York and was responsible for "onboarding" and transition of clients on to the FXPB systems. Thus, apart from Ms Greenberg, there was physical separation between FXPB Operations in New Jersey and the FXPB Sales (Product) team in New York, as well as the "Chinese wall" between FXPB generally and DBAG's Trading/ Sales/ Franchise desk.

124. Mr Quinn's report continued thus:

> "30. Further, and as I explain below, there was no one-size-fits-all FXPB service. On the contrary, in the relevant period from November 2006 to November 2008, the FXPB service offered by banks acting as prime brokers varied from bank to bank and from client to client. This is because the FXPB service offered by a bank to a client would differ from client to client and take into account the client's characteristics and set up.
>
> 31. FXPB was first conceived in 1994. A convenient summary of the evolution of the FXPB market is set out in a document that was presented to institutions in 2005 by the Federal Reserve (the Product Overview and Best Practice Recommendations) as follows:
>
> > "*Prime brokerage emerged in the early 1990s with the use of semi-formalized "give-up" arrangements initiated by a few financial institutions. The product gained momentum in the late 1990s when several banks entered the prime brokerage business with dedicated market and sales efforts as well as tighter and more formal operational controls, procedures and processes. This focus laid the foundation for a rapid expansion of the client base.*"
>
> 32. FXPB, as it is now known, was commonly called "FX Clearing" at this point. It was only in the 2000's that it became commonly known as FXPB.

33. By 1998, there were three institutions that offered the FXPB/FX Clearing product as a designated offering: ABN-AMRO, AIG and Deutsche Bank/Bankers Trust. These institutions offered a dedicated FXPB team (separate from FX Trading and Sales), a senior FXPB relationship point, and carved out "give-up" lines that were exclusive for the client's use. Every bank has a line of credit with other banks. The FX Prime Broker would use a portion of these credit lines between the banks for the client's exclusive use to trade FX transactions.

34. By 2004, the number of FXPB service providers had grown to more than 20 institutions, including banks, investment banks, insurance companies, and niche broker-dealers, which provided some form of FXPB offering to more than 500 clients. The product had evolved from simple FX spot, FX forwards, and short dated swaps "give-ups" to include more complex transactions.

35. By 2008, more than 25 entities offered some sort of FXPB. This list included US and European commercial banks, investment banks, insurance companies, retail FX firms, small broker dealers and some corporate entities. Every firm that offered FXPB seemed to have a different product offering. The nature of their offering correlated with the firm's core client base, technology and operational robustness, research focus and overall credit rating. The main users of FXPB services were hedge funds that actively traded FX as an asset class for their portfolio. Other users of FXPB emerged over the period 1994-2008 and typically included small commercial banks, small broker-dealers, high frequency traders, European and Asian private banks, large and small corporations and retail-focused web-based FX trading firms.

36. Although I am not a compliance expert, I had a broad understanding of the regulatory framework in New York. My experience was that as more banks offered FXPB, the Federal Reserve and the Office of the Comptroller of the Currency started taking a more proactive interest by asking more questions about the business in FXPB starting in early 2001. These regulators were interested as FXPB was situated within the banking (rather than securities or broker dealer) entities of banks.

37. In or about 2005, the Product Overview and Best Practice Recommendations were presented by the Federal Reserve addressing the role and structure of FXPB. This overview did not constitute binding or enforceable guidelines. Rather, the document emphasized that the recommended best practices "were intended as goals rather than binding rules".

38. Other regulatory bodies like FINRA, the SEC, the NYSE and the CFTC had no direct authority over establishing or enforcing regulations with respect to the FXPB product specifically, or licensing professionals involved in offering the product, and I never came across such regulators in my FXPB practice.

39. Given the absence of formal regulation or binding guidelines, there was substantial variance in arrangements which clients negotiated with the various banks individually, which led to big differences in the operational processes of the participants involved.

40. However by 2006 there were some key facets to executing "give-up" transactions with FX Prime Brokers, which had similar characteristics or practices across industry participants. Some of these included:

(a) Use of Client Documentation: Prior to trading through an FX Prime Broker, the client would typically sign a prime brokerage agreement outlining the terms and legal structure of the service, which may include a list of approved "give-up brokers" and associated financial limits with each broker, and other items like permitted currencies. Other documents that were customarily used included an ISDA Master Agreement (ISDA) and Credit Support Annex (CSA). While documentation was put into place to set out the terms of the relationship with an FX Prime Broker, the actual content and terms of these documents varied greatly from bank to bank and client to client, reflecting substantial variation in the business model used by each bank and applied to each client.

(b) Use of Bank to Bank Documentation: The FX Prime Broker negotiated a "give-up" agreement with the executing brokers [referred to in this action usually as a Counterparty Agreement].

(c) Formalized access to specific banks' credit lines by each FXPB client: The FX Prime Broker allowed the client to use its interbank lines of credit so that it could transact contracts with numerous executing brokers as specified in the "give-up" agreement. Very often, an FXPB arrangement would require the client to post collateral with the FX Prime Broker as a safeguard against the total risk of the client's trading positions, for the bank's protection.

(d) Trade confirmation timing: It was market practice for there to be a period of time in which an executing bank would confirm a trade with the FX Prime Broker for a transaction. The FX Prime Broker would not be regarded as having a trade until both parties had reported the trade. After the suggested

period had elapsed, it was common practice for an FX Prime Broker to reach out to the party that had not reported for confirmation. If neither party had reported the trade, it was impossible for an FX Prime Broker to know a trade had been executed. Reporting methods included: Reuters 3000 Machine (FX chat and communication system), fax, phone, File Transfer Protocol file (FTP) or email. Some banks who were on the Triana platform offered this system to their clients. By 2006, it was commonplace to receive an FTP file that was straight through processed from the client into the bank's internal FX booking systems for all FX spots, vanilla options and forwards. These FX spots, vanilla options and forwards generally represented more than 90 per cent of all transactions done by clients and, due to the degree of automation, the FXPB team had minimal manual involvement.

(e) Clearing and settlement functions: The FX Prime Broker would be solely responsible for matching, reconciling, and inputting the trades into the bank's internal systems. Matching a trade is meant to ensure that the client and the executing broker have exactly the same trade details. If a trade is matched properly, the FX Prime Broker then inputs an equal and opposite transaction between itself and the client to ensure the FX Prime Broker ends up with a flat position. While the FX Prime Broker takes credit risk by the provision of a credit line which gives the clients access to the FX markets, the ending net position for the FX Prime Broker is flat, reflecting the complete offset between the client trade and give-up received. If a trade was matched it would have then been settled in accordance with its terms.

(f) Reporting: Typically, some basic reporting of the trades executed would be provided by the FX Prime Broker to the client on a daily basis. The type, method and detail of reporting would vary between institutions and clients. As I have already explained, the FXPB service provided would differ from client to client and that was particularly true of any reporting arrangements made. Any reporting in the context of an FXPB service was primarily to provide a record of the trades the client had selected and executed in the name of the FX Prime Broker.

(g) Access to client information: Customarily, FXPB staff sat on a different floor and used different systems (with restricted access for FXPB staff) to the FX sales/trading department. This ensured a separation of duties for operational control, and confidentiality to preserve the integrity of client information (so that only FXPB had access to clients' position information). The effect of this was that sales and traders had no access to clients' position information, aside from what was traded directly with the bank.

(h) Client interaction: FXPB professionals were solely responsible for the client-facing operational aspects of the FX client relationship. FXPB would not customarily be involved when clients sought advice or research from FX sales coverage.

41. Even though there was some consistency with regard to the broad roles and functions of FXPB providers, each FXPB facility was typically very different from the next. The lack of regulation and any specific regulatory guidance resulted in substantial variances in the FXPB service provided to different clients by different banks.

42. Most FXPB facilities would take into account a client's existing operational and trading infrastructure. One client might do their "forward rolls" (which is taking a currency position from a near date to a date further in the future) at the end of the day, another client might do them at 12pm EST and another might do them trade by trade.

43. Operationally, the process conducted by FXPB for a client was not standardized due to the diversity of each client's trading strategies. One client might have preferred to receive trade confirmations via fax, another by telephone, another by website, and another by FTP file.

44. In addition, the size of a client's operation and the client's level of sophistication and customization needs typically informed the FXPB process. For example, larger clients who had a technology infrastructure and strong operational support were more streamlined tended to use automated processes to interact with their FX Prime Broker. Smaller clients with fewer resources tended to use more manual processes, both in operations processes internally and how they interacted with the FX Prime Broker. However the provision of the Triana system by some FXPBs enabled clients to automate the process for certain types of vanilla trades.

45. A broad range of documents for creating an FXPB facility were or could be used. These documents were the sole source of governance of the relationship between the FX Prime Broker and the client, in the absence of any specific regulations that were applicable to FXPB. Furthermore, there was no Exchange/Central Clearing Counterparty or regulatory margin policies that existed for FXPB. The use of specific documents was a function of a bank's policies in addition to both the type of client and the nature of their proposed trading activities. Those documents could include (though these were not necessarily always used) an FXPB agreement, ISDA, CSA, give-up documents, Collateral Agreement, and Trader authorization list.

> 46. Since the actual provisions in these documents were not required by the terms of an exchange (as was the case in futures markets), there was great flexibility in the language and customization of these bilateral documents. The ISDA and give-up documents were fairly industry standard, but these and the other documents were always subject to negotiations based on the bank's unique credit or risk characteristics and the client's priorities, needs, and negotiating power."

125. It should be noted, therefore, that Mr Said concluded FX transactions for SHI by initiating contact with the Sales/Trading team at other banks such as Credit Suisse (CS), Goldman Sachs (GS) and MS or with DBAG's own Sales/Trade Desk. Having agreed the terms of a transaction, the terms of that deal would be notified to DBAG's FXPB department by Mr Said and by the other bank with whom DBAG had a Counterparty Agreement. That trade took effect as a transaction between the other counterparty bank and DBAG, through the agency of Mr Said and, subject to matching of the details provided, an offsetting trade would then come into effect between DBAG and SHI (the Give-up or Agency Transaction). This structure would commonly be referred to as an Indirect Trade. Where Mr Said, for SHI, concluded a trade with DBAG's Trade Desk, however, the structure was necessarily different. Self-evidently DBAG's Trade Desk could not enter into a contract with DBAG's FXPB desk as they were each part of the same legal entity but the mechanics of the transaction operated in the same way. This was referred to as a Direct Trade, but was treated by FXPB as if there were two distinct legs to that trade.

126. The difference in function between the Trade Desk and the FXPB desk has significance in the context of some of the allegations made by SHI. FXPB was a high volume, low cost clearing arrangement whereby SHI gained access to DBAG's credit status in order to effect its own transactions with the benefit of putting up such collateral as DBAG demanded to DBAG alone, as opposed to having put up separate collateral to each of the banks with whom it had negotiated the trades in question. According to Mr Quinn, the FX prime broker was not understood to play and did not play any role in assessing or advising on the market risk or possible gains or losses from the transactions that the customer concluded. Ordinarily, the FX prime broker would only know about the transaction after it had been agreed by the customer and the Counterparty, on receipt of notification from the customer and Counterparty, whether by automated means, electronically or otherwise. The customer, acting as agent for the Prime Broker in concluding the agreement with the Counterparty, instigated the trade and notified the Prime Broker of it with the offsetting trade between the Prime Broker and the Agent springing up without anything in the nature of a trading decision on the part of the Prime Broker itself and without any opportunity for any discussion of the trade or the risk involved in it between the Prime Broker and the Customer.

127. In the case of Structured Options concluded under the FXPBA, prior approval had to be obtained by SHI from DBAG before they could be Accepted Transactions falling within the ambit of the FXPBA but the individual treatment of these items cannot change the basic nature of the relationship between the Prime Broker and the customer. The FXPBA envisaged most of the trades being effected in the ordinary way, by automated entry by Mr Said or by manual inputting of information supplied

by Mr Said, with matching of this by DBAG against the details provided by the Counterparty.

128. Mr Quinn expressed his understanding of the role of the FX Prime Broker in this way:

> "51. The role of an FX Prime Broker was understood in the market to be to facilitate the clearing of client-traded products which were approved in the documentation. The FX Prime Broker was not understood to play, and in my experience did not play, any role in assessing or advising on the market risk or possible gains or losses from those transactions. Indeed, customarily the FX Prime Broker would only know about the transaction after it had been executed by the client. …
>
> 52. As providers of a clearing service whose primary function is to match and settle trades, it was not customary for FX Prime Brokers to offer risk management services to clients, even though I became aware some FX Prime Brokers offered limited portfolio metrics. By "portfolio metrics" I mean data such as volatility estimates about the underlying currencies in a client's portfolio. If an FX Prime Broker did offer any limited portfolio metrics, those would only be to aid the client's own risk management and not intended as a risk management service. Some FXPB clients outsourced their risk management (although many utilized their own proprietary risk systems) and there were a number of outside vendors who offered third party risk management software, such as Risk Metrics, SunGard, Algorithmics and others. The provision of risk management was not, however, customarily a service provided by FX Prime Brokers even as an add-on feature available for an additional fee."

129. The expert appointed by SHI, Ms Rahl, was in broad agreement with this description but in cross-examination said that risk reporting obligations could be undertaken by a Prime Broker and, where they were, they should be fulfilled. She considered that the position of a bank which entered into direct trades or incorporated a PWM department should be seen differently from the position of a stand alone FX Prime Broker. Ms Rahl also considered that a bank would be subject to obligations in respect of margining. She was prepared to accept that the function of margin was primarily to provide credit protection for the FX Prime Broker but did not accept that it could not also represent a calculation to be used by the client as an assessment of the market risk of the positions it had cleared through the FXPB. Mr Quinn did not see any direct relationship between risk reporting by the Prime Broker, even if that was undertaken as an obligation, and calculation of margin since they were distinct functions effected by the FX Prime Broker for different purposes. The calculation of margin was for the Prime Broker's protection whilst risk reporting was for the client's purposes. Ms Rahl disagreed on the basis that if margin was "risk based", which she took to be the case with VaR, it could be used as a risk assessment tool. It was agreed between them that there was no regulatory standard in respect of determining the amount of margin for FX OCT derivatives.

130. In her first report, Ms Rahl gave her opinion that it was at all material times the custom and practice of a reasonably prudent and competent investment bank to have a policy or policies regarding high risk derivative transactions to require that the bank explain the risks of the instrument to some person at the client who was not the immediate trading contact – i.e. a supervisor or a Chief Risk Officer. That second person could be more senior than the trading contact or could be independent of the trading contact. This evidence was adduced in support of a plea by SHI that, under New York law, on the true construction of the FXPB Agreement, in the light of factual background and/or as an implied term, it was a term of the FXPBA that the bank would ensure that, in circumstances when Mr Said proposed to enter into a high risk product, particularly a leveraged derivative (such as an EDT), an accurate explanation of the risk level of the product would be given to Mr Vik; alternatively the bank would take reasonable care to ensure that in such circumstances an accurate explanation of the risk level of the product was given to Mr Vik. The plea related specifically to the FXPBA and Ms Rahl's first report drew no distinction at all between direct trades with DBAG and indirect trades with other Counterparties. Following the sequential service of Mr Quinn's report, Ms Rahl responded by saying that the custom and practice to which she had referred in her first report regarding high risk products applied only to direct trades and SHI amended its case accordingly in Further Information served on 1st February 2013. Ms Rahl agreed with Mr Quinn in the Joint Expert Memorandum of 31st January 2013 that the FX Prime Broker was not providing any advisory service to the client and that it was not customary for an FX Prime Broker to seek assurances that clients had adequately considered the market risks of the transactions which they sought to clear with the FX Prime Broker on "stand alone" trades as opposed to direct trades.

131. Her evidence was, however, that she considered that there was a subset of transactions that were so unusual and risky that they would, even if permitted under the terms of a Prime Brokerage Agreement, require FXPB approval. She maintained this in cross-examination but there seemed to be no logical basis for it at all save for the contractual provision in the FXPBA in relation to Structured Options. It was a feature of Ms Rahl's report that, instead of giving expert evidence on the market, she sought to refer to the specific contractual provisions and the facts surrounding the DBAG/SHI relationship, as she saw them.

132. It was common ground between the experts that it was standard market practice for transactions to be booked accurately by the Prime Broker on the day of trading, although it was not uncommon in Mr Quinn's view to have trades which were not booked on the same day that they were traded by reason of the complexity that some trades involved. Some required manual inputting with a careful review of the terms of the contract. Ms Rahl considered that although there was no uniform identifiable set of standards which would be customarily applied and although the FX market was self-regulated, clients could reasonably expect accurate and timely booking and confirmation of trades, reporting and margining, irrespective of the systems actually used by the Prime Broker. Although she agreed that a trading professional would generally maintain his own records, that did not change her opinion that the Prime Broker had an obligation to keep accurate records and there was no reason why a trading professional should not be able to rely on an FX Prime Broker to assist him with his records. She considered that the accurate booking, valuing and recording of transactions was the minimum standard of service and the very basis of the prime

brokerage business, whilst Mr Quinn did not consider these were core services offered by an FX Prime Broker to its client. The services that were offered would of course depend upon the contract between the parties and no analogy with bank "checking account statements" was appropriate.

133. Regulatory material relied upon by Ms Rahl was all for the purposes of audit of the bank by the examiners of the Office of Comptroller of Currency (OCC), seeking to ensure that banks were run properly with a view to avoiding counterparty risk for the bank's own protection. In my judgment, as Mr Quinn said, the only relevant guidance appeared in the Federal Reserve Foreign Exchange Prime Brokerage Product Overview and Best Practice Recommendations of 2005. These were not binding or enforceable. The core services offered by a prime broker to a client were there said to be "leverage, access to market, liquidity, and consolidated settlements, clearing and reporting". This, on Mr Quinn's evidence, corresponded with his view as to the Prime Broker's functions, namely that of allowing the client to use the Prime Broker's credit lines and the clearing and settlement of trades. The reporting to the client might take many formats but was to enable the client to reconcile its own records with those of the prime broker. There was no custom or practice which applied in respect of the reporting, save basic reporting of this kind. Booking a trade in the prime broker's books was done for its own internal management purposes, namely management of risk and exposure. Any entity would seek to do this accurately for its own benefit but how it chose to do so was entirely a matter for itself. Valuation was not part of any core service provided by an FX Prime Broker and, typically, traders did their own valuation internally with the aid of a third party system, or by employing an administrator who would be responsible for managing valuations and striking monthly Net Asset Values if that was required. It was the custom and practice for FXPB clients to keep their own valuations.

134. Mr Quinn's opinion was that there was no formalised industry standard regarding booking and recording of FX transactions and that in the 2006/2008 timeframe there were many new products which were inevitably going to be difficult to fit into existing systems of booking. If the trade fell within the ambit of the Prime Brokerage Agreement, the Prime Broker had no option but to take the trades in and to book and record them as best it could. Similarly, valuation and margining were arguably the most challenging aspects of FXPB throughout 2008, especially for complex structured FX options. There was no standard market practice in valuation of the products, nor in the imposition of margin based thereon. It was in his view customarily understood in the market that the function of margin was to provide credit protection for the FX Prime Broker and was not to be a calculation for the client of the market risk of the positions it had cleared through that Broker. There was no regulation governing specific collateral levels and clients therefore appreciated that the FX Prime Broker might be flexible about margin. There was intense pressure between 2005 and 2008 between banks, in seeking to match or better competing banks' credit/margin terms in order to win new business. There were also situations in which an FX Prime Broker might choose not to call for all the margin to which it was entitled. It was customary for clients to have their own risk system, or to utilise the services of a third party technology provider to evaluate their overall exposure to the market. Where the Prime Broker did provide trading information, there was dialogue between the Prime Broker and the customer to reconcile mismatch errors but not to reconcile risk evaluation. Mr Quinn was not aware of any FX Prime Brokers who offered any form

of comprehensive risk exposure or metrics reporting during November 2006 to November 2008.

135. In cross-examination Ms Rahl stated that, for direct trades, there was clearly an obligation on an investment bank to have proper records. She said that for "give-up trades" she had not formed an opinion. She went on to say however that FXPB reporting was not simply to provide a record of trades the client had selected and executed in the name of Prime Broker and that she considered that whatever the client received by way of report should be accurate and whatever reports were provided were the services upon which the parties had agreed.

136. So far as MTM and exposure were concerned, she considered that all that mattered to the client was what the prime broker thought about it for collateral purposes. The client was reliant upon that reporting. She agreed that valuation was not a core service but stated that it was part of leverage margining and that leverage for a collateralised product assumed an ability on the part of the Prime Broker to calculate margin. Valuation was therefore not just for the Prime Broker's own purposes. It was a regulatory requirement for the calculation of margin. She agreed that margin was sought by FX Prime Brokers to protect themselves against the risk of client default and came forward with no other reason for it. She agreed it was not put in place to protect the client from incurring loss but to give the Prime Broker credit protection. She agreed with Mr Quinn that the provision of collateral was conventional and that margin was for the protection of the bank and not a service to the client. They both agreed that there were no regulatory standards for the manner in which margin was to be charged in FXPB.

137. In my judgment it is clear that the core services of a Prime Broker are as Mr Quinn described them. It is also clear that a Prime Broker, when conducting valuations of trades, does so for its own benefit and protection, so that it can charge margin in relation to those trades. In the ordinary way, a trader manages its own risk by reference to its own valuations and there is no obligation on the Prime Broker to calculate or call for margin, since any entitlement to do so is provided for the bank's own benefit and not for that of the customer. Indeed the customer's own interests are usually directly contrary to those of the Prime Broker, since the customer will wish to minimise the amount of margin to be put up in order to obtain the greatest amount of leverage and the greatest scope for trading. The standard position when margin is being negotiated is for the client to seek to restrict the figure to as low a level as the Prime Broker will wear.

138. Of course there is scope for agreement to the provision of additional services, over and above those which obtain in any Prime Brokerage relationship. The parties can expressly agree to specific forms of reporting, whether of the trades done, the valuation of those trades or the calculation of margin in relation to them. That is a matter of freedom of contract. In the absence of specific agreement to a broader scope however, I accept Mr Quinn's evidence that, as a matter of market practice, FX Prime Brokers' duties were to provide basic information for reconciliation of trades and positions and that traders who trade institutionally in the market know their own positions, track them and risk manage them. If a service is contractually agreed, it should however be performed.

139. Ms Rahl accepted that the FX Prime Broker was not obliged to call for margin but suggested that it had to communicate the fact if it was not calling for it. She said she did not know if the bank could call for less collateral than that to which it was entitled but said that it was unacceptable to make partial calls without saying what it was that was being done. She maintained that it was standard practice in margining that the client would be informed of the total collateral entitlement, the extent of any demand by reference thereto and the reasons for not calling for collateral in full and the circumstances in which further demand for it might be made. She considered it misleading not to call for collateral when collateral was due and, although a bank could decide to waive its entitlement, it ought to inform the client that it was so doing.

140. All of this was said to be based upon what Ms Rahl had seen done in the past but she could not remember if that was in an FXPB context or not. She considered it standard practice in margining and that there should be no distinction for FXPB. I was unable to accept any of this evidence as giving rise to a market practice which could affect contractual rights. Ms Rahl had no relevant experience of the FXPB market to bring to bear on the subject and once it is accepted that any provisions for margining are for the benefit and protection of the Prime Broker, and not the customer, it is hard to see how there can be any applicable custom which could give rise to an obligation affecting the exercise of that entitlement.

141. All in all I am unable to find that there is any sufficiently well known custom or market usage which could impact upon the contractual obligations of the parties as set out in the FXPBA which is governed by New York law, nor the other 2006 Agreements which are governed by English and Swiss law. The question whether or not DBAG agreed to provide additional services, beyond the core services inherent in FX Prime Brokerage depends upon the proper construction of the FXPBA, in the light of the nature of FX Prime Brokerage and the surrounding circumstances known to the parties and/or upon the implication of terms into the FXPBA in accordance with the relevant principles of New York applicable to the construction of contracts and the implication of terms therein.

7(d) The Foreign Exchange Prime Brokerage Agreement (the "FXPBA")

142. The introductory paragraph to this Agreement sets out its purpose in clear terms:

> "This Agreement describes the arrangement pursuant to which Deutsche Bank AG London ("DBAG") authorizes Sebastian Holdings, Inc. ("Agent"), to act as its agent in executing spot, tom next, deliverable and non-deliverable, forward foreign exchange transactions with a maximum tenor of 24 months ("FX Transactions"), gold, silver, platinum and palladium ("Precious Metals") spot and forward transactions with a maximum tenor of 24 months which provide for settlement without physical delivery of metal ("Precious Metals Transactions"), and currency and Precious Metals options with a maximum tenor of 24 months and which provide, in the case of Precious Metals options, for settlement without physical delivery of metal ("Options") (collectively, the "Counterparty Transactions") with the Counterparties listed in Annex A hereto (each, a "Counterparty") and on the terms set forth in Annex B

> hereto. Capitalized terms not defined herein shall have the meanings assigned to them in the 1998 FX and Currency Option Definitions (as published by the International Swaps and Derivatives Association, Inc., the Emerging Markets Traders Association and The Foreign Exchange Committee)."

143. The FXPBA operates to confer authority on SHI to commit DBAG to transactions with identified Counterparties, subject to its terms. The original named Counterparties in Annex A were Citibank, N.A., Credit Suisse First Boston, Goldman Sachs International and Den Norske Bank although additional Counterparties, such as MS, Sociétè Generale and Lehman Bros, were later added. SHI was thus enabled to act as DBAG's agent in concluding contracts ("Counterparty Agreements") between DBAG and the Counterparties in accordance with the terms of the FXPBA. This SHI did, concluding transactions with the named Counterparties, of which it would then inform DBAG ("Counterparty Transactions"). Under the terms of the FXPBA, DBAG was contemporaneously to enter into an equal and offsetting transaction with SHI (an "Agent Transaction"). Although there was a provision which would have allowed DBAG to "give up" such transactions to approved third parties, there were no approved third parties for this purpose, with the result that each offsetting transaction was always between SHI and DBAG as an Agent Transaction.

144. The FXPBA contained express limits on the authority thus given to SHI to commit DBAG to these Counterparty Transactions and thus to the offsetting transactions between SHI and itself. The introductory paragraph, set out above, referred to the types of authorised transactions, which, so far as is material, included "FX Transactions" as defined and "Options" as defined (including specifically currency options with a maximum tenor of 24 months).

145. Additionally, paragraph 1 of the FXPBA provided as follows:

> "1. This authority is expressly limited for each Counterparty in that (a) for any Settlement Date the Net Daily Settlement Amount for such Counterparty may not exceed the Settlement Limit as specified in Annex A hereto and (b) the Counterparty Net Open Position may not exceed at any time the Maximum Counterparty Net Open Position as specified in Annex A hereto. The Settlement Limit and the Maximum Counterparty Net Open Position shall apply to all Counterparty Transactions entered into between DBAG and the Counterparty branch specified in Annex B."

146. There was no Counterparty Net Open Position specified for any Counterparty in Annex A but at a later stage limits were set in respect of GS and Sociétè Generale. In Annex A, the Net Daily Settlement Amount for each Counterparty was specified as US$200 million and the Maximum Counterparty Net Open Position limit was set later and then increased in May 2008 to US$600m and US$800m respectively for those two Counterparties. There was thus an express agreed restriction to the trading of SHI to these amounts on a daily basis for the net amount owing to DBAG by a Counterparty for any settlement date. The Net Daily Settlement Amount was defined as the net amount owing to DBAG by a Counterparty (excluding options prior to their exercise) on any Settlement Date. The Counterparty Net Open Position was defined

as the “aggregate amount owed by the Counterparty to DBAG” calculated by reference to the MTM of each FX or Precious Metals Transaction and the Dollar Countervalue of the delta equivalent of each sold or bought option.

147. Clause 1 went on to refer to “Netted Options” and “Structured Options”. Netted Options were (excluding Structured Options), options sold by DBAG and owned by the Counterparty which could be discharged and terminated together with an Option (other than a Structured Option) sold by the Counterparty and owned by DBAG, subject to certain criteria (e.g. being of the same currencies, duration and style and having the same strike prices). Structured Options were excluded from the calculation of the Net Open Position. They were defined thus:

> “"Structured Option" means any option other than one which is a (i) put or call that does not have special features, or (ii) single barrier option.”

148. Clause 2 provided that SHI should monitor the Net Daily Settlement Amount and the Counterparty Net Open Position for each Counterparty (although there was no Counterparty Net Open Position originally specified), doubtless with a view to ensuring that it (SHI) incurred no breach of the limits set out by the FXPBA. DBAG submits that its agreement to provide “a summary of the outstanding trades and the net exposure with respect to each Counterparty up to two times on each Business Day during which there are Counterparty Transactions outstanding” must be read in this context. The full provisions of Clause 2 appear later in this judgment, when considering what obligations DBAG owed SHI under the FXPBA.

149. Clause 3 provided as follows:

> “Prior to entering into any Counterparty Transactions, DBAG shall have executed a Counterparty Agreement with such Counterparty. Agent [i.e. SHI] shall promptly communicate trade details of each Counterparty Transaction by notifying via facsimile or other electronic means an area of DBAG separate from trading and marketing personnel. Each Counterparty Transaction between DBAG and a Counterparty shall be confirmed and settled in accordance with the terms of the applicable master agreement between DBAG and the Counterparty (a "Counterparty Master Agreement").”

150. DBAG had concluded Counterparty Agreements with the Counterparties set out in Annex A and with later additional Counterparties included by agreement with SHI. It was for SHI to notify DBAG of the transactions it concluded with such Counterparties in the name of DBAG which would then be confirmed and cleared in accordance with the terms agreed between DBAG and the relevant Counterparty. It was Clause 4 that then provided for the corresponding offsetting transaction between DBAG and SHI, in the following terms:

> “4. In connection with entering into each Counterparty Transaction, DBAG shall contemporaneously therewith enter into an equal and offsetting transaction or transactions with, at the discretion of Agent (i) Agent (each, an "Agent

> Transaction") or (ii) one or more of the give up parties listed in Annex C hereto …"

As previously mentioned there were no such parties specified in Annex C so that every Counterparty transaction concluded by SHI gave rise to an Agent transaction between DBAG and SHI.

151. Clause 4 went on to provide:

> "Each Agent Transaction shall be an FX transaction precious metals transaction or option under, and subject to and governed by, the applicable ISDA Master Agreement or other master agreement between Deutsche Bank AG and the Agent, including the Credit Support Annex which is a part thereof (the "Agent Master Agreement"). Agent shall be required to post collateral with respect to its obligations under the Agent Master Agreement (including the Agent Transactions) in accordance with terms and provisions of the Credit Support Annex. DBAG and Agent agree that any breach of this Agreement by Agent shall constitute an Event of Default under the Agent Master Agreement.
>
> ….
>
> Each Agent Transaction and each Give Up Transaction shall be subject to and settled in accordance with any market practice … applicable to, or adopted by, DBAG and the Counterparty in connection with the Counterparty Transaction for which it is offsetting notwithstanding any provision in a confirmation for an Agent Transaction or Give Up Transaction that may be to the contrary."

152. Thus, the effect of the conclusion by SHI of a Counterparty Transaction was to bring into being a contract between DBAG and the Counterparty which, in accordance with the Counterparty Agreements, meant on ISDA terms (as modified by agreement) with margin and collateral requirements as agreed. The offsetting Agent Transaction between SHI and DBAG to which DBAG and SHI were thereby committed was also to be governed by ISDA terms, in accordance with the ISDA Master Agreement between them, including the Credit Support Annex (the "CSA") which provided for the posting of collateral with respect to SHI's obligations. Any breach of the FXPBA by SHI, but not by DBAG, was to constitute an Event of Default under the Agent Master Agreement.

153. The issues which arise in relation to the FXPBA concern the meaning of the words "FX Transactions", "currency options" and "Structured Options" in the context of the authority initially given to Mr Said to conclude transactions on behalf of both DBAG with the Counterparty and SHI with DBAG. The primary instrument by which SHI gave authority to Mr Said is the Said Letter of Authority which uses the same expression "currency options", but makes no reference to Structured Options. It is on that document and those words that SHI's arguments centre, since DBAG has settled all the Counterparty Transactions with the Counterparty banks on the footing that all

the transactions which were concluded by Mr Said with such Counterparty banks were authorised by DBAG and binding upon it. DBAG has thus accepted that Mr Said had authority to bind it to the Counterparties under the FXPBA. It is SHI which contends that he had no authority to bind SHI to DBAG in respect of the EDTs and OCTs.

154. The other central issue which arises is the existence or non-existence of duties imposed upon DBAG by the FXPBA with regard to the booking, recording, clearing and settlement of the transactions and in particular the reporting to SHI of the MTM of the trades and its own margin and collateral requirements in respect of them, in circumstances where the FX ISDA agreement and the CSA entitled DBAG to calculate such margin and demand Credit Support in respect of the total portfolio on a net basis.

155. It is in this context that Clause 2 of the FXPBA falls to be considered in the context of the FXPBA as a whole and the market evidence as to the role and function of a Prime Broker. The FXPBA does not expressly oblige DBAG to book transactions, to record them, to calculate MTM valuations, exposure or margin or to report any of these to SHI, save as set out in Clause 2, which, in its entirety reads as follows:

> "2. Agent acknowledges and agrees that it shall monitor the Net Daily Settlement Amount and the Counterparty Net Open Position for each Counterparty and that DBAG shall not be responsible for any Counterparty Transaction executed by Agent on behalf of DBAG unless (i) giving effect to such Counterparty Transaction does not cause the Settlement Limit or the Maximum Counterparty Net Open Position to be exceeded (without DBAG's prior written consent or recorded verbal consent (confirmed by fax immediately thereafter)); (ii) such Counterparty Transaction meets the criteria set forth in Annex B and (iii) if such Counterparty Transaction is a Structured Option, DBAG shall have approved the particular Structured Option transaction proposed by Agent, including the Counterparty and principal amount of such Structured Option, and such approval shall have been effective when the Structured Option was executed by Agent (an "Accepted Transaction"). DBAG agrees to provide Agent with a summary of the outstanding trades and the net exposure with respect to each Counterparty, up to two times on each Business Day during which there are Counterparty Transactions outstanding. Each Accepted Transaction shall be valid and binding upon DBAG, enforceable against DBAG in accordance with its terms. The dealing arrangement with respect to each Counterparty shall be set forth in a Foreign Exchange Prime Brokerage Counterparty Agreement (a "Counterparty Agreement"). Each such Counterparty Agreement is substantially in the form of a template which DBAG will send you on your request."

156. It can be seen that "DBAG agrees to provide" SHI with a summary of the outstanding trades and the net exposure with respect to each Counterparty up to two times on each

Business Day during which there are Counterparty Transactions outstanding. DBAG submits that the purpose of this provision is plain, because it appears in the context of a clause which requires SHI to monitor the Net Daily Settlement Amount and the Counterparty Net Open Position for each Counterparty in order to ensure that the contractual limits are not exceeded. The contents of the "summary" are not specified, but bearing in mind that purpose, must at least include the date of each trade, some identifying description of it, the identity of the relevant counterparty and the sums involved in the transaction so that settlement figures and Counterparty Net Open Position figures can be monitored against the limits specified - the Settlement Limit and the Maximum Counterparty Net Open Position.

157. Whereas the Settlement Limit refers to sums owing by a Counterparty on any Settlement Date, the Counterparty Net Open Position is to be calculated in accordance with a series of provisions set out in Clause 1 (A) to (E), in order to assess the "aggregate amount owed by [each] Counterparty to DBAG". This is to be done by summing the respective short and long positions on each currency in all the open individual FX Transactions between DBAG and the Counterparty (concluded by SHI), expressed in US$ and aggregating the result with the US$ Countervalue of the delta equivalent of Options purchased or sold by the Counterparty, taking into account Netted Options.

158. The "net exposure with respect to each Counterparty" to which Clause 2 refers must mean the amount owing by such Counterparty in relation to these two different limits, with their different foci and methods of calculation. DBAG's agreement to provide the figures for net exposure is clearly for the purpose of enabling SHI to perform its monitoring obligation in circumstances where the effect of not doing so could be to vitiate the authority given by DBAG to SHI to conclude Counterparty Transactions. Clause 2 itself provides that DBAG is not to be responsible for any Counterparty Transactions executed by SHI if giving effect to such transactions causes the Settlement Limit or the Maximum Counterparty Net Open Position to be exceeded without its prior written consent or recorded verbal consent confirmed by fax immediately afterwards.

159. DBAG's agreement was to provide the information "up to two times on each Business Day during which there are Counterparty Transactions outstanding". The phrase "up to two times" appears to provide a degree of latitude in the obligation. DBAG contends that it is to be construed as a provision giving a choice to SHI to ask for such information, but with DBAG only required to provide it no more than twice. If no request is made, then there is no obligation to provide the information. SHI contends that it provides an obligation on DBAG to provide the information once a day, and, at SHI's option, a second time, if so asked. It does not appear that SHI in fact ever did ask for such information, whether because Mr Said never felt the need to do so, being confident of being well within the limits in question, or because he did not want to raise the issue. Where there was no specified Maximum Counterparty Net Open Position, there would be no reason to ask and, as will be noted, Structured Options fell outside this regime in any event.

160. In my judgment, since the purpose of the provision of such information was, as DBAG submits, to inform SHI so it could monitor its trading against the limits, so that it was not at risk of exceeding them and running the risk of concluding trades in the name of DBAG which DBAG would not acknowledge, the Clause must be read as

requiring DBAG to produce such information once or twice a day if and as requested by SHI. If there was no request, there was no obligation to provide the information.

161. It will be noted that the information which DBAG agrees to provide is "a summary of the outstanding trades and the net exposure with respect to each Counterparty". The information to be given relates to outstanding Counterparty Transactions and to realised profit and loss (unpaid cash settlement figures between DBAG and the Counterparty banks) on such trades and to unrealised profits and losses (in the shape of MTM on those trades between DBAG and the Counterparty banks). The latter would appear to correspond to the margin requirement between DBAG and the Counterparty banks – essentially MTM on the trades between them (variation margin), without any initial margin, but it does not relate to margin calculations or margin requirements as between DBAG and SHI. Those are to be found in the FX ISDA and the Schedule and CSA thereto.

162. The figures thus to be produced by DBAG, if asked by SHI, represent global figures in respect of the totality of outstanding Counterparty Transactions, per Counterparty, rather than individual amounts for each trade. The figures do not represent SHI's total portfolio upon which margin could be charged under the FX ISDA, the Schedule and the CSA, with both initial margin and variation margin. The whole of Clause 2 relates to the position between DBAG and its Counterparties and the effect of SHI's actions when concluding transactions, as between DBAG and the Counterparties.

163. Nor is there any reference here to transactions between SHI and DBAG directly without the involvement of any Counterparty, which would give rise to their own margin requirements which would then fall to be taken into account in any calculation of margin and collateral as between SHI and DBAG under the ISDA Agreements, along with the indirect transactions (the Agent transactions) as part of the total SHI portfolio.

164. Furthermore, it is common ground that, if the EDTs and OCTs were currency options at all, and if they fell within the ambit of the FXPBA, they would all be "Structured Options" within the meaning of the FXPBA. This means that they did not fall to be taken into account in assessing the Maximum Counterparty Net Open Position nor require SHI to monitor them. Each "Structured Option" was to be the subject of specific agreement by DBAG, as provided by Clause 2, at the time SHI concluded any such trades with a Counterparty. Thus "Structured Options" fell into a special class of options, outside the Counterparty Net Open Position provisions, each of which had to be approved before being concluded by SHI and taken in by DBAG, in order to be an "Accepted Transaction".

165. Since the monitoring obligation was to monitor the Counterparty Net Open Position and Structured Options fell outside that, the requirement to provide a summary of the outstanding trades and the net exposure with respect to each counterparty, if asked, could not include the EDTs and OCTs and, for the reasons set out above, did not require any report of MTM valuations on individual trades or margin requirements for the portfolio as a whole.

166. Both the Settlement Limit (initially set at US$200 million, but increased later for some if not all Counterparties) and the Counterparty Net Open Position (set in 2008 for two Counterparties at US$600m and US$800m respectively) are provided in the

FXPBA for the protection of DBAG. Each involves the aggregation of figures on a "per Counterparty" basis and Clause 8 gives DBAG the right unilaterally to amend those limits on 20 days notice or to do so immediately in the event of reasonable grounds to believe that the Counterparty is unable to perform any of its obligations under the Counterparty Master Agreement. Moreover, under Clause 11, if SHI were to exceed one of those two limits without DBAG's prior consent, DBAG would be entitled to terminate the FXPBA immediately. The limits are provided for DBAG's benefit and are capable of unilateral modification by it. The agreement to provide a summary of outstanding trades and net exposure in relation to each Counterparty was for the purpose of enabling SHI to monitor its obligations and to ensure that it stayed within the limits provided by Clause 2. No request was ever made for a report of the net exposure with respect to a counterparty for the purpose of monitoring that limit let alone for a report of net exposure on Structured Options which fell outside that limit, so that DBAG cannot be in breach of Clause 2. In short, the express terms of Clause 2 are of no direct assistance to SHI in its allegations of breach of a duty on the part of DBAG to book, value and record trades and to margin them and report such figures. SHI has never alleged any breach of the Clause, as so construed.

167. Clause 2 does not therefore include an obligation to provide information on MTM values or exposure for each individual transaction nor for the SHI/DBAG position as a whole. *A fortiori*, there is no obligation to provide any information with regards to any collateral that DBAG might require. Any obligation on the part of DBAG to provide information of this kind is not to be found in Clause 2 and could only be founded on an implied term of the FXPBA as a whole, in circumstances where Clause 2 provides for a much more limited type of information to be given.

168. Clause 4 of the FXPBA provided that each Agent Transaction should be subject to and governed by the terms of an applicable master agreement between DBAG and SHI, namely the FX ISDA, with its Schedule and CSA.

7(e) The FX ISDA, the Schedule and the CSA

169. The most important provisions of the FX ISDA, the attached Schedule and the CSA relating to Credit Support, collateral and margin (though the last named term is not used in these documents) are as follows:

> "The FX ISDA
>
> …
>
> 5. Events of Default and Termination Events
>
> (a) Events of Default. The occurrence at any time with respect to a party or, if applicable, any Credit Support Provider of such party or any Specified Entity of such party of any of the following events constitutes an event of default (an "Event of Default") with respect to such party:-
>
> (i) Failure to Pay or Deliver. Failure by the party to make, when due, any payment under this Agreement or delivery under Section 2(a)(i) or 2(e) required to be made by it if such failure

is not remedied on or before the first Local Business Day after notice of such failure is given to the party;

…

(iii) Credit Support Default.

(1) Failure by the party or any Credit Support Provider of such party to comply with or perform any agreement or obligation to be complied with or performed by it in accordance with any Credit Support Document if such failure is continuing after any applicable grace period has elapsed;

…

(3) the party or such Credit Support Provider disaffirms; disclaims, repudiates or rejects, in whole or in part, or challenges the validity of, such Credit Support Document;

6. Early Termination

(a) Right to Terminate Following Event of Default. If at any time an Event of Default with respect to a party (the "Defaulting Party") has occurred and is then continuing, the other party (the "Non-defaulting Party'") may, by not more than 20 days notice to the Defaulting Party specifying the relevant Event of Default, designate a day not earlier than the day such notice is effective as an Early Termination Date in respect of all outstanding Transactions.

The Schedule

Part 1

…

(l) "Additional Termination Event" will apply. The following shall constitute Additional Termination Events …

…

(iii) Failure to Provide Additional Collateral. If Party A [DBAG] shall for any reason deem that there is/are insufficient Eligible Assets held pursuant to the terms of the Credit Support Document [defined in the Schedule as the Pledge Agreement] and available to satisfy Party B's [SHI's] present or future obligations under this agreement or Party B's present or future obligations under any other agreement or arrangement between Party B and Party A or its affiliates, Party B shall within two Local Business Day's notice thereof deliver additional collateral assets of such type specified by

Party A (which collateral assets shall be delivered and secured pursuant to any existing Credit Support Document or other arrangement in a form satisfactory to Party A in its sole discretion) in an amount as may be required by Party A. If Party B fails to deliver such additional collateral assets, such failure shall constitute an Additional Termination Event with respect to Party B and Party B shall be the sole Affected Party and all Transactions shall be Affected Transactions.

…

Part 5 Other Provisions

...

10. Credit Support Balance

All payments required to be made by Party A in respect of any FX Transaction or Currency Option Transaction under this Agreement (except for payments required to be made under the Credit Support Annex or Section 6(e)) shall be made by way of credit to the Credit Support Balance of the relevant amount and Party A's obligation to make such payment shall be satisfied and discharged in full."

"The Credit Support Annex (The CSA)

Paragraph 2. Credit Support Obligations

(a) *Delivery Amount*. Subject to Paragraphs 3 and 4, upon a demand made by the Transferee on or promptly following a Valuation Date, if the Delivery Amount for that Valuation Date equals or exceeds the Transferor's Minimum Transfer Amount, then the Transferor will transfer to the Transferee Eligible Credit Support having a Value as of the date of transfer at least equal to the applicable Delivery Amount (rounded pursuant to Paragraph 11(b)(iii)(D)). Unless otherwise specified in Paragraph ll(b), the "Delivery Amount" applicable to the Transferor for any Valuation Date will equal the amount by which:

(i) the Credit Support Amount

exceeds

(ii) the Value as of that Valuation Date of the Transferor's Credit Support Balance (adjusted to include any prior Delivery Amount and to exclude any prior Return Amount, the transfer of which, in either case, has not yet been

completed and for which the relevant Settlement Day falls on or after such Valuation Date).

…

Paragraph 3. Transfers, Calculations and Exchanges

(a) Transfers. All transfers under this Annex of any Eligible Credit Support, Equivalent Credit Support, Interest Amount or Equivalent Distributions shall be made in accordance with. the instructions of the Transferee or Transferor, as applicable, and shall be made:

(i) in the case of cash, by transfer into one or more bank accounts specified by the recipient; …

Subject to Paragraph 4 and unless otherwise specified, if a demand for the transfer of Eligible Credit Support or Equivalent Credit Support is received by the Notification Time, then the relevant transfer will be made not later than the close of business on the Settlement Day relating to the date such demand is received; if a demand is received after the Notification Time, then the relevant transfer will be made not later than the close of business on the Settlement Day relating to the day after the date such demand is received.

(b) Calculations. All calculations of Value and Exposure for purposes of Paragraphs 2 and 4(a) will be made by the relevant Valuation Agent as of the relevant Valuation Time.

…

Paragraph 11. Elections and Variables

(b) Credit Support Obligations

…

(C) "Credit Support Amount means, for any Valuation Time, (i) the Transferee's Exposure for that Valuation Time plus (ii) the aggregate of all Independent Amount applicable to the Transferor, if any, minus (iii) the Transferor's Threshold; provided, however, that the Credit Support Amount will be deemed to be zero whenever the calculation of the Credit Support Amount yields an amount less than zero.

(h) Other Provisions

…

(ii) *Provisions relating to the Allocated Portion, the Eligible Assets and the Pledged Accounts*

Party A may from time to time notify Party B of the Allocated Portion orally or in writing or electronically by email or other similar electronic messaging system or internet based reporting system.

On a Valuation Date, the Credit Support Balance shall be the Allocated Portion as of such Valuation Date (and the definition of "Credit Support Balance" shall be construed accordingly).

Where a transfer obligation arises under Paragraph 2(a) any Eligible Credit Support transferable by the Transferor pursuant thereto shall be transferred into the Pledged Account. (For the avoidance of doubt, the Transferee acknowledges that, notwithstanding Paragraph 5(a) and (b), any Eligible Credit Support so transferred by the Transferor into the Pledged Account will thereafter be held subject to the security created by, and in accordance with the terms of the Credit Support Document.)

The following definitions shall be inserted into the appropriate place in Paragraph 10:

"*Allocated Portion*" means such amount of the assets standing to the credit of the Pledged Account as is calculated by Party A in its sole discretion and notified by Party A to Party B to constitute the "Allocated Portion" as of such Valuation Date.

"*Eligible Assets*" means any assets which (i) would be eligible for transfer into the Pledged Account and (ii) would constitute satisfactory collateral pursuant to the terms of the Credit Support Document.

"*Pledged Account*" means all accounts containing Eligible Assets and which are subject to the terms of the Credit Support Document.

…

(v) *Additional Termination Events*

The following shall constitute an additional Termination Event with respect to Party B (for which purpose Party B shall be the sole Affected Party):

The Net Collateral Value is equal to or less than the Value at Risk multiplied by the Close-Out Ratio.

The above Additional Termination Event shall apply irrespective of whether or not Eligible Credit Support has been requested by Party A, or is being delivered to Party A pursuant to the terms of this Annex. For purposes of determining

whether such an Additional Termination Event has occurred at the discretion of Party A, Exposure, Net Collateral Value and Value at Risk may be calculated at any time on any calendar day, and if such day is not a Valuation Date, the Value of Posted Credit Support may at the discretion of Party A be calculated based on the Value on the preceding Valuation Date.

Furthermore, Party A may use foreign exchange rates as of the close of business on the Local Business Day preceding any calendar day on which Exposure and Value at Risk are calculated when the calculation of such amounts is otherwise determined as of a time on such day.

Notwithstanding any provision of this Agreement that may be to the contrary, if the Additional Termination Event specified in this Credit Support Annex shall occur with respect to party B, Party A shall be entitled to designate an Early Termination Date with respect to all Transactions with immediate effect. Without limiting such right, Party A agrees to use reasonable efforts to deliver to Party B notice of such designation in accordance with Section 12 of this Agreement."

170. There is a hierarchy set out in these contractual documents for the resolution of any inconsistencies between their component parts. Under Clause 1(b) of the FX ISDA, the Schedule is to prevail over any other provisions of the FX ISDA, if there is inconsistency between them. The introductory words of the CSA provide that it is part of the Schedule and that, in the event of any inconsistency between it and other parts of the Schedule, it is to prevail. In the event of any inconsistency in the CSA itself, paragraph 11, which is the paragraph dealing with "Elections and Variables", is to prevail.

171. Under the FXPBA, DBAG allowed SHI to use its name to conclude FX trades. The provision of collateral under the ISDA was a one way feature in support of SHI's obligations to DBAG arising out of such trades. Paragraph 2 of the CSA set out SHI's Credit Support Obligations by reference to the concepts of the Delivery Amount, the Credit Support Amount and the Credit Support Balance, the last of which was the Allocated Portion of the Pledged Account as at any Valuation Date. Under paragraph 11 of the CSA, the Credit Support Amount required to support SHI's trading was the aggregate of the Independent Amount and DBAG's Exposure. That Exposure was represented by the amount payable by SHI to DBAG on the Agent Transactions as if they were terminated at the date of the valuation (namely the marked to market valuation or MTM/premium to close out the transactions). The Independent Amount was initially 200% of VaR, representing the potential loss of value which might occur in the course of unwinding those transactions in a given period. In the event that the value of the Credit Support Balance (the Allocated Portion of the assets standing to the credit of the Pledged Account), fell below the Credit Support Amount (constituted by the sum of the Exposure and Independent Amount), the differential, namely the Delivery Amount, was to be made good by SHI with Eligible Assets which would then constitute Eligible Credit Support. DBAG was entitled to notify SHI of the Allocated Portion "from time to time" orally or in

writing, the Allocated Portion being such amount "as calculated by DBAG in its sole discretion and notified" by it to SHI.

172. SHI contended at one point in its arguments that only sums in the Pledged Account could constitute Eligible Assets, for transfer into the Allocated Portion which is constituted by assets in the Pledged Account, as calculated by DBAG and notified by it to SHI. Paragraph 11(h)(ii) of the CSA provided that where a transfer obligation arose under paragraph 2(a) of the CSA, any Eligible Credit Support should be transferred into the Pledged Account and that, once transferred, it would be held subject to the terms of the Pledge Agreement. Only Eligible Assets can constitute Eligible Credit Support and Eligible Assets are defined as "any assets which (i) would be eligible for transfer into the Pledged Account and (ii) would constitute satisfactory collateral, pursuant to the terms of the Credit Support Document" (i.e. the Pledge Agreement). The Pledged Account is defined in the Pledge Agreement as Account 2011084. What is plain, contrary to that submission of SHI, is that "Eligible Assets" are not confined to assets which are already in the Pledged Account because they are defined as assets which "would be eligible for transfer into the Pledged Account".

173. The reason for the convoluted construction given by SHI to the definition of "Eligible Assets" which are capable of constituting "Eligible Credit Support for SHI's trading under the FXPBA and FX ISDA" is the desire to support, by an alternative route, SHI's case of a maximum limit of loss of US$35 million and/or the Pledged Account Limit (PAL), which are primarily said to arise as a result of a separate oral agreement between Mr Vik and Mr Meidal. Contrary to its submission that the only available assets which could constitute collateral for the envisaged FX trading were those already in the Pledged Account, the very definition of Eligible Assets envisages that the assets may lie outside the Pledged Account, because it refers to assets which "would be eligible for transfer into the Pledged Account" and "would constitute satisfactory collateral, pursuant to the terms of the [Pledge Agreement]".

174. Thus a margin demand made of SHI for a "Delivery Amount" requires a transfer by SHI of "Eligible Assets" into the Pledged Account, if rendered necessary because there are inadequate assets in it, to top up the Allocated Portion which constitutes the Credit Support Balance so that it matches the Credit Support Amount required at the relevant time. Of course if there are other Eligible Assets in the Pledged Account which are not part of the Allocated Portion and are available to become the Allocated Portion (and therefore the Credit Support Balance), then there would be no need for a transfer from outside but in the absence of that, there is no doubt that the CSA provides for margin calls to be met by SHI by payment into the Pledged Account to form part of the Allocated Portion.

175. Paragraphs 5(a) and (b) of the CSA provide that all right, title and interest in and to any Eligible Credit Support transferred by SHI to DBAG under the CSA is to vest in DBAG free of any encumbrances and that nothing in the CSA creates any security interest in any assets transferred by SHI to DBAG. However by paragraph 11 which is to prevail over any inconsistent provision in the CSA, sub-paragraph (h)(ii) expressly provides that, notwithstanding the terms of paragraph 5(a) and (b), any Eligible Credit Support transferred as margin under paragraph 2(a) of the CSA into the Pledged Account will thereafter be held subject to the security created by and in accordance with the terms of the Pledge Agreement.

176. SHI submitted that funds could only be paid from the unallocated part of the Pledged Account to the Allocated Portion and that, when this occurred, title to those funds would transfer from SHI to DBAG. In this connection it relies upon the use by parties of the ISDA form of the English law CSA which, in a footnote, states that the document is not intended to create a charge or other security interest over the assets transferred under its terms. Reliance is then placed on paragraphs 5(a) and (b) but paragraph 11(h)(ii) prevails over this and SHI's argument falls foul of the express terms of that sub-paragraph under the definition of Eligible Assets, to which I have already referred. SHI refers to the use of "clumsy language" and "an imprecise use of language", when the language is plain and it is SHI's construction which is clumsy in its attempts to avoid its obvious meaning.

177. The terms of the Pledge Agreement itself make it plain that any and all assets whatsoever deposited or relating to account 2011804 of SHI with DBS, at present and in future, are pledged by SHI to DBAG to "serve as collateral to [DBAG] for all claims that [DBAG] has and/or will have against [SHI]". The assets in the account are held by DBS but are, by Clause 4 of the Pledge Agreement, at DBAG's disposal and "may be sold, exchanged and repaid only with [DBAG's] express or implied consent". By Clause 7 the assets are to be administered in accordance with the safe custody regulations of DBS and SHI remains responsible for taking any precautions necessary to protect the value of the assets pledged. In the event that SHI is in arrears of any existing or future credit facility or agreement with DBAG, or is in default of any obligation towards DBAG, DBAG is entitled automatically to realise the assets under the terms of Clause 9. By Clause 11 SHI undertakes if necessary to participate in the transfer of assets to a new purchaser as required by DBAG and by Clause 14 irrevocably and unconditionally instructs DBS to follow any and all instructions from DBAG regarding the assets, including sale, realisation and transfer instructions.

178. The Pledge Agreement is governed by Swiss law but there is no suggestion of any difference between Swiss law and English law. It is a pledge agreement where title remains with SHI and DBAG has a security interest in accordance with the terms of the pledge. It is, moreover, by Clause 16 effected "in addition to and independently of any existing or future securities/collateral" and is to remain in force until DBAG's claims are met in full. Furthermore, by Clause 17 DBAG is not responsible for not exercising its rights under the Pledge Agreement nor for any consequential damages for actions taken to realise the security.

179. SHI's purpose in advancing these arguments on construction was to seek to negate DBAG's argument that it had the right but not the obligation to demand collateral from SHI and to argue that SHI's ability to trade was limited to the capital in the Pledged Account which DBAG was obliged to manage. SHI submitted that DBAG had an obligation under Clause 11(h)(ii) of the CSA to calculate the Allocated Portion on each Local Business Day. I am unable to see how this obligation can arise when paragraph 11(h)(ii) expressly provides that DBAG "may from time to time notify [SHI] of the Allocated Portion" and contains no requirement that it should do so. That is the governing wording so that although the CSA provides that on a Valuation Date (each Local Business Day) the Credit Support Balance is to be the Allocated Portion at such a date, that adds nothing and is neither here nor there.

180. Paragraph 3(b) of the CSA provides that all calculations of Value and Exposure "for the purposes of Paragraph 2" (the calculation of the Delivery Amount and the Credit

Support Balance) are to be made by DBAG as of the close of business on the business day preceding the Valuation Date. There is, however, no obligation on DBAG to notify SHI of those calculations of value and exposure at all, because the standard provision to that effect in paragraph 3(b) has been deleted. A calculation "for the purpose of paragraph 2" is, on its own terms, a calculation made in order to make a demand – a margin call. If there is to be no demand, there is no independent requirement or need for a calculation to be made "as of the relevant Valuation Date or Time".

181. The express terms of paragraph 2, paragraph 3(b) and paragraph 11(h)(ii) of the CSA do not therefore create an obligation on DBAG to notify SHI of the Allocated Portion on a daily basis, nor to make a demand of a Delivery Amount, nor to effect margin calculations, unless a demand is to be made. If DBAG requires further collateral, which is a matter for it to decide, since the collateral is for its protection, it must, if it so chooses, then calculate the Delivery Amount in accordance with the contractual methodology and notify SHI of an increase in the Allocated Portion of the Pledged Account, so that a greater part of that account is then to be treated as available collateral under the FX ISDA. If there are insufficient Eligible Assets in the Pledged Account to constitute the Credit Support Amount (the MTM deficiency plus 200% VaR) it can make a margin call by giving notice of its calculation of a new figure for the Allocated Portion and by demanding a transfer of the Delivery Amount for payment into the Pledged Account so as to increase the size of the Allocated Portion.

182. Paragraph 11(h)(v) of the CSA provides for an Additional Termination Event where the Net Collateral Value (representing the Allocated Portion less the MTM deficiency) becomes equal to or less than the VaR, representing the loss that would be incurred on liquidating the assets. Where therefore DBAG is at risk of a deficit if the assets had to be liquidated and the collateral realised, DBAG has the right to terminate the FX ISDA and to do so "with immediate effect". The sub-paragraph goes on to state that this applies "irrespective of whether or not Eligible Credit Support has been requested by [DBAG] or is being delivered to [DBAG] pursuant to the terms of this [CSA]".

183. The very terms of this sub-paragraph predicate a situation where DBAG is entitled to demand margin but may not have asked for it under paragraph 2 (in circumstances where the Credit Support Amount is constituted by the aggregate of the MTM and 200% of VaR). For this Additional Termination Event to occur, a situation under paragraph 2(a) of the CSA must necessarily have arisen and the terms of paragraph 11(h)(v) therefore envisage that occurring without a call being made.

184. There is nothing uncommercial about this facility to make, or the effect of making, a declaration of an Early Termination Date in such circumstances. Everything in the Pledged Account (including the Allocated Portion) remains in the ownership of SHI but, as it is collateral for SHI's obligations to DBAG and is held under the Pledge Agreement, it is susceptible to realisation by DBAG under the terms of that Pledge Agreement in order to satisfy any indebtedness of SHI. If there is any balance remaining, which in such circumstances would appear unlikely, SHI's entitlement to that balance remains undisturbed.

185. A further aspect of the arrangements between the parties in relation to the Credit Support Balance is the requirement in paragraph 10 of part 5 of the Schedule to the

FX ISDA. This required all payments by DBAG in respect of any of SHI's FX trades under the FX ISDA to be made by way of credit to the Credit Support Balance. As the Credit Support Balance, in accordance with paragraph 11(h)(ii) of the CSA, is the Allocated Portion on any Valuation Date, the trading profits, if paragraph 10 of part 5 of the Schedule is taken at face value, would go to increase the collateral available as part of the Allocated Portion, without any notification of an increase in the Allocated Portion. As paragraph 11(h)(ii) provides that the Allocated Portion is constituted by the amount of assets standing to the credit of the Pledged Account, as calculated by DBAG in its sole discretion and notified by it to SHI, a notification of payment of profits into the Pledged Account can be taken as a notification of an increase in the Allocated Portion. Since accumulated profits can only be paid into the Allocated Portion, the effect of notification of such payment must be to increase the collateral even if there is no express notification that the Allocated Portion has been increased. The collateral available to support the FX trading is thus increased by the profits earned, as long as they remain in the Pledged Account, because they automatically form part of the Allocated Portion. The accumulation of profits in the Allocated Portion would serve to increase the scope for collateralised trading by Mr Said above and beyond what was possible with US$35 million.

186. In fact, no change in the Allocated Portion was ever notified by DBAG and most of the profits earned on Mr Said's trading were, with DBAG's consent, withdrawn from SHI's trading account (in one instance via the Pledged Account) without, it appears, any consideration of these provisions of the CSA. Some US$30m was withdrawn in late 2007 and some US$75m (including a sum in Euros) in mid 2008 but, under the terms of the ISDA, once the money was in the Pledged Account, whether as part of the Allocated Portion or not, it could only be released from it with the consent of DBAG, whilst DBS maintained its monitoring role to ensure that the lending value of the assets pledged was always US$35 million or more. On 6 October 2008, Mr Said agreed to new margin terms, which, for the reasons I have already set out in the context of the Said Letter of Authority, he had authority to do. No notification of any change in the Allocated Portion was ever made to allow for this, even though the suggestion at the time was that the effect of the change would be to increase the margin required from about US$20m to US$40m, some US$5m more than the notified Allocated Portion. This aspect was soon overtaken by events and the margin calls were met by payments from other sources than the Pledged Account, with Mr Vik signing transfers for payment direct to DBAG's own accounts.

187. There is thus no basis in the FX ISDA, the Schedule or the CSA for the contention that DBAG was restricted to collateral of US$35m or to what was in the Pledged Account at any time. There was a procedure to be followed in the provision of more collateral, in the shape of a margin call and a requirement to increase the Allocated Portion of the Pledged Account by "allocation" of assets within it, or transfer of external Eligible Assets to it, but, on the face of these Agreements, there was nothing to prevent DBAG from seeking additional margin, calculated in accordance with the CSA, whenever the situation arose. As is recognised by SHI, the effect of its argument is that DBAG would be assuming responsibility for any drop in the market value of the assets in the Allocated Portion or the Pledged Account, if it, when aggregated with the Initial Margin, gave rise to a figure which fell below the required margin level calculated in accordance with the CSA. This is an unlikely and un-businesslike construction of a provision setting out a requirement for security.

188. It is self evident that the reason for the provision of "the Allocated Portion" was because the Pledged Account was also intended to serve as collateral for other transactions apart from Mr Said's FX transactions. Only a part of that Pledged Account was intended to serve as collateral for Mr Said's FX trading, namely the NOK equivalent of US$35m, whilst other types of transaction could be secured on other assets in the Pledged Account, as permitted by DBS in accordance with its separate requirements. Initially the documents show that the NOK equivalent of another US$35m (approximately) was put into the Pledged Account as security for other types of trading that Mr Said had in mind, such as Fixed Income trading and trading of the kind he effected during the lead up period to the FXPBA, in Credit Default Swaps and Argentinian Bonds.

189. The reason for the maintenance of the Pledged Account at DBS, as opposed to security placed with DBAG, appears to have been both Mr Vik's desire to maintain his cash balances in NOK to the greatest extent practicable in the context of trading in US$ as the base currency and the PWM connection with DBS. DBS had undertaken by the TPMCA to monitor the sums in the Pledged Account so as to ensure that the assets, denominated in NOK, did not fall below the US$35 million figure, but this was a private arrangement between itself and DBAG, to which SHI was not a party. The terms of the Pledge Agreement governed the basis upon which assets within it could be dealt with.

190. Furthermore, under Part 1(l)(iii) of the Schedule to the FX ISDA, if, for any reason, DBAG deemed that there were insufficient Eligible Assets held in the Pledged Account to satisfy SHI's obligations under the FX ISDA or any other agreement between it and DBAG or one of its affiliates (including for this purpose DBS), it was entitled to demand additional collateral assets to be "delivered and secured pursuant to" the Pledge Agreement or pursuant to any "other arrangement in a form satisfactory [to DBAG] in its sole discretion" in such amount as DBAG required. A failure on SHI's part to provide such additional collateral within 2 days would constitute an Additional Termination Event. This provision was expressly additional to any rights given to DBAG to designate an Early Termination Date under section 5(a)(iii) of the FX ISDA which made a failure to provide margin an Event of Default.

191. In these circumstances, SHI's contentions on the construction of the FX ISDA, the Schedule and the CSA are untenable and its allegations of breach based thereon fall to the ground.

7(f) The Pledge Agreement

192. I have made reference to the Pledge Agreement in construing the FX ISDA which refers to it as the Credit Support Document. It was a tripartite agreement between SHI, DBAG and DBS. As Pledgor, SHI pledged its assets, claims, tangible property and rights now or later held by DBS, including its claims on DBS itself, as collateral to DBAG for all claims that DBAG had or would have against SHI. The pledged assets were listed in article 22 as being "[any] and all assets whatsoever deposited or relating to Account 2011084 of SHI with DBS, at present and in future".

193. The pledge included, by article 3, all rights that had already fallen due and all future rights attaching to the pledged assets and rights (such as interest, dividends, coupons, warrants etc). Article 4 provided that, as the pledged assets were at the disposal of

DBAG (London branch), the pledged items were only to be sold, exchanged and repaid with DBAG's consent. They were to be held and administered in accordance with the safe custody regulations of DBS. Under article 9, if SHI was in arrears under any existing or future credit facilities or agreements, as referred to in article 6, or in default with regard to any obligations towards DBAG, DBAG was entitled, but not obliged, to realise the assets forthwith at its discretion, either freely by private sale (including to itself) or by force of law and to apply the proceeds in full or partial reimbursement of the debts owing.

194. SHI authorised DBS to provide DBAG with unrestricted information about the assets and its banking relationship with DBS and irrevocably and unconditionally instructed DBS to follow all instructions from DBAG regarding the assets, including the sale and realisation thereof, without liability on the part of DBS.

195. Under articles 16 and 17, the pledge was stated to be in addition to and independent of any other existing or future security/collateral and was to remain in force until all sums owing to DBAG were met. DBAG was not to be held responsible for not fully exercising rights accruing to it under the Pledge Agreement nor for any consequential damage for actions taken in realising the assets under article 9.

196. The Pledge Agreement was governed by Swiss law but no evidence was adduced by either party of its contents.

197. It is plain from the language of the Pledge Agreement that property in the assets in the Pledged Account remains with SHI and that they stand pledged as security for indebtedness to DBAG, whilst deposited with DBS. By the separate Third Party Monitored Collateral Agreement (the TPMCA), to which SHI was not a party, DBS agreed with DBAG to hold the assets pledged in DBAG's favour under the Pledge Agreement with SHI, the holder of account number 2011084 and pledgor for margin lines extended to it at the London branch of DBAG. The pledged assets amounted to a figure just short of US$70 million. DBS stated that it had blocked and would safeguard the pledged assets held at its Zurich office and would ensure that they were not released prior to receipt of authorisation from DBAG. DBS agreed to monitor the loanable value of the pledged assets in accordance with its own margin requirements and procedures and undertook to advise DBAG should the loanable value of the assets fall below US$35 million so that DBAG could take the necessary action to maintain the required loanable value (under Paragraph (i)(iii) of Part 1 of the Schedule). The TPMCA referred to the value of the assets in both US dollars and CHF but in fact the instructions from Mr Vik were that all sums should be held in NOK, save in so far as they were required for the fulfilment of obligations in other currencies.

7(g) The Limited Power of Attorney

198. On 28th November 2006 Mr Vik on behalf of SHI also signed a limited power of attorney, addressed to DBS, appointing Klaus Said attorney "in respect of all the assets and valuables deposited" in SHI's account with DBS. The customer reference number was given as 2011084, which was the account number for the Pledged Account. The limited power of attorney comprised "the most extensive possible powers of management and administration, to the exclusion of all powers of disposal". It permitted Mr Said to buy and sell securities, to invest and reinvest, to encash and convert, to exercise and realise subscription rights and to use coupons

constituting assets or valuables in the account. What Mr Said could not do was to withdraw anything from the account or create any additional pledges over assets in it or contract loans. All Mr Said's actions, performed within the limits of the mandate, were to bind SHI and DBS was to be relieved of all liability in respect of them. In the absence of wilful misconduct or gross negligence, within the limits stipulated by the law, DBS was to incur no liability to SHI, with an indemnity from SHI to DBS in respect of complaints lodged against it by anyone else in connection with the power of attorney.

8. Implied Terms

199. As appears from the discussion of New York law pertaining to contract, as set out above, whatever reluctance a court may have to imply a term that the parties have neglected specifically to agree if the parties are sophisticated business entities dealing at arm's length, a term will be implied into a contract where a reasonable person in the position of a party to it would be justified in understanding such a term to be included and such term at the time of contracting was implicit in the agreement when viewed as a whole. It will not however imply a term which conflicts with the express terms of the written contract. The reservations expressed by SHI's expert about any narrowness in this test, with particular reference to terms implied by custom and usage, make no difference to the determination of the issues in this action. The exact formulation of the test for implication of terms is not significant in the context of the implied terms alleged when set out against the express terms of the contracts and the factual background.

200. The implied terms of the FXPBA for which SHI contends are set out in paragraph 38 of its re-re-re-amended defence and Part 20 counterclaim (the "RRRADC"). These implied terms are extensive and read as follows:

> "38. Under New York law, on the true construction of the FX PB Agreement in the light of the aforesaid factual background and/or as an implied term, it was a term of the FX PB Agreement that:
>
> (1) The Bank would obtain from each Counterparty, retain and/or provide to SHI on demand and/or within a reasonable period of time after each trade a confirmation in writing of each FX Transaction that accurately recorded each FX Transaction.
>
> (2) The Bank would ensure that each FX Transaction was booked, valued and recorded accurately in SHI's account (i.e., trading book) with the Bank relating to such FX trades ("the FX Account"). Alternatively, the Bank would exercise reasonable care to ensure that each FX Transaction was booked, valued and recorded accurately in the FX account.
>
> (3) The Bank would ensure that each FX Transaction was performed by the Bank and the Counterparty strictly in accordance with the terms of such confirmation.

(3A) No equal and offsetting transaction is capable of arising under clause 4 unless the transaction entered into with the Counterparty was within the scope of the relevant Counterparty Master Agreement as defined in clause 3.

(4) The Bank would allocate capital in the Pledged Account in respect of each FX Transaction in accordance with the FX ISDA Agreement and would carry out complete and accurate calculations of the capital required in order to allocate capital appropriately and would notify SHI of the capital requirements of its FX trading when calculated, alternatively would take reasonable care to ensure that calculations of the capital required were carried out completely and accurately, and to notify SHI of the capital requirements of its FX trading when calculated.

(4A) The Bank would inform SHI of any inability or failure to:

(i) book and/or to record and/or value accurately or at all SHI's transactions in the FX Account of SHI or in its reporting systems, and/or

(ii) carry out any, or any complete or accurate, calculations of the capital required in order to allocate capital appropriately, and/or failure to allocate capital in the Pledged Account properly or at all.

(4B) The Bank would ensure that, in circumstances when it was proposed to enter into a high risk product directly between SHI (through Mr. Said) and the Bank, particularly a leveraged derivative (such as the Exotic Derivatives Transactions, as referred to below), Mr Vik understood the risk level of the product; alternatively the Bank would take reasonable care to ensure that, in such circumstances, Mr Vik understood the risk level of the product. Such a term is to be implied from the fact that it was at all material times the usual custom and practice of an investment bank (such as the Bank) to have a policy or policies providing that, in respect of high risk products, in particular leveraged derivatives (which would include transactions such as the Exotic Derivatives Transactions), that it was proposed to trade directly between the client and the bank, the bank would ensure before entering into the transaction that an appropriate individual in the client organisation other than the usual trading contact understood the risk level of the product. This would typically involve an explanation of the risk level of the product being given to an appropriate individual in the client organisation other than the usual trading contact, unless the bank knew, by reference to previous trading, the client's risk tolerance or other relevant

> facts, that the said appropriate individual already understood the risk.
>
> (4C) The Bank would not allow any trading in a product not approved through the appropriate New Product Approval Processes. Such a term is to be implied from the fact that it was at all material times the usual custom and practice of an investment bank (and SHI understands that it was also a policy and practice of the Bank) not to allow any trading in a product not approved through appropriate New Product Approval Processes.
>
> (4D) The Bank would not enter into any transaction with SHI, or accept any transaction under the FX PB Agreement (alternatively, the Bank would not accept under the FX PB Agreement any Structured Option (by refusing to give its approval pursuant to clause 2(iii) of the FX PB Agreement)) which the FX Prime Brokerage division was unable to book, value and record accurately in the FX Account or in its reporting systems and in respect of which it was unable to carry out any, or any complete or accurate, calculations of the capital required to support such trading and to report accurately to SHI such capital requirements (or, alternatively, in circumstances where it was unable to do any one or more of these tasks). Alternatively, the Bank would take reasonable care to ensure that transactions were not entered into in the said circumstances.
>
> (5) The Bank was subject to a duty to act in good faith and a duty of fair dealing in the course of its performance such that the Bank was required not to do anything which would have the effect of depriving or injuring the right of SHI to receive any of the intended benefits for which it bargained under the FX PB Agreement; such term being implied as a matter of New York law as the governing law of the FX PB Agreement."

201. None of these 10 alleged implied terms are readily associated with any of the express terms of the FXPBA, save for those which bear on the provisions of Clause 2. The FXPBA set out the arrangement by which DBAG authorised SHI to act as its agent in concluding transactions with Counterparties and contained qualifications and restrictions on SHI's authority to do so by reference to the types of trade, tenor of trade and the Settlement Limit and the Maximum Counterparty Net Open Position Limit. It provided for DBAG to enter into Counterparty Agreements with Counterparty banks before any Counterparty transactions could be concluded by SHI and for DBAG to enter into offsetting trades with SHI when SHI concluded authorised Counterparty Transactions. As already set out, the FXPBA did not expressly provide for any obligations on DBAG beyond that, save for those set out in Clause 2. DBAG did not expressly agree in the FXPBA to provide any other services than those to which I have referred.

202. The provision under Clause 2 of "a summary of the outstanding trades and the net exposure with respect to each Counterparty" requires a reporting capability on the part of DBAG, namely an ability to furnish the basic details of each trade and the MTM valuations of those trades, in order to provide the summary and the Counterparty net exposure position. In practice this would necessitate the maintenance of records of the trades which contained the relevant information although the obligation, is a reporting obligation, rather than a record keeping obligation and applies when a request is made. It is undoubtedly the case however that the expectation of the parties would be that such records would be maintained and it was not suggested otherwise by DBAG.

203. Mr Quinn's evidence, as set out above, was that the core functions of a Prime Broker were to lend its name and credit to the trader and to clear and settle the trades by matching the information supplied by the trader and the Counterparty in relation to the trades effected between them and by effecting the monetary settlements which resulted from the contracts so concluded. The manner in which the Prime Broker booked or recorded these trades was an internal issue for itself alone and not a matter for the client. The reporting function involved only reporting of basic trade details in order to enable the client to reconcile his own records with those of the Prime Broker in circumstances where every trader could be expected to retain his own records of trades and positions, to watch the market and to manage his own risk. No trader would rely upon the Prime Broker's collateral requirements to assess the market risk being run in relation to liability on trading positions. (On his own evidence Mr Said was no exception to this.) Any trader would be able to tell you, at any point in time, how his trades stood with respect to the current state of the market, from his own records and from following the market himself. Risk management was a matter for the client and not for the Prime Broker whilst the Prime Broker's entitlement to call for collateral in the shape of margin was a provision for the Prime Broker's benefit alone and one which there was no obligation on the Prime Broker to utilise or enforce.

204. Whilst however these were the core functions inherent in any Prime Brokerage, Mr Quinn accepted that the provision of additional services could be agreed between the Prime Broker and the client and although market practice did not require any additional services to be provided, an agreement could be concluded to that effect.

205. It is the fact that DBAG did provide additional services in the shape of web reporting and, in circumstances to which I will refer later in this judgment, the provision of spreadsheets created manually by Mr Walsh which set out vanilla transactions with MTMs. On what basis were these services supplied? SHI contends that they were supplied as part of the services afforded by DBAG as a Prime Broker, that the FXPBA was the governing contract in respect of Prime Brokerage and that terms must be implied into the FXPBA in relation to the provision of those services. SHI submits that the function carried out by DBAG in practice, however badly, in booking, recording and valuing SHI's trades and in reporting those trades, their MTM value and the margin requirements of the portfolio were so fundamental to the Prime Broker relationship between SHI and DBAG that the court ought to hold that they were implied terms of the FXPBA. It is said by SHI that a reasonable person in the position of SHI would be justified in understanding that there were implied terms in the FXPBA to that effect, since without them the framework in which SHI operated as DBAG's agent and entered into offsetting transactions would not exist.

206. It is in this connection that SHI rely upon the promotional literature and brochures produced by DBAG and sent to SHI prior to conclusion of the FXPBA and to the evidence of DBAG's own witnesses as to the role and function of a Prime Broker.

207. There was a wealth of evidence from DBAG about the role and function of a FXPB desk. None of DBAG's witnesses drew any distinction between the FXPB desk's functions of booking, recording, valuing and margining trades or margining the portfolio or the reporting of the details of the trades, the MTM values and the margin requirements. None of them appeared to have any knowledge of the contractual provisions which operated between DBAG, DBS and SHI, although some of them appreciated and advanced the view that margining was an entitlement which rested in DBAG for its own protection alone.

208. DBAG charged a monthly fee to SHI in relation to the Counterparty Transactions concluded during that month on the basis of US$8 per US$1 million of the Notional Amount of each transaction (although the Notional Amount of the TPFs could, in reality, only be assessed after knock out or maturity). This level of fee was suitable for the routine transactions which were dealt with in an automated fashion. In the ordinary way, with such routine vanilla transactions, the trades would be booked with apposite trade details in DBAG's automated system, by both Mr Said for SHI and the Counterparty. The system would match the transactions and confirmations could be sent to both parties showing the trade between DBAG and the Counterparty and DBAG and SHI. Under DBAG's automated systems, this would lead to the creation of initial margin at the outset by the use of DBAG's ARCS VaR FX II (ARCS VaR) system in the case of SHI's portfolio of trades (and by its NOP system in GEM for many other customers). Initial margin was a figure intended to represent the losses which the portfolio would incur during the time it would take to liquidate it. Thereafter the trades and assets would be valued (marked to market or MTM) and variation margin would be calculated by the same VaR engine. In practice therefore, if margin was calculated and required on a daily basis, the variation margin payable on any given day would represent the shortfall between the aggregate MTM valuation of the portfolio on that day as compared with the valuation the previous day. The aggregate amount of the Initial Margin and the Variation Margin was thus to be the subject of collateral available to DBAG, as provided by SHI.

209. With simple trades the client would input the trade details in the computer system by use of a programme called TRM which would feed into DBAG's Risk Management System (RMS) and into its Web Reporting System (GEM) by which the customer could access, 24 hours in the day, the details of the trades done, the MTM valuation (supposed to be updated every 15 minutes of the day) of those trades, the net asset position and the current collateral situation. The Counterparty would input details of the same trade by use of another programme called Harmony which would automatically match those trades. In the event of a failure to match, because of a discrepancy (a break), human intervention was needed to resolve the issue.

210. Equally, with more complex trades, for which the automated system was not specifically designed, human intervention was needed for inputting the trade details and matching, using the menus available within the system. DBAG had an office in India which was used to effect such inputting. If however the transaction was yet more complex, intervention would be needed on the part of DBAG's FXPB

operations department in New Jersey, if necessary with the assistance of personnel in the front office (business/sales) in 60 Wall Street, New York.

211. The valuation and reporting of MTM values and margin levels depended upon the correct inputting of the trade details. Once the trade details fed in by the customer, the Indian office or the FXPB operations department had been matched by the Counterparty, whether through Harmony or by email with a short form trade confirmation, the transaction would be booked in RMS and its details would then appear in GEM. Valuation for margining on the VaR basis was effected by the ARCS VaR engine which fed through details of its calculations to GEM, with the MTM values as well as the Initial Margin. Margining on the NOP basis, with MTM valuations for that purpose, came from a different source than ARCS VaR to GEM. As appears later in this judgment, there were problems in the feed of information from ARCS VaR to GEM throughout the period from June 2007 to August 2008 so that, on ordinary vanilla transactions, the MTM seen on the GEM Web Reporting site was inaccurate and did not reflect the current state of the trades done. In consequence, a work around was effected whereby a new reporting account was set up in GEM. This was intended to replicate the trade details which appeared in the Outstanding Trade Details part of the website so that the trade information in this account auto-generated the same information in what became known as the P&L Reporting Account. MTM valuations from the NOP system were then fed into the P&L Reporting Account which was not accessible to SHI on the GEM website, being only available to DBAG personnel. At the close of business each day in the periods when these problems arose, Mr Walsh would send Mr Said, by email, a spreadsheet which represented a screenshot of the vanilla trades (with some adjustment) and the MTM position on each as they then appeared. Mr Said's main concern here was with the vanilla cash transactions, not the options, as set out later in this judgment.

212. During the course of the relationship between SHI and DBAG, Mr Said increasingly was to effect trades which would not fit into the automated system and which were recognised by him and DBAG to be "Structured Options". He sought DBAG's consent for these and, when obtained, provided details of the trades by email. Manual intervention was then needed in order to book the trades into DBAG's systems although, as appears elsewhere, there were insufficient fields available in the computer systems for the EDTs to be properly booked. Nonetheless, in the light of the increasing manual work required in particular to match trade confirmations, a special fee was negotiated and agreed with Mr Said, namely US$1,200-$1,500 in respect of each EDT. Nonetheless, in total, DBAG received less than US$400,000 in contractual remuneration for allowing SHI to trade in its name, for giving SHI the benefit of its net margin arrangements with Counterparty banks whilst requiring SHI only to put up collateral to DBAG alone and, in addition, providing whatever services it did provide to SHI, which SHI calls "back office services". These figures can be seen in the context of realised profits of about US$40 million in Mr Said's first year of trading and some US$81 million in eight months in 2008 until the market moved against him with resultant losses in excess of US$600 million in October 2008.

213. Notwithstanding this low level of remuneration, DBAG did provide services beyond the "core services" to which Mr Quinn referred.

214. Prior to the conclusion of the FXPBA, DBAG supplied SHI with a "Pitch Book", which Mr Said described, in his deposition, as a "standard" for a bank offering prime

brokerage services. This Pitch Book set out the benefits of prime brokerage as including the efficient use of capital and increased operational efficiency with a centralised FX clearing facility, centralised credit arrangements, centralised settlement, position and trade reporting, error rate and market risk reduction through timely trade matching and confirmation, auto-matching technology (for Straight Through Processing by TRM), online real-time reporting and a simplified documentation process. "Operational risk management" was to be achieved by the TRM auto-matching engine in the computer systems and website reporting with trade data feeds. "Product depth" specifically included "FX options" and "Exotic FX options". In the Basic Trade Flow diagram, reference was made to the single credit line, single collateral relationship, consolidated reporting and single reconciliation achieved by the prime brokerage system operated by DBAG. Trade matching, credit monitoring, allocations and valuations were specifically mentioned. As part of the client service there was "on-line reporting" which was described as a real-time suite of trade reports which included trade detail, cash flow summaries, collateral summaries, historical reports, bank credit lines with all reports marked to market every 15 minutes. Electronic summary trade files were said to be available for automatic reconciliation purposes. Reference was made to efficient back office trade capture and reconciliation, and, on the page dealing with "Credit Terms", under the heading "Margin Requirements", the explanation was given that credit terms were specific to each client's needs with Net Open Position based margining (NOP) on a tiered currency basis with percentages determined by credit. VaR methodology was also said to be available. As part of the seamless integration into DBAG's FXPB system, the first step was set out as agreement on the product scope for the service.

215. DBAG's Foreign Exchange Web Reporting brochure stated that the web reports allowed access to information relating to "trades, positions, cash flows, collateral account balances and P&L". Available reports included Margin Status, Open P&L, Collateral Reports including Assets on Deposit, Collateral Summary Reports and Net Equity Breakdowns with Close of Business reports including the history position of trades and cash flow, Collateral Summary and Open P&L. Key features included revaluation every 15 minutes. Whilst the margin status reports referred to the NOP method of valuation, the Open P&L screenshot shown in the brochure referred to a display of all outstanding option positions, latest revaluation rate and current market value of outstanding positions. The Collateral Summary screenshot referred to drilling down to a Net Equity Breakdown Report and showed current market values of open trades for available collateral purposes, the available collateral sum of assets on deposit and their current market value and the collateral required based on total current NOP and margin ratios. The amount by which the required collateral exceeded or fell short of the net equity was then set out with the total of cash and options positions netted against each other.

216. In its promotional literature, DBAG thus held itself out as being capable of running a "back office" system for the recording of transactions, including exotic FX options, for their valuation and margin calculation with reporting to the client. All the reports were said to be marked to market every 15 minutes in a real-time suite of reports which included trade details, cash flow summaries and collateral summaries.

217. Although it is argued by DBAG that it undertook no obligations beyond those which appear in the FXPBA itself, such an argument would suggest that all the services

referred to in the Pitch Book and the Website Brochure, when provided, were not contractual services and fell outside the terms of the FXPBA. DBAG did not go so far as to suggest that they were provided on an ex gratia basis, without responsibility, whilst denying the existence of the implied terms alleged by SHI.

218. Whilst therefore the FXPBA included very limited express obligations on DBAG, and the obligation under Clause 2 to provide, if asked, a summary of outstanding trades and the net exposure per Counterparty to enable SHI to monitor the Net Daily Settlement Amount and the Counterparty Net Open Position was likewise very limited, with the latter figure specifically excluding Structured Options, the promotional literature referred to a wide range of services including reporting services to be provided by DBAG, largely by means of the GEM Web Reporting System.

219. It cannot have been intended that these services were freestanding, offered and accepted as an act of generosity on the part of DBAG. These services were proffered by DBAG in its capacity as a Prime Broker and as part and parcel of Prime Brokerage services, as advertised in its promotional literature, in order to attract customers to use it as a Prime Broker. Whilst the remuneration for Prime Brokerage services was limited in itself, there was a potential spin off, of which personnel in the FXPB department of DBAG were aware, namely that SHI might conduct direct trades with DBAG's Trading/Franchise desk, thus generating profits for DBAG in a different department. Moreover, DBAG recognises that these services were not freestanding, in as much as it contends that the web reporting services were governed by the GEM Terms and Conditions. It thus accepts that there was a contract between SHI and DBAG in relation to web reporting, albeit that it relies upon those terms and conditions as excluding it from liability in relation to inaccurate reporting. One way or another, it is in my judgment clear that there was an agreement of some kind to provide the services which were actually carried out. These services involved the provision of information, not the internal booking and recording of the trades by DBAG, although, of necessity, in order to report, DBAG had to maintain some systems which would enable it to do so. The GEM web reporting agreement cannot be seen in isolation from the FXPBA – the two are plainly linked, as both parties recognise.

220. In this context it is to be borne in mind that the FXPBA cannot be seen in isolation from the FX ISDA, the Schedule and the CSA, to which it refers. Under Clause 4 of the FXPBA, every Agent Transaction was to be "subject to and governed by the applicable ISDA Master Agreement, including the Credit Support Annex". Specifically the Agent was to be required to post collateral in accordance with the terms and provisions of the CSA, it being agreed that any breach of the FXPBA on the part of the Agent (SHI) should constitute an Event of Default under the FX ISDA. The FX ISDA and the CSA are governed by English law.

221. With these matters in mind, I turn to the specific alleged terms set out in paragraph 38 of the RRRADC, there being no basis for contending that there are any express terms to that effect.

8(a) Paragraph 38(1)

222. The first implied term for which SHI contends is that the DBAG would obtain from each Counterparty and retain and provide on demand or within a reasonable period, a

trade confirmation in writing for each FX Transaction concluded under the terms of the FXPBA and that such confirmation should accurately record the terms of each transaction.

223. DBAG submits that such a term would be inconsistent with the structure of the FXPBA which authorises SHI to execute transactions with the Counterparties and, by Clause 3, to communicate trade details of each Counterparty Transaction to DBAG (its FXPB desk in practice, as opposed to its Trading or Franchise Desk) by fax or electronic means. Only SHI therefore knew the terms agreed between it and the Counterparty which gave rise to the offsetting transaction between SHI and DBAG. Clause 7 of the FXPBA provides that SHI is to indemnify DBAG against loss resulting from any error in any information provided by it to DBAG. In practice, in the case of simple transactions SHI could feed the information directly into DBAG's computer system (RMS) which would carry out a matching process with information fed by the Counterparty. On more complex transactions human agency was required to effect the matching in the systems. Structured Options would be the subject of special prior agreement before being concluded however so that DBAG would be aware of at least the main terms before giving its approval, but the same provisions of Clause 3 and Clause 7 applied nonetheless. The Prime Broker was not responsible for the terms of the trades.

224. It is accepted by DBAG that a core function of Prime Brokers is to clear trades, by matching them, on the basis of information supplied by the Agent and the Counterparty. How this is done is a matter of mechanics and, following email exchanges and/or the supply of short form term sheets, it appears that the normal process involved matching trade confirmations from each party. Where that could not be done, because there was an unresolved issue as to the terms of the trade, no deal would be concluded. As this is a matter of mechanics however I do not see how the test for implication of terms is met, although it seems to me that an implied term to fulfil the core function of a Prime Broker of clearing by matching the Counterparty Transaction and Agent Transaction (on the basis of information supplied) is to be implied because any reasonable person in the position of the parties to the FXPBA would be justified in understanding that there was a term to that effect, without which the Prime Brokerage function could not be fulfilled. As a matter of fact, nothing turns on this implied duty in any event, but the terms of Clause 4 (last sentence) and of Clauses 5(a), (c) and (d) of the FXPBA provide circumstances in which action is said to be contractual notwithstanding any provisions to the contrary in a trade confirmation. The implied term is inconsistent with these provisions and cannot stand.

<u>8(b) Paragraph 38(2)</u>

225. The second implied term alleged by SHI is that DBAG was obliged to ensure (or to take reasonable skill and care to ensure) that Transactions entered into by SHI were booked, valued and recorded accurately in the accounts it maintained in relation to SHI. As a third implied term (in paragraph 38(4A)) it is further alleged that DBAG was obliged to inform SHI of any inability or failure to book and/or record and/or value accurately any of SHI's transactions in its accounts or recording systems. I am unable to see how these terms can properly be implied either, since the additional functions which DBAG actually performed, and represented that it would perform, in accordance with its promotional literature were reporting functions, rather than

internal functions of booking and recording which led to that reporting of trades and valuation of trades. Moreover, if there was such a duty it would be an oddity to be under an obligation to give notice of any breach and, if there was no such duty, a failure to book or record would again be irrelevant. Booking, as such, was an internal matter for DBAG, as Mr Quinn said.

8(c) Paragraph 38(3)

226. The fourth implied term, set out in paragraph 38(3) of SHI's pleading, is that DBAG would ensure that each FX Transaction was performed by it and the Counterparty strictly in accordance with the terms of such confirmation. This appears to me to be an impossible implication to make. DBAG cannot guarantee the performance of an FX transaction by the Counterparty with whom SHI has brought it into contractual relations. So far as its own performance is concerned, DBAG would inevitably be in breach if it failed to perform the Agent Transaction. No implication of any term is required for this and the alleged implied terms would not cross the mind of a person in the position of a party to the FXPBA.

8(d) Paragraph 38(3A)

227. As to the implied term in paragraph 38(3A), the test is once again not met. Mr Said was, by the Said Letter of Authority, authorised by SHI to trade on its behalf under the FXPBA. The FXPBA in turn authorised SHI to act as DBAG's agent in binding it to trades with Counterparties. It was always open to DBAG to agree with a Counterparty that a trade conducted by SHI in DBAG's name, though falling outside the scope of the relevant Counterparty Master Agreement as defined in Clause 3 of the FXPBA, was to be binding on it. The principal can ratify unauthorised acts effected by its agent. Whether such a trade would be binding upon SHI under the FXPBA and/or the Said Letter of Authority is another matter but, even if it was not within his actual or ostensible authority, it could be ratified by SHI. The only question which would matter in such a context was whether or not Mr Said had such authority, which depended upon the FXPBA and the Said Letter of Authority or on ratification by SHI of something done outside that.

38(e) Paragraphs 38(4) and (4A)

228. Paragraphs 38(4) and (4A) set out the alleged implied term which lies at the heart of these proceedings. The implied term requires DBAG to calculate margin in accordance with the FX ISDA and CSA and to notify SHI of its maximum entitlement to margin in accordance with those calculations and to require allocation of capital in the Pledged Account (presumably by notifying an increase in the Allocated Portion). Alternatively a term is to be implied that DBAG would take reasonable care to ensure that such calculations were carried out and notified to SHI. In the yet further alternative, DBAG was obliged to inform SHI of any inability to carry out complete and accurate calculations of margin in order to call for its maximum entitlement and/or notify an increase in the Allocated Portion.

229. In my judgment, a reasonable person in the position of either party to the FXPBA would be justified in understanding that, in accordance with DBAG's promotional literature and the universal understanding of DBAG's witnesses, DBAG had undertaken a service additional to the core services referred to by Mr Quinn. The

service in question which DBAG must be taken to have agreed to provide was a web-based reporting service which set out details of the trades concluded, the MTM valuation placed upon those trades by DBAG and the margin calculations relating to the SHI portfolio as a whole.

230. DBAG argued and I accept that the margin provisions of the FXPBA, and the FX ISDA, existed for its own benefit and that it was under no obligation either to calculate or demand margin at any stage. Nor could it be obliged to calculate or demand its full margin entitlement at any particular time. There could however be a significant difference between the provision of information on valuation on a MTM basis on the one hand, which a trader might wish to know for any number of reasons, including the hedging of the item or closing out a transaction, and on the other hand a demand for margin, which constitutes security to DBAG in respect of the exposure revealed by such valuations. Any trader in the ordinary way would want to know how his trades were faring on an MTM basis in order to make decisions about future trading strategy and, in the case of more complex transactions, such as the EDTs or OCTs (as opposed to vanilla trades and forwards, where valuation was straightforward from readily available sources and with readily available tools) a sophisticated computer model might be required to provide MTM, with the only alternative being to seek a price in the market to unwind the trade in question. Although the evidence of Mr Quinn was that all traders kept their own valuations as part of their risk management, there is no reason why a trader might not value a cross-check on ordinary trades and might look for some guidance in relation to complex trades where a computer model was needed. As will be seen later, Mr Said did not expect this for the EDTs because he knew that DBAG's systems were not able to value such complex trades and he had no regard for their MTM status in any event, regarding them as buy to hold options. Mr Said did, of course, as any trader would, retain his own trading records and had his own pricing tool which would operate for vanilla trades.

231. The margin provisions were undoubtedly provisions included in the FX ISDA and CSA, and incorporated by reference in the FXPBA, for the protection and benefit of DBAG alone, so it was entitled but not obliged to call for margin (representing security in relation to potential debts owing by SHI). If however it wished to avail itself of the margin provisions of the FX ISDA and CSA, it was in my judgment obliged to notify SHI of its margin calculations for the portfolio as a whole and, as provided by the promotional literature, the MTM valuation of each trade (which when added would give rise to the Counterparty Net Open Position in respect of each Counterparty, as well as providing an element in the calculation of margin as between DBAG and SHI).

232. DBAG was clearly expected to provide these web-based services as part of its FXPB arrangements and it was to those services that the promotional literature referred. Mr Said, on his evidence, expected to receive such services for his ordinary trades, however little he relied on them and however well he could manage without them. All the FXPB personnel saw it the same way. Although as a matter of English law the CSA did not require any calculation of margin or notification, save in the event of a demand for a Delivery Amount, the whole system of FXPB as operated by DBAG, and as advertised in order to attract customers, included the web reporting service with these elements. What use the client might make of them was another matter, but

DBAG made it plain that this is what the website would provide. The essence of the additional service was this "reporting", in the sense of it being made available for access by the customer on the web-based system. The duty was not to record the information but to make it available for use by the customer. Although the FXPBA did not spell out any of the "back office" services which DBAG supplied to SHI, it is the fact that such services were supplied in terms of booking, clearing and settling the vanilla trades, reporting on market values and collateral requirements and the net equity or collateral position as DBAG's brochures spelt out.

233. As to the basis upon which that website service would be provided, there is no clue in the FXPBA, as the FXPBA makes no reference to it. Is the implied duty an absolute one, or one of reasonable care in reporting? Whereas, as a matter of English law, to my mind it would go without saying that a Prime Broker who provides services for reward impliedly undertakes to act with reasonable care and skill in the provision of those services, that does not appear to be the stance adopted by New York law, which does not so readily imply duties of reasonable care into contracts, save those of a specified kind. As a matter of commercial good sense, regardless of any notions of "fair dealing", both DBAG and SHI must have entered into the FXPBA with the expectation that trades would not just be accurately cleared and settled, but reported on the website, together with MTM valuations according to DBAG's systems and margining in accordance with the agreed terms set out in the CSA. No customer however would expect perfection in the sense of 100% accuracy at all times and it appeared to be common ground between Ms Rahl and Mr Quinn that errors were to be expected. Computer systems being prone to fail, that might go without saying.

234. The difficulty is resolved because, as Ms Rahl effectively recognised, access to computer systems of this kind invariably involves acceptance of conditions of use. DBAG's own terms and conditions of use of the GEM appeared on it, and although there is no direct evidence of Mr Said reading them or acknowledging their existence, reference to them was prominent enough to bring them to his attention when accessing the website.

235. SHI accepted the facts and matters relating to the website set out in Deloitte's letter of 3rd May 2013. Mr Said used the GEM website where the page loaded immediately after a user had logged onto the site (the "Home page") contained a summary disclaimer referring to the GEM terms and conditions, with a hyperlink to those terms and conditions. That summary disclaimer also appeared on the "Margin Report – Help" page and the "Global FX Reports" page as well as appearing on downloads in Excel format.

236. In circumstances where there is an implied term in the FXPBA for the provision of these web based services, and the web based services themselves purport to be provided on the basis of terms and conditions, those terms and conditions must be, like the FXPBA, governed by the law of New York. The very terms of the exclusion set out below reinforced that because, as a matter of public policy, New York law prevents the contractual exclusion of liability for damages which result from a party's own "wilful misconduct or gross negligence". Moreover, reference is made to the concept of punitive damages which is not known to English law. It is common ground between the parties that "gross negligence" is different in kind and not just degree from ordinary negligence. It amounts to conduct which evinces a reckless disregard for the rights of others or smacks of intentional wrongdoing.

237. The following limitation of liability Clause appears in the terms and conditions:

> "Except to the extent that liability under any applicable law or regulation cannot be excluded and to the extent of its own wilful misconduct or gross negligence, Deutsche Bank is not liable for loss or damage of any kind whatsoever arising as a result of (1) information published on the Website or (2) any errors or omissions from the Website, including any made in computing or disseminating valuations, and under no circumstances shall Deutsche Bank be liable for any damages whatsoever, whether direct, indirect, punitive special or consequential, that are directly or indirectly attributable to the use of, or the inability to use, the Website, even if advised of the possibility of such damages or if such damages were foreseeable."

238. There could to my mind be no implied term which went wider than the terms of use of the GEM system, because that was the service which was advertised as part of the PB services. Whether this is seen simply as an implied term of the FXPBA or as a separate agreement to the use of the GEM web system is neither here nor there, but I have no doubt that an implied term in the FXPBA must be subject to this limitation.

239. If Mr Said, for SHI, concluded a transaction which fell within the ambit of his authority and that of SHI to bind DBAG, such a transaction should be the subject of reporting on the website, with valuation and margining together with other trades. A failure to carry out such functions would be a breach of contract, but I can see no basis for holding that there was an implied term requiring DBAG to admit to a breach. Despite the willingness of DBAG's witnesses to accept that the customer should be told if the systems could not handle the trade, that is not a term which a person in the position of either party to the contract would consider was included in it – nor would it be implicit in the agreement, viewed as a whole. In any event, as appears later, Mr Said was told and knew of the limits of DBAG's systems where the EDTs were concerned.

240. DBAG's Pitch Book included Exotic FX options in its array of products which could be administered by the FXPB desk, but the FXPBA made special provision for Structured Options, which as appears elsewhere in this judgment (see Mr Said's Timeline) were thought of as presenting particular problems for DBAG's systems and had therefore to be the subject of DBAG's prior consent in order to be an Accepted Transaction. If, for whatever reason, DBAG could not accurately report such a trade and set out its value on the website and include it in the margin calculations, it had the choice before taking it in of refusing that trade or agreeing special terms in relation to its reporting. An inability to report as required would constitute a very good reason for agreeing special terms. If it failed to do that, accepted the trade and then failed in its reporting duties, there would be a breach of contract but once again, for the same reasons as set out above, I see no basis for an implied term that DBAG should confess to its own wrongdoing.

241. DBAG accepts that there were failures on its part in a number of different respects. DBAG has, since February 2012, accepted that at no time before 13th October 2008 did FXPB accurately book or otherwise record the indirect EDTs in its RMS system at

the time the trades were executed, that its GEM web reporting did not accurately state MTM valuations in respect of EDTs and that no information was provided to SHI which contained accurate MTM valuations for them. Neither did DBAG perform accurate calculations of VaR in respect of the EDTs and could not do so at the time. In order to do so accurately, DBAG has had to construct a computer model to do that which its own computer systems at the time could not do. Questions of categorisation of the failures could arise here – was there wilful misconduct or gross negligence on DBAG's part?

8(f) Paragraph 38(4B)

242. The next alleged implied term is that found in paragraph 38(4B), namely that DBAG would ensure that, before it entered into a direct trade of a "high risk product" with Mr Said for SHI (and in particular any EDT), Mr Vik understood the risk level of the product, alternatively that the bank would take reasonable care to ensure that he understood the risk level of the product. It is said that such a term is to be implied because it was the usual custom and practice of an investment bank to have a policy providing that it would ensure (before concluding a "high risk" transaction of this kind) that an appropriate individual in the client organisation other than the usual trading contact understood the risk level of the product. Some explanation would therefore have to be given to the appropriate individual unless the bank was aware, by reference to previous trading or other circumstances, that this individual already understood the risk.

243. There are a number of oddities about this implied term and I have no hesitation, when applying the test in New York law for the implication of terms by reference to any alleged custom or usage or otherwise, in rejecting it. In the first place, it is hard to see how the internal policies of the bank, designed for its own protection, in order to avoid counterparty risk or loss of reputation, could give rise to an implied term of the kind alleged.

244. The "usual custom and practice" put forward by SHI, to which it referred in its pleadings and which is required to meet the appropriate standards of consistency and wide knowledge in the trade in order to qualify as a relevant custom and usage, has changed during the course of the action. The difficulty which SHI has had in defining this custom suggests that it is not "uniform", "well settled", "established", "well-known" or "notorious". In the Amended Defence and Party 20 Counterclaim, when the point was first pleaded, SHI stated that the relevant custom of an investment bank, such as DBAG, was to have a policy providing that in respect of high risk products (in particular EDTs) "an explanation of the risk level of the product would be given to, and authorisation for the trading for such products required from, at least one level of seniority, if not two levels of seniority, of decision-maker in the client, above the usual trading contact". At a Case Management Conference, I ordered a sequential exchange of reports in relation to this alleged custom. Ms Rahl, on behalf of SHI, expressed her opinion that "the custom and practice of a reasonably prudent and competent investment bank" was to have a policy "to require that the bank explained the risks of the instrument to some person at the client who [was] not the immediate trading contact, i.e. a supervisor or a Chief Risk Officer". That person had to be independent of the trading contract but not necessarily more senior. The reason for such a policy was, she said, to seek to prevent clients from unknowingly incurring large risks "and thus exposing the bank itself to financial, legal and reputational risk"

inasmuch as informing additional persons within the customer's organisation would provide a check or balance that was intended to reduce or control the risk of a rogue trader.

245. In the Re-Amended Defence and Part 20 Counterclaim, SHI modified the alleged custom and practice, stating that an explanation of the risk level of the product would be given to "an appropriate individual in the client organisation other than the usual trading contact".

246. It was following Mr Quinn's report served in response to that of Ms Rahl, to which I have made extensive reference earlier in this judgment, and after the Joint Experts' Memorandum prepared by the two experts, that the position changed once again. Ms Rahl agreed in the Joint Experts' Memorandum that the FX Prime Broker did not provide any advisory service to the client, which ruled out any question of advice on market risk, as a matter of custom of the FX PB market. As Mr Quinn pointed out, customarily, the FX Prime Broker would only know about any transaction after it had been executed by the client and would be bound to accept that transaction if it fell within the ambit of the agreement between them. Moreover, the alleged custom related to authorisation of "the trading" of "high risk" products and FX Prime Brokers would not be considered to be involved in trading since the whole point of the arrangement was that the Prime Broker's position was "flat", with the trading risk being taken by the Counterparty and the client respectively, between whom the deal had been concluded. It was agreed between the experts that the FXPB desk had minimal interaction with the FX Sales or Trade Desk and charged low level fees for its operationally focused business. In the Joint Memorandum Ms Rahl, when agreeing that the Prime Broker did not even know what trades the client had entered into before the client informed it, noted that this was not true in the case of direct trades not involving a Counterparty bank or executing broker. Where, for example, SHI, in the person of Mr Said, concluded an EDT with DBAG's Trade Desk, through Mr Geisker at the Sales Desk, the position was different to trades with Counterparty banks effected as agent for DBAG through the Prime Brokerage mechanism. (As appears elsewhere in this judgment, of the forty one EDTs concluded by Mr Said, six were direct trades concluded with DBAG.)

247. In Further Information served on 1st February 2013, the day after agreement in the Joint Experts' Memorandum, SHI set out a proposed further amendment to plead the custom which now appears at paragraph 38(4B) of its current pleading.

248. This was a volte-face since paragraph 38 of the pleading has at all times referred to the "true construction" of the FXPBA "in the light of the aforesaid factual background" and/or terms to be implied into the FXPBA. That was the issue which Ms Rahl had been addressing in her first report, without reference to any distinction between direct trades with DBAG and indirect trades with Counterparties. In her Report in response to that of Mr Quinn, she was less than candid when saying that the custom and practice she had referred to in her original report applied to direct trades only. In cross-examination she stated that this was obvious and that she had only felt the need to clarify the position in her second report following the experts' meeting. I regret to say that I have concluded that Ms Rahl was advancing the case for a custom in her first report, in the context of an implied term in the FXPBA (albeit by reference to the surrounding circumstances which included a PWM relationship with DBS), which she then abandoned when faced with Mr Quinn's evidence about the nature of

FXPB, an area of which she had very little knowledge and no working experience. For the first time, in her Reply Report the custom (which had already changed shape from that originally pleaded, doubtless on her instructions) was said to refer to direct trades which had not previously been mentioned.

249. In the light of this changed case, DBAG sought the permission of the court to adduce evidence on custom relating to direct trades, as opposed to FXPB and, on being given permission, adduced the report of Ms Mandell who drew attention to the fact that the FX market was self-regulating, despite various bodies opining on best practice for sales and trading as well as market and counterparty risk management. She referred to the OCC and the Federal Reserve's high level guidelines for FX sales trading in this context. In consequence, banks adopted standardised customer classification, although this sometimes merely split them into those considered sophisticated or unsophisticated, whilst other banks would have a wider spectrum. Classifications might indicate the types of product which a client could trade and the need for independent approval for products outside that range but this was once again variable as between banks.

250. Most importantly however, she drew attention to the standard Master Agreements most commonly used in FX trading, which developed over the years so that, in 2005, terms such as ISDA were in common usage with the express provisions therein of the kind to be found in part 5, paragraph 1 of the FX ISDA in the present case. In such provisions, the client acknowledges that it has made its own independent decisions as to whether the transaction was appropriate or proper for it based upon its own judgment and is not relying upon any communication given by the other party to the transaction as investment advice or as a recommendation to enter into it. It acknowledges its capability of assessing the merits of and understanding the terms, conditions and risks of the transaction and acknowledges that it does assume risks. The other party is acknowledged as not acting as a fiduciary for or adviser to it in respect of the transaction. (In the present case there are various other provisions in part 5 paragraph 1(b) in which SHI acknowledged that the transactions to which the ISDA refers may at times be volatile and subject to complex and substantial risks that can arise without warning with losses occurring quickly and in unanticipated magnitude. The terms of part 5 paragraph 1 are set out in full in Annex 1 to this judgment). Ms Mandell continued by saying that sales people for sophisticated clients with IFXCO/ISDA type agreements would not customarily question the motivation for trading a particular instrument, especially if the request came from the client (reverse-enquiry) or if it was known to the bank that the client had traded the instrument before (thereby implying that the client was capable of booking and managing the risk).

251. For exotic derivatives, approval from the bank's credit department might be required and on occasion that approval might be issued contingent upon certain disclosures or signatures from the client. She stated that ensuring that an appropriate individual in the client's organisation, other than the usual trading contact, understood the risk level of a product prior to trading, was not in her experience a standard requirement of the sales process. It could conceivably be a specification attached to the authorisation to trade but it would not be customary to require the sales force to do this for every high risk transaction. In entering into a transaction, an FX Sales/Trade Desk would pay regard to internal guidelines and to the agreed documentation with the client. The

desk would be guided both by any internal information regarding the nature of the client and its sophistication and what other transactions the client was known to be transacting with other market counterparties. Consequently, in her view, there was no customary policy that the bank would ensure that a person other than the trading contact of the client understood the risk level of a high risk product (however that was defined) and would explain the risk level to such a person. Nor was there any general or regulatory requirement to do so. Whether it actually took such steps in any particular situation would depend upon all the circumstances, including the nature of the client, its trading history, whether there was any evidence that the trader was engaged in improper practice and the terms of the client documentation.

252. In her report in reply to that of Mr Quinn, Ms Rahl endorsed the term now pleaded in paragraph 38(4B) of SHI's current pleading but two paragraphs further on stated that if there was any ambiguity about whether the specified proposed transactions were aligned with the intentions of the client, a reasonably prudent and competent investment bank "would clarify with a senior person at the client which transactions are acceptable before engaging in them." In cross-examination she agreed that the trading contact might himself be the senior person in question.

253. The alleged custom thus acquired something of the character of a moveable feast. Whatever form it took from time to time, there was essentially nothing to support it save for Ms Rahl's assertion. There was no binding regulatory guidance to support it and the industry writings that she relied upon were all aimed at the steps which a bank might take for its own protection and the steps that bank examiners might take when auditing the processes that the bank had put in place for that purpose.

254. By contrast, the evidence of Ms Mandell, set out in her report and maintained under cross-examination, was entirely convincing. From the perspective of a Sales Desk of a bank, it is irrelevant whether or not the other party has an FXPBA with the same bank. There are sales standards which apply to FX sales persons as to other sales persons in a bank and banks are subject to Federal regulation in the US. The FX market however is self-regulated. She accepted that regulations were principles based but those that existed were all about the risk that the bank assumed, namely the risk of counterparty default and it was in that context that a bank might wish to ascertain the effectiveness of a counterparty's risk management systems and capabilities in order to preserve the institution's reputation in the market place by avoiding situations that created unjustified expectations. Steps taken to ensure that counterparties understood the nature and risks inherent in transactions were taken for the bank's own protection. Some higher risk transactions would be referred to the senior management of the client or the senior sales person at the bank with this in mind. This was particularly the case where the client was unsophisticated. A bank should assess the client's ability to understand the risk in the relevant product and would want to have a procedure whereby it was confident that the client management understood the nature of the transaction, but often it would be the manager or a senior person who would be executing that transaction and a bank would not go to another individual to inform them of it. There was moreover a higher degree of confidence that the client was prepared to undertake complex higher risk transactions if it had done such trades before, passed them through its systems and confirmed and settled them. It was not therefore standard practice on the sales desk or a standard practice of the sales process to present an outline of the risks associated with complex derivatives to someone

other than the person who was executing the transaction, whether someone away from the Trade Desk or away from the executing client manager, in order to ensure that someone other than the trading contact understood the product in a high risk transaction, however that was defined.

255. I accept Ms Mandell's evidence in preference to that of Ms Rahl, because it is inherently more credible, is coherent in the light of ISDA standard terms and the approach to bank policies and because I found her, unlike Ms Rahl, measured and objective in her approach. I find therefore that the alleged custom is not made out in relation to the existence of bank policies in respect of direct trades of "high risk" products.

256. Moreover, as pointed out earlier, the allegation is not that, as a matter of custom and practice, investment banks owed their clients an obligation to ensure that someone other than the trading contact understood the risk level of the product (or that Prime Brokers owed such duties). The allegation is of a custom and practice about bank policies. It does not follow that, even if banks did have such internal policies, the terms of those policies would be customary terms of contracts with those dealing with the institution. To my mind the notion is inimical to the internal nature of such policies designed for the bank's own protection and I can see no basis for importing a term into the FXPB or the FX ISDA to the effect alleged.

257. Moreover, any such customary term in the arrangements between SHI and DBAG would be inconsistent with the express terms of the contracts between them. The FXPBA makes no distinction between "high risk" trades and other trades. The opening paragraph of the FXPBA lists the type of trades which DBAG authorises SHI to transact as its agent. Structured Options, as defined, are more complex transactions and require DBAG's approval prior to execution by DBAG but, as with the vanilla trades, the initiative for concluding the transactions rests with SHI which deals with Counterparties before approaching DBAG. As pointed out by Mr Quinn, the alleged custom could have no place in the context of an FXPB arrangement.

258. By the Said Letter of Authority, SHI specifically authorised Mr Said to trade on behalf of the company for the purpose of executing the types of transaction referred to in the first paragraph and, by the second paragraph, expressly acknowledged that DBAG should have no duty to enquire as to the nature of the relationship between SHI and Mr Said, nor as to any restrictions upon his activities in connection with his execution of such transactions. SHI was, by the terms of this Letter, expressly clothing Mr Said with authority to act on its behalf as its trader and agreeing to be bound by transactions executed by him "to the same extent as if we were directly executing such FX or options transactions". SHI thus equated Mr Said with itself, held him out to be the manager of the business referred to and absolved DBAG from any duty to enquire further about SHI's interrelationship with him. The requirement to ensure that someone other than Mr Said within SHI, whether Mr Vik, a contact other than the trader or another senior figure, understood the risk level of a product would necessarily involve an inquiry as to the understanding of persons other than Mr Said, an enquiry into the nature of his relationship with SHI as a "manager" or "senior person" and an enquiry which questioned his authority to execute transactions on SHI's behalf.

259. Justice Kapnick in her decision of 8th November 2012 held, as a matter of New York law, that the Letter was "a complete defense" in relation to SHI's claim that DBAG could be liable for Mr Said's trading activities and she was upheld by the Appellate Division on this point. The best available evidence of the application of New York law to this Letter effectively rules out a possibility of any custom of the kind alleged.

260. These points hold good in relation to the modified custom which is said to relate solely to direct trades between DBAG's Sales/Trade Desk and Mr Said on behalf of SHI. Those trades, in practice, were dealt with by the FXPB desk in exactly the same way as a trade by the Counterparty and the implied term is one to be implied, according to SHI, into the FXPBA. However the claim is put, it is nonetheless completely inconsistent with the terms of the FX ISDA and its Schedule, as set out in Annex 1 and referred to above, which applied to every transaction concluded under the FXPBA and to the direct transactions with DBAG as much as the indirect trades. The acknowledgement that SHI had made its own independent decisions as to the appropriateness and propriety of the transaction and was not relying upon any advice or views of DBAG in relation thereto and had determined that the transaction in question was suitable for SHI in the light of its investment objectives, financial situation and level of investment sophistication, when combined with the acknowledgement that transactions may be volatile, subject to complex and substantial risks with losses which occur quickly and in unanticipated magnitude, render the implication of a term of this kind impossible. SHI specifically represented and acknowledged that it needed no explanation or advice for the conclusion of the transactions in question.

261. Not only is the alleged obligation inconsistent with the terms of the contracts between SHI and DBAG but it is also inconsistent with the parties' practical construction of those agreements and their performance of the contracts in question. There was no such expectation or understanding on the part of any of the individuals involved, whether at the FXPB Desk, the Sales/Trade Desk or on the part of Mr Said or Mr Vik. As appears elsewhere in this judgment, Mr Vik knew that Mr Said was entering into complex risks, the nature of which was explained to him by Mr Said, but never looked to FXPB or the Trade/Sales Desk for an explanation of the risks involved. Nor was it ever suggested that any such approach on their part was required. Mr Geisker's evidence was that, in his seventeen years as a salesman, he had never called anyone else other than the trading contact he had in relation to any trade being discussed. He knew of no market practice whereby investment banks, before selling leveraged products such as the EDTs to a client, ensured that an appropriate person at the client, other than the trader, understood the risks involved. He said that it never occurred to him to contact Mr Vik and there was never any discussion of the need for that at the bank. Not only did his evidence support the absence of any custom of the kind alleged but his evidence showed that the course of performance and the parties' practical construction of the agreements, in so far as anybody had reference to them, was inconsistent with any such customary terms. The salesmen would assume that a Counterparty employing a trader was receiving reports from the trader and it would be difficult and embarrassing to approach anyone else over the trader's head and would undermine the relationship between them.

8(g) Paragraph 38(4C)

262. A further implied term alleged by SHI (paragraph 38(4C) of the RRRADC) is that DBAG would not allow any trading in a product not approved through the appropriate NPA processes. This term is alleged to be implied from the fact that it was at all material times the usual custom and practice of an investment bank (and also the policy and practice of DBAG) not to allow any trading in a product not approved through appropriate NPA processes.

263. It will be recalled that the draft internal Audit Report referred specifically to the absence of any NPA process by FXPB in respect of the EDTs (there referred to as TPFs). There is no dispute that carrying out an NPA process was standard practice in the banking world. It was also common ground between the experts that NPA processes were internal matters, conducted by banks as part of their internal risk management and that the processes instituted and adopted by such banks were confidential to them. The processes varied from bank to bank and there was no identifiable set of standards, according to Mr Quinn, which would have been customarily applied, nor an identifiable set of steps which would be taken by a reasonably prudent and competent investment bank engaged in operating an FXPB arrangement. Whilst therefore a customer might be aware that banks habitually carried out NPA processes, the customer could not know what those processes involved nor how effective they were in ensuring that the bank in question had minimised the risks to it from trading in such products.

264. The same underlying difficulty arises with this implied term as with the previous implied term in relation to explaining the risk level of a transaction to a person other than the trader. It simply does not follow from the fact that a bank has an internal practice of reviewing a product, before being prepared to trade in it, that a term is to be implied into a contract with a third party that it will not permit itself to enter into a trade with that third party unless and until that process, however effective or ineffective it is, has been carried out. Once again, the test enunciated by the New York law experts is not met, namely that, for a term to be annexed to a contract as a matter of trade usage, it must be shown that the parties to the contract are aware of the usage or that the existence of the usage in the business to which the transaction relates is so notorious that they should have been aware of it. The custom and usage must be such that the parties are taken to have contracted by reference to it.

265. The effect of SHI's submission is that DBAG is taken to have promised SHI that it would not allow SHI to enter into trades, in its name, with Counterparties, which had not been reviewed and accepted under the NPA process. This, once again, is directly inconsistent with the terms of the FXPBA and the Said Letter of Authority. Both of those instruments contain their own definitions of the types of trades which Mr Said was authorised to conclude for DBAG on the Counterparty Transaction and/or SHI on the Agent Transaction. If a trade fell within the ambit of the FXPB and the Said Letter of Authority, DBAG was not entitled to refuse to accept such a trade. The fact that DBAG might not have gone through its own internal NPA process is an irrelevance in that regard. It had agreed to accept the transactions set out. The fact that there was a special category of Structured Options which had to be approved by DBAG before becoming an "Accepted Transaction" does not affect the overall position in relation to the alleged implied term. The implied term, as formulated, would require DBAG to refuse to trade a product which otherwise fell within the scope of what it had specifically agreed to authorise Mr Said to conclude on its behalf

and what it had agreed to trade with SHI itself in the offsetting transactions. Whilst the absence of an NPA process in relation to a Structured Option would provide a good reason for DBAG to refuse to accept it, that was a matter for DBAG's choice, without any fetter being placed upon the exercise of that choice by the terms of the FXPBA.

266. From whence then can any obligation arise in the context of Prime Brokerage which Ms Rahl accepted did not involve trading? The Prime Broker's role is much more passive than that but the implied term, as framed, requires DBAG to refuse "any trading in a product not approved through the appropriate New Product Approval processes".

267. The uncertainty which surrounds the nature of this implied term requiring rejection of a product which has not been subjected to "an appropriate New Product Approval procedure" is problematic for the implication of a customary term, which, in order to qualify as such, must be uniform, well-settled and well-known or notorious. This is illustrated by Ms Rahl's own evidence. In her first report she was insistent that the Prime Brokerage desk should conduct an NPA process before handling the new product, regardless of the position of the Trade Desk. In her second report she said that the application of the NPA process to a Prime Brokerage desk could be different from that applied to the Trade Desk but that the Prime Brokerage desk might be able to rely on an NPA process conducted elsewhere in the bank. In the Joint Memorandum with Mr Quinn she agreed that NPA was primarily done for the bank's protection but stated that it was a standard procedure and clients could reasonably expect that all products entered into by a bank would be subject to an NPA "or some other approval process" that ensured that their operations and systems could handle the products. This point was repeated in her third report where she again referred to "some other similar process" to ensure that an FXPB group could properly handle the trade "without making sustained errors in valuation, margining and reporting" and in cross-examination, having stated that approval at the FX level could not possibly cover FXPB, she accepted that a shorter process, such as a "sign-off by systems and operations and credit" could suffice. Whilst she was insistent that it was standard practice to seek to achieve what was set out in Best Practice Number 51 issued by the New York Federal Reserve in its publication, Management of Operational Risk in Foreign Exchange, she recognised that there were no regulatory requirements for NPA and only guidelines, none of which referred to NPA processes being conducted for the client's benefit and none of which set out the details of the process to be followed. External regulatory examiners would audit banks for compliance with their own procedures, but no more than that.

268. What an "appropriate" NPA process involves is not specified and is uncertain. DBAG's own evidence seeking to establish that there had been an NPA process in respect of the EDTs, by reference to an Approval AB103563 which was completed in 2004 and covered a range of product types with particular economic features, illustrates the uncertainty in any application of the term alleged. SHI maintains that this Approval was insufficient for the EDTs and the reference to the technical security type "KOMultiDualCCY" did not incorporate the EDTs, although Mr Chin's evidence was that EDTs were treated by DBAG as falling within this category. If this was a New Product Approval, it suggests that the process was inadequate, certainly as far as the FXPB Desk was concerned, even if it was sufficient for the Trade desk,

because of the difficulties involved in booking, valuing and margining the EDTs in DBAG's FXPB systems. Whether or not this process would have been applicable to FXPB, as opposed to the Trading Desk, only creates another issue of what is "appropriate" as an NPA process.

269. In circumstances where, even if the trader is aware of an NPA policy applicable to the Prime Broker or the Trading Desk, it cannot know what the process involves or whether the process followed is adequate or inadequate in ensuring the capability of the institution to handle the product in question, the uncertainty surrounding the content of the alleged implied term is reinforced. In the context of internal procedures, designed for the bank's own protection, and no regulatory requirement for NPA or the manner in which the NPA process is to be conducted, the "appropriateness" of such a process is too uncertain and too unknown to give rise to any customary obligation.

270. Mr Vik, at paragraph 44 of his first witness statement, expressed his belief, from his own experience, that DBAG must have had NPA policies and operated in accordance with them. The balance of the paragraph which follows on merely states that, whenever he wanted to trade something he had not traded before, there was a ritual of process and procedure which had to be gone through which involved form filling, legal documentation and significant delay. He did not attribute this however to any NPA process. Given my other findings about the unreliability of Mr Vik's evidence, I am not inclined to accept this evidence from him either, being contained in one sentence alone without anything to support it. There was no evidence from Mr Said that he had any such expectation at all. The evidence of DBAG's witnesses in relation to NPA was all given in the context of procedures designed for DBAG's own protection. Mr Quinn's evidence was that NPA processes were for the bank's benefit without any client involvement. NPA process was a standard practice but a matter of internal risk management to ensure that banks had proper controls, operation, technology and finance. Moreover, FXPB, which was not involved in the trading of new products, maintained a flat position on business it was bound to take in under the Prime Brokerage documents agreed and would not necessarily know that a product had or had not been approved on a firm-wide basis when taking in a trade. He said that, particularly in the years 2006-2008, Prime Brokers were often presented with new products that a client was trading in an evolving market. If the trade fell within the contractual documents, the broker was bound to take it in and fulfil its role as Prime Broker.

271. Ms Mandell's evidence was to the same effect in the context of direct trades, stating that NPA processes were conducted as part of internal risk management.

272. Ms Rahl stated in her second report that the purpose of the NPA process was to ensure that a bank did not authorise transacting in products for which it was unprepared. The NPA process was intended to assess whether the relevant departments within the bank had the necessary knowledge and expertise to book and account for the product, whether it had the knowledge and expertise properly to risk manage the product and whether transacting in the product would expose it to unnecessary reputational risk. She agreed in cross-examination that the NPA process was an internal process and that different banks would have different processes though the intent and the major components, she said, would be the same. She agreed that banks conducted NPA processes for their own risk management purposes but maintained that it was also "a

regulatory imperative". She appeared to accept that the regulatory guidance referred to in her report focused on what banks did for their own protection without any suggestion that it was being done for the benefit of the client. She said that it was "not done for the clients per se, but it is done to ensure that the product can be properly processed and handled and by definition therefore it tells a client that a bank is not going to enter into an activity that it is ill-prepared to handle properly." Given however the absence of any knowledge on the part of the customer as to how any NPA process would be conducted and how effective it would be, it could not tell the client anything of the kind.

273. The position is therefore that, notwithstanding the fact that it was customary for banks to conduct NPA processes in relation to new products and that DBAG had a policy itself to do so, that does not translate into a customary term of an FXPBA not to permit the Agent to conclude trades which have not been through such a process, let alone an "appropriate" process. The evidence does not establish that an obligation to refuse trades which had not been through a Prime Broker's appropriate NPA process was a customary obligation in the trade to be incorporated into the contract because the parties must be supposed to have made their contract by reference to it. It is inconsistent with the internal, confidential and proprietary nature of an NPA process, inconsistent with the terms of the FXPBA (and the Said Letter of Authority) and with the terms of the FX ISDA and Schedule (as set out in Annex 1) inasmuch as SHI thereby acknowledges that it assumes the risks of the transactions, relies on its own judgment in entering into such transactions and reaches its own decisions as to the suitability of them whilst acknowledging that DBAG is neither a fiduciary nor an adviser on whose advice or communications it relies.

8(h) Paragraph 38(4D)

274. Paragraph 38(4D) of SHI's latest pleading alleges a further implied term which was introduced in draft amendments on 1st March 2013. The implied term alleged is that DBAG would not enter into any transactions with SHI or accept any transactions under the FXPBA (alternatively any Structured Options) which the FXPB desk was unable to book, value, record, margin and report accordingly. The alternative formulation is that the bank would take reasonable care to prevent such transactions being concluded. Once again I have to apply the test for implication of terms as set out by the New York professors of law engaged by the parties. The oddity about this implied term is that, once again, it imposes an obligation upon DBAG to prevent SHI from conducting transactions which otherwise fall within the authority given to SHI under the FXPBA and to Mr Said under the Said Letter of Authority. This is not, by any means, the opposite side of the coin from the implied term alleged under paragraph 38(2) of the RRRADC which relates to DBAG's obligations in relation to trades concluded by Mr Said that fall within the ambit of the authority given to him. The great advantage of the implied term alleged in paragraph 38(4D), from SHI's perspective, is that it would cast responsibility on DBAG for the transactions which have led to the major losses (the EDTs), all of which resulted from Mr Said's trading decisions.

275. As framed, in relation to "any transaction with SHI" and "any transactions under the FXPBA" the implied term is plainly inconsistent with the terms of the FXPBA, for

much the same reasons as I have already set out in relation to other alleged implied terms. If a trade fell within the ambit of the FXPBA (and the Said Letter of Authority) it was a transaction which DBAG had authorised SHI to conclude as its agent (and which SHI had authorised Mr Said to conclude as its agent). DBAG would therefore be obliged to accept such trades as binding upon it in relation to the Counterparty and to conclude an offsetting transaction with SHI on the same terms under Clause 4. For ordinary transactions, other than Structured Options, DBAG had no power to accept or reject and was bound to process them under the FXPBA, if they were within its terms. DBAG was simply not in a position to refuse a transaction which was authorised under the FXPBA and would be in breach if it did so. It was bound to process the authorised trade which Mr Said had concluded, in its name, with the Counterparty and it was bound then to enter into the corresponding transaction with SHI. There simply is no room for the implication of a term to the contrary effect not only allowing but obliging DBAG to refuse transactions on the basis of its inability to book, value, record and margin properly or to report accordingly. It matters not whether this is expressed as an absolute duty or as a duty to take reasonable care to prevent such transactions taking place. Either form of the obligation is inconsistent with the express terms of the FXPBA.

276. The same issue arises in relation to direct trades with the DBAG Trade Desk. The implied term is framed by reference to the inability of the FXPB desk properly to book, value, record, margin and report to SHI. Direct trades were, in fact, treated by the FXPB desk in exactly the same way as indirect trades, from an operational point of view, although the legal position was, self-evidently, different. DBAG, as one and the same entity, could only have one contract with SHI and there could be no separate Counterparty Transaction and Agent Transaction, since the DBAG FXPB desk could not contract with the DBAG Trade Desk, as a matter of law. Nonetheless this was how the direct trades were treated by the FXPB desk.

277. The implied term proceeds on the basis that the transactions entered into by the Trade Desk would be booked by the FXPB desk and not by the Trade Desk itself. The Trade Desk was in fact capable of booking and valuing the EDTs by using DB Analytics and margining could be done but not on the VaR basis by the ARCS VaR model, as the FXPBA and the CSA required. DBAG is thus said to be in breach of the implied term in so far as the Trade Desk concluded direct trades with SHI which the FXPB desk could not properly process. It is not suggested that the direct trades are governed by anything other than the FXPBA and thus it is an implied term which is alleged into the FXPBA in relation to what the FXPB desk could or could not do. If a trade had been treated as outside the FXPBA and CSA, then the Trade Desk would have instituted separate processes for trade confirmation, valuation and margining on a different basis, such as trade level margining.

278. Once it is accepted that the direct trades are as much governed by the FXPBA and CSA as the indirect trades, although the Counterparty Transaction and the Agent Transaction collapse into one transaction only, Mr Said and SHI's authority to transact direct business must be taken as coincident with their authority to transact indirect trades. Thus the self same inconsistency between the implied term and the contractual authority applies and DBAG could have no choice whether or not to comply with the authority it had conferred because of the inadequacy of its own systems.

279. As DBAG submits, the matter can be looked at from the opposite perspective. If DBAG did owe a duty to book, value, margin and report on the trades concluded by SHI under the FXPBA, it would be in breach of contract if it failed to do that. How then would the New York law test for implication of terms apply? There could be no basis for the implication of a term that DBAG would prevent SHI from concluding Counterparty Transactions and Agent Transactions or direct trades where DBAG's failures would mean that it was in breach of contract. If no such obligations were assumed, there would be no basis for implying a term that DBAG would prevent SHI from using the authority given by the FXPBA to conclude trades in circumstances in which DBAG could not carry out various functions that it was not obliged to carry out anyway. In circumstances where I have held that there was an implied term requiring DBAG to report trades and their valuation and the margin requirements of the portfolio as a whole on the website, DBAG would be in breach if it failed to do so though its liability might be restricted by reference to the GEM website terms and conditions. It would still be no basis for any implied term of the kind alleged.

280. With regard to the more limited implied term requiring DBAG to refuse to accept any Structured Option by refusing approval under Clause 2(iii) of the FXPBA in circumstances where it could not carry out the specified functions relating to those Structured Options, the New York law test can, once again, not be met. The same logic applies as for trades which are not Structured Options. If DBAG owed an implied obligation to book, value, record and margin Structured Options or the more limited obligation that I have held to exist, namely to report on such Structured Options, DBAG would be liable for failing to do so if it has approved such transactions so that they became Accepted Transactions. If it owed no such duties, there would be no basis for saying that it was obliged to tell SHI that it could not do what it was not obliged to do. Either way, there is no basis for thinking that a reasonable person in the position of a party to the FXPBA would be justified in understanding that such a term was included or that such a term was implicit in the Agreement viewed as a whole.

281. The way in which Clause 2(iii) of the FXPBA worked was to give an entitlement to DBAG, at its option, to approve or not approve Structured Options proposed by SHI. DBAG would not be responsible for any Counterparty Transaction executed by SHI on its behalf unless such approval was obtained and was effective at the time of execution of the trade. In the absence of DBAG's consent, it would not be bound by Mr Said's conclusion of the trade with a Counterparty and would not be obliged to enter into any offsetting transaction with SHI. The requirement of consent was therefore a pre-condition to DBAG's liability for such transactions and obligations in respect of them (and DBAG could impose additional conditions for its consent). The Clause does not involve an obligation to refuse consent in circumstances where DBAG was unable to comply with any enforceable obligations which would arise if it gave its approval. Once again there can be no basis for implying an anterior duty which has the effect of restricting DBAG's ability to give consent, whether or not the giving of consent for transactions it cannot properly handle gives rise to future breaches of contract.

282. Again, the same logic applies to a lesser duty to exercise reasonable care to prevent the conclusion of such trades with SHI.

283. Any reliance upon statements made by DBAG witnesses in their evidence to the effect that DBAG should not accept trades which it could not book, value, margin or report is misplaced, in much the same way as their reliance upon statements that a client should be told of DBAG's inability to perform these functions in relation to the trades. As a matter of prudent and internal risk management, any employee would rightly think that a bank should not take on trades that it could not properly process in its systems. That however is very different from a contractual obligation, about which they were not being directly questioned and on which they were not qualified to give an answer. A bank which takes in trades that it cannot properly process may be liable for any loss caused by such failure but there is no basis for the implication of an independent obligation not to accept such trades and it is in fact a powerful factor against the suggestion that such a term should be included and was implicit in the agreement taken as a whole.

8(i) Paragraph 38(5)

284. The last implied term alleged by SHI appears at paragraph 38(5) of the RRRADC. This alleges that DBAG had a duty to act in good faith and a duty of fair dealing in the course of its performance of the FXPBA with the effect that it was "required not to do anything which would have the effect of depriving or injuring the right of SHI to receive any of the intended benefits for which it bargained under the [FXPBA]".

285. As set out in the section of this judgment relating to the principles of the New York law of contract, the two professors of New York contract law agreed upon the existence of an implied covenant of good faith and fair dealing and on the appropriate test to ascertain whether or not it has been breached. They disagreed however as to whether the implied covenant created additional freestanding duties in the sense of substantive obligations which were independent of the other obligations imposed on the parties by the contract, whether express or implied. Both agreed that the implied covenant could not give rise to duties which conflicted with the express terms of the contract and I have found that the difference between the professors was not as wide as might at first sight be supposed. I have also set out my conclusions on the point.

286. Professor Cohen stated that the implied covenant of good faith and fair dealing, as part of the contract, does not create a cause of action that is separate from an action for breach of contract. He opined that, as noted by many New York courts, "The duty of good faith and fair dealing is implicit in the performance of contractual obligations to the extent that a separately stated cause of action asserting breach of that duty is routinely dismissed as redundant." In the present case, that is exactly what has happened in the New York action. The seventh cause of action alleging breach of the implied covenant of good faith and fair dealing was dismissed by Justice Kapnick on 9th November 2012 as duplicative of SHI's more specific breach of contract claims on the basis that they arose from the same facts. The other wrongdoings alleged deprived SHI of the intended benefits for which it bargained, including the rights provided by the terms of the FXPBA and FX ISDA. The alleged breach of the implied covenant therefore had no independent substance and added nothing.

287. That decision was upheld by the Appellate Division, First Department on 2nd July 2013. In my judgment, on the facts here it can add nothing in the context of the breaches alleged in this action either, as appears hereafter.

8(j) A Further Implied Term of the FX ISDA

288. As can be seen from the earlier section of this judgment dealing with the construction of the FX ISDA there are three provisions relating to collateral which could result in the termination of the FX ISDA. The first was section 5(a)(iii) of the FX ISDA itself which provided that a failure by SHI to comply with its obligations under the CSA, continuing after any applicable grace period had elapsed, amounted to an event of default in respect of which, if continuing, DBAG was entitled to serve a twenty day notice specifying the default and designating an Early Termination Date. The second provision was found in Part 1(i)(iii) of the Part 1 of the Schedule where DBAG could, if for any reason it deemed there were insufficient Eligible Assets held under the Pledge Agreement, give notice obliging SHI to deliver additional collateral, either into the Pledged Account or in some other form satisfactory to DBAG. A failure on SHI's part to comply would amount to an Additional Termination Event. Thirdly, under paragraph 11(h)(v) of the CSA, DBAG had a right of immediate termination if the value of the collateral in place fell below 100% of VaR.

289. These provisions, when seen in the light of the other terms to which I have made reference, are inconsistent with a further implied term alleged by SHI. SHI submits that DBAG had an obligation to calculate the Allocated Portion every day and an obligation to ensure that it contained sufficient collateral to support SHI's FX trading on the basis of 200% of five day VaR. SHI submits that once there was insufficient collateral in the Pledged Account for the Allocated Portion to support the FX trading on a fully collateralised basis, there was no scope for the parties to enter into any further FX trades without a request for additional collateral being made and fulfilled. If a request was made and SHI did not provide the additional collateral, DBAG could close down SHI's FX trading. In such circumstances of termination, on SHI's construction, DBAG would retain the Allocated Portion in its entirety because ownership in that had been transferred to it. The effect of this, if DBAG had been performing its calculations correctly, would be that most or all of the losses would be covered even if market movements were sudden, since the margin calculated was intended to cover this very situation and, as soon as the limits were exceeded, the request would be made and met within a day during which time prices would not be expected to fall substantially. SHI further submitted that it had no liability for any outstanding transactions above and beyond the collateral provided. It submitted that "[g]iven the structure of the FX CSA that was set up, where the Bank has no entitlement to demand additional collateral (only the ability to close down SHI's FX trading where a request for additional collateral was refused or where the collateral fell below 100% of the VaR level), and where the Bank retained the Allocated Portion, notwithstanding that it might (and indeed was very likely to) overcompensate the Bank on any loss-making transactions, it must follow that SHI was not to have any outstanding liability for transactions". DBAG's only recourse was therefore to the Allocated Portion and there would be little sense in the agreed limitation on DBAG's ability to seek further collateral if SHI had remained liable for the underlying transactions. Accordingly it is said that there was an implied term of the FX ISDA that SHI's liability on its FX transactions was limited to the Allocated Portion, working on the assumption that DBAG had complied with its obligations with regard to the calculation of margin.

290. It was accepted by SHI that this would have been an unusual arrangement whereby DBAG assumed responsibility for the mechanism under which payment of SHI's collateral requirement was satisfied, namely by reference to the Allocated Portion, and was unable to recover any losses that exceeded the balance in the Pledged Account, but this is said to be the result of the provision for the Allocated Portion and the transfer of ownership of it to DBAG.

291. As already set out in section 7(c) of this judgment, however, ownership in the Allocated Portion remains vested in SHI. Furthermore the express terms of the termination provisions gainsay any implied term just as much as they gainsay any construction of the FX ISDA which has the effect of limiting SHI's liability to US$35 million. DBAG is given a right of termination in the event that SHI fails to put up additional collateral but this in no way touches upon SHI's obligation to do so under Clause 2 of the CSA. There would be no purpose served in allowing for time to comply with an obligation before the termination provisions kicked in, if there was no obligation to produce margin over and above the US$35 million. The alleged implied term is inconsistent with the express terms of the contract.

292. Some of the above alleged implied terms which I have rejected run counter to the express terms of the FXPBA in which they are said to be implied. Others run counter to the essential nature of the FXPB relationship or may be seen as contrary to Clause 12 of it or to Clause 9 of the FX ISDA. Each in the form pleaded fails for the reasons set out.

9. The Principles of the New York law of Tort

293. It is agreed between the parties that the existence of the tortious duties alleged by SHI in paragraphs 38A-38D of the re-re-re-amended Defence falls to be assessed by reference to the law of New York. Those duties are as follows:

> "38A. Further or alternatively, the Bank owed a duty of care in tort to SHI in the following respects:
>
> (1) A duty to take reasonable care to ensure that each FX Transaction was booked, valued and recorded accurately in the FX Account.
>
> (2) A duty to take reasonable care to ensure that calculations of the capital required to support SHI's FX trading were carried out completely and accurately, and to notify SHI of the capital requirements of its FX trading when calculated.
>
> (3) A duty to take reasonable care to ensure that information communicated to SHI in relation to its FX trades and its accounts was in all material respects accurate and complete.
>
> (4) A duty to take reasonable care to inform SHI of any inability or failure to:

(i) book and/or to record and/or value accurately or at all SHI's transactions in the FX Account of SHI or in its reporting systems, and/or

(ii) carry out any, or any complete or accurate, calculations of the capital required in order to allocate capital appropriately, and/or failure to allocate capital in the Pledged Account properly or at all.

(5) A duty to take reasonable care to ensure that, in circumstances when it was proposed to enter into a high risk product directly between SHI (through Mr. Said) and the Bank, particularly a leveraged derivative (such as the Exotic Derivatives Transactions, as referred as referred to below), Mr Vik understood the risk level of the product.

(6) A duty to take reasonable care not to enter into any transaction with SHI, or accept any transaction under the FX PB Agreement, (alternatively, not to accept under the FX PB Agreement any Structured Option (by refusing to give its approval pursuant to clause 2(iii) of the FX PB Agreement)) which the FX Prime Brokerage division was unable to book, value and record accurately in the FX Account or in its reporting systems and in respect of which it was unable to carry out any, or any complete or accurate, calculations of the capital required to support such trading and to report accurately to SHI such capital requirements (or, alternatively, in circumstances where it was unable to do any one or more of these tasks).

38B. The said duty of care arose out of the facts and circumstances pleaded at paragraphs 3 to 14, 16 to 21 and 38(4B) above, in particular SHI relies upon the following matters:

(1) The Bank's presentation of itself with key values and priorities in relation to risk management and monitoring of risk and in the provision of customised solutions to clients, as set out at paragraphs 5 and 6 above.

(2) The fact (as pleaded at paragraphs 7 and 14 above) that, as the Bank knew, SHI did not have employees or front, middle or back office operations dealing with its investments and so would be reliant upon the Bank for such services, including in particular the services set out in paragraph 7 above.

(3) The Bank at all times held itself out to SHI as being able to provide the prime brokerage service required by SHI, as set out at paragraph 19 above, and was aware that SHI did not have access to the data, models and systems referred to at paragraph 19 above; and the discussion and agreement (pleaded at paragraph 20(2) above) that FX trading would be facilitated by the provision of prime brokerage services.

(4) The way in which SHI managed its risk, as set out at paragraphs 9, 10, 12, 14 and 17 above, including the parties' reasonable expectations as pleaded at paragraph 10 above, and SHI's requirements as pleaded at paragraph 17 above (which were discussed with representatives of the Bank, as pleaded at paragraph 18 above).

(5) That SHI never requested nor agreed to any "trading on credit" with the Bank in relation to FX trading, as set out at paragraphs 11 and 12 above, the standard practice (pleaded at paragraph 12 above) to ensure that the amount of capital due in respect of any trades was always in place on a timely basis, and the discussion and agreement (pleaded at paragraph 20(1) above) that SHI's FX trading would be supported by capital and not by credit.

(6) SHI was always treated by the Bank as a Private Wealth Management client, as set out at paragraphs 4 and 14 above.

(7) It was discussed and agreed, as pleaded at paragraphs 20(3) and (5) above, that Mr Said's FX trading would be limited as there set out, the amount of capital to be provided by SHI to support SHI's FX trading was discussed and agreed as pleaded at paragraph 20(4) above, and the Bank and SHI discussed the matters relating to Mr Said's FX trading pleaded at paragraphs 20(6) and (7) above.

(8) The essential purpose of the FX prime brokerage agreement, as pleaded at paragraph 21 above.

(9) The custom and practice pleaded at paragraph 38(4B) above.

38C. In the premises, the said duty of care arose on the basis:

(1) that the Bank assumed responsibility to SHI for:

a. booking, valuing and recording accurately each FX Transaction in the FX Account;

b. carrying out calculations of the capital required to support SHI's FX trading completely and accurately;

c. communicating to SHI information in relation to its FX trade and its accounts that was in all material respects accurate and complete;

d. informing SHI of any inability or failure to (i) book and/or record and/or value accurately or at all SHI's transactions in the FX Account of SHI or in its reporting systems, and/or (ii) carry out any, or any

complete or accurate, calculations of the capital required in order to allocate capital appropriately, and/or failure to allocate capital in the Pledged Account properly or at all; and

e. in circumstances when it was proposed to enter into a high risk product directly between SHI (through Mr. Said) and the Bank, particularly a leveraged derivative (such as the Exotic Derivatives Transactions, as referred to below), ensuring that Mr Vik understood the risk level of the product;

f. not entering into any transaction with SHI, or accepting any transaction under the FX PB Agreement, (alternatively, not accepting under the FX PB Agreement any Structured Option) which the FX Prime Brokerage division was unable to book, value and record accurately in the FX Account or in its reporting systems and in respect of which it was unable to carry out any, or any complete or accurate, calculations of the capital required to support such trading and to report accurately to SHI such capital requirements (or, alternatively, in circumstances where it was unable to do any one or more of these tasks).

And/or

(2) that (i) it was reasonably foreseeable that if it did not take reasonable care in the respects set out in paragraph 38A above, SHI may suffer loss, (ii) there was a relationship of proximity between the Bank and SHI, and (iii) it was in all the circumstances fair, just and reasonable that the Bank owed the duties of care set out in those paragraphs.

38D. Further or alternatively, the Bank owed a duty of care in tort to SHI (which arose out of the facts and circumstances pleaded at paragraphs 2 to 14 and 16 to 21 and in particular those pleaded at paragraph 20(3A) above, and paragraphs 44A, 45, 62 and 66A below) to inform Mr Vik on behalf of SHI whenever the collateral requirements of SHI's trading with the Bank were approaching the upper limit of the collateral then available for that trading. The said duty of care arose on the basis:

(1) that the Bank assumed responsibility to SHI for informing Mr Vik on behalf of SHI whenever the collateral requirements of SHI's trading with the Bank were approaching the upper limit of the collateral then available for that trading; and/or

> (2) that (i) it was reasonably foreseeable that if it did not take reasonable care in the respects set out in this paragraph, SHI may suffer loss, (ii) there was a relationship of proximity between the Bank and SHI, and (iii) it was in all the circumstances fair, just and reasonable that the Bank owed the duties of care set out in those paragraphs."

294. It can be seen that the duties of care alleged in paragraph 38A(1) and (2) are identical to the alternative implied terms set out in paragraph 38(2) and 38(4) of the same pleading. There is no contractual counterpart to the duty to take reasonable care to ensure that information communicated to SHI in relation to its FX trades and its accounts was in all material respects accurate and complete (as alleged in paragraph 38A(3)) but it overlaps with the implied term that I have found to exist in relation to the reporting of trades, valuations and margin on the GEM website. The implied term that I have found is a straightforward obligation to report on the web, subject to the GEM terms and conditions, whereas the duty alleged here is one of reasonable care. The duties alleged in paragraph 38A(4) and (5) are the same as the implied terms alleged in paragraphs 38(4A) and 38(4B) so that, once again, these allegations allege a duty of reasonable care rather than the absolute duty of the implied terms. The duty of care alleged under paragraph 38A(5) draws on the same alleged custom and practice as the implied term alleged under paragraph 38(4)(b) which I have found not to exist.

9(a) Concurrent duties of care and the Economic Loss Rule

295. I had the benefit of two reports from Professor Catherine Sharkey, two reports from Professor Benjamin Zipursky, their Joint Memorandum of Agreement and Disagreement and a day of oral evidence in which they were both cross-examined. As recorded in the Joint Memorandum of Agreement and Disagreement, it was agreed that, under New York law, there is a duty of care in law to avoid causing physical bodily injury and property damage, but that such a general duty of care does not apply to cases involving pure economic harm. There are exceptions to this principle but the experts were not at one in relation to tort claims "at the borderland" between tort and contract, although both agreed that there were two New York Court of Appeals decisions which provided a framework for deciding when New York law would recognise a tort claim for economic harm in circumstances in which the parties are in a contractual relationship. Those two decisions are *Clark-Fitzpatrick, Inc. v Long Island R.R. Co.* 70 NY2d 382 (1987) and *Sommer v Federal Signal Corp.* 79 NY2d 540 (1992). Within this framework, it was agreed that a pre-requisite for recognition of a negligence claim is the existence of a "legal duty independent of contractual obligations". There was disagreement as to the effect of three further decisions of the New York Court of Appeals to which I shall refer later, but there was recognition between them that "professionals" have been found to hold such an independent legal duty and that lawyers and accountants qualified as professionals for this purpose.

296. There was agreement that New York law recognised an "economic loss rule" in products liability cases but disagreement as to whether it extended in the same way to contract cases.

297. Professor Zipursky's views suffered from two main defects. First, they ran counter to the decisions of Justice Kapnick and the Appellate Division in the New York Action.

Secondly, they essentially ignored the fact that the parties had chosen to govern their relationship by a series of contracts with detailed terms and conditions which set out the rights and obligations of the parties. If terms could not be implied into those contracts imposing the duties in question there was no scope for tortious duties, absent strong policy considerations requiring the existence of an independent duty. As Professor Sharkey put it: "the New York courts … are extremely wary about imposing extra-contractual duties in contexts where sophisticated parties have set forth their contractual arrangements". Cases where there was no contract between the parties are of limited assistance when considering the imposition of a duty and Professor Zipursky's views were largely founded on "near privity" cases where there was a special relationship akin to contract without any applicable terms and conditions governing the parties' rights and duties.

298. Here, the alleged tortious duties do not fit with the non reliance clause and exclusion of any fiduciary or advisory role on the part of DBAG in the standard ISDA conditions agreed between the parties. Moreover, the parties agreed detailed terms relating to their dealings to govern their mutual rights and obligations.

299. In *Clark-Fitzpatrick* (*ibid*) it was undisputed that the relationship between the parties was defined by a written contract which provided for the improvement of the Long Island Railroad by the addition of a second track and that this contract provided for project design changes with appropriate adjustments in compensation. The court concluded that the two causes of action sounding in negligence were properly dismissed stating that:

> "It is a well established principle that a simple breach of contract is not to be considered a tort unless a legal duty independent of the contract itself has been violated … This legal duty must spring from circumstances extraneous to, and not constituting elements of, the contract, although it may be connected with and dependent upon the contract."

300. The court went on to say that the plaintiff had not alleged the violation of a legal duty independent of the contract but had alleged that the defendant failed to exercise due care in designing the project, locating utility lines, acquiring necessary property rights and informing the plaintiff of problems with the project before construction began. This was alleged to be gross negligence but the court held that each of these allegations was merely a restatement, albeit in different language, of the implied contractual obligations asserted in the cause of action for breach of contract. Furthermore, the damages allegedly sustained as a result of the breach of the duty of due care were clearly within the contemplation of the written agreement as indicated by the design change and adjusted compensation provisions in it. It was said that "merely charging a breach of a duty of due care, employing language familiar to tort law, does not, without more, transform a simple breach of contract into a tort claim."

301. In *Sommer* (*ibid*) the plaintiff claimed against a defendant fire alarm company for extensive fire damage to his property as a result of the defendant's failure to transmit a fire alarm to the fire department. This had led to extensive property damage but the defendant relied upon exemption and limitation of liability clauses in the contract, arguing that its liability should be limited to the sum of US$55.50. As a matter of New York law, such a clause would be effective in respect of negligence, but not in

respect of gross negligence, as had been pleaded. As Professor Sharkey testified, the decision in *Sommer* is critical in dealing with what was described as "the borderland between tort and contract" and as setting several guide posts for separating tort from contract claims. It was maintained by the defendant that the plaintiff was restricted to claims under the contract. The court referred to the basis of the claims in tort and to the duties imposed by law as a matter of social policy. By contrast, contract duties arise from the parties' consensual undertaking. The borderland situations most commonly arise when the parties' relationship initially is formed by contract but a claim is then made that the contract was performed negligently. That was the position in *Sommer*. There was no duty owed prior to the contract being made but, once made, the defendant had obligations which included a duty to make timely reports to the fire department. The effect of such a claim being put in tort or in contract could be significant in the context of statutes of limitation, proof and measure of damages and the availability of exemption clauses or contribution rights. The court set out the following relevant guideposts:

> "[1] A tort may arise from the breach of a legal duty independent of the contract, but merely alleging that the breach of a contract duty arose from a lack of due care will not transform a simple breach of contract into a tort. …
>
> [2] A legal duty independent of contractual obligations may be imposed by law as an incident to the parties' relationship. Professionals, common carriers and bailees, for example, may be subject to tort liability for failure to exercise reasonable care, irrespective of their contractual duties. …. In these instances, it is policy, not the parties' contract, that gives rise to a duty of care.
>
> [3] In disentangling tort and contract claims, we have also considered the nature of the injury, the manner in which the injury occurred and the resulting harm … In *Bellevue*, we rejected plaintiff's attempt to ground in tort a claim that defendants supplied defective floor tiles, noting that the injury (delamination of tiles) was not personal injury or property damage; there was no abrupt, cataclysmic occurrence; and the harm was simply replacement cost of the product. Thus, where plaintiff is essentially seeking enforcement of the bargain, the action should proceed under a contract theory."

302. With those guideposts in mind the court held that the plaintiff was not limited to a claim for breach of contract but might also claim for breach of tortious duty. In the light of the guidelines the court highlighted the nature of the services to be performed in the light of the scheme of fire safety regulations which applied to buildings in New York. Fire alarm companies were said to perform a service affected with a significant public interest where failure to perform that service carefully and competently could have catastrophic consequences. The conclusion that a tortious claim was available therefore rested on the special relationship of the parties in the context of the services to be rendered and the public interest policy which required a duty of reasonable care to be imposed that was independent of the defendant's contractual obligations. The conclusion was also held to rest upon the manner in which the injury arose and the

resulting harm, both of which were said to be typical of tort claims, in contrast to the delamination of tiles in the *Bellevue* case and the damages claim in *Clark-Fitzpatrick*, which amounted to no more than the benefit of the contractual bargain. In *Sommer* what was sought was recovery of damages for a fire which had spread out of control – the sort of "abrupt, cataclysmic occurrence" that had been referred to in *Bellevue*.

303. Two further decisions of the New York Court of Appeals were relied on by Professor Sharkey, namely *New York University v Continental Insurance Co*. 87 NY2d 308 (1995) and *Abacus Federal Savings Bank v ADT Security Services Inc.* 18 NY3d 675 (2012). She considered that the decision in *AG Capital Funding Partners LP v State Street Bank and Trust Company* 896 NY2d 61 (2008) was a particular decision relating to the position of Indenture Trustees under the Federal Indenture Trustee Act and did not reflect any different principles from those referred to in *Clark-Fitzpatrick*, *Sommer* and the other two decisions upon which she relied. There was a difference of view between her and Professor Zipursky on these authorities.

304. I found Professor Sharkey's explanation of the principles which underlay the authorities entirely convincing. Whereas Professor Zipursky effectively maintained that the criteria which governed the nature of a relationship which would support a third party negligent misrepresentation case applied to a negligence claim between two parties to a contract, the authorities did not support him in this. It is not enough to establish the requirements which obtain for a negligent misrepresentation case on the part of a non-contractual claimant in order to found a liability in negligence for carelessly performing contractual duties, whether they be express or implied.

305. In the *New York University* action it was alleged by a plaintiff insured that its insurer had failed adequately to investigate the claim and failed to renew the policy, in violation of the insurance law of New York. It was held that this amounted to no more than a claim based on the alleged breach of the implied covenant of good faith and fair dealing and the use of tort language in the pleading could not change the cause of action to a tort claim in the absence of an underlying tort duty. Allegations of a sham investigation and bad faith practices did not change the position so as to claim punitive damages in tort.

306. The court held that:

> "A tort obligation is a duty imposed by law to avoid causing injury to others. It is "apart from and independent of promises made and therefore apart from the manifested intention of the parties" to a contract … Thus defendant may be liable in tort when it has breached a duty of reasonable care distinct from its contractual obligations or when it has engaged in tortious conduct separate and apart from its failure to fulfil its contractual obligations."

A tort claim can only arise for breach of a contractual obligation where the very nature of that contractual obligation and a public interest in seeing it performed with reasonable care require it, in accordance with the decision in *Sommer*.

307. In referring to *Sommer*, the court explained that in that case it had been held that the alarm company's duty, separate and apart from its contractual obligations, arose from

the very nature of its services – to protect people and property from physical harm, whilst noting the catastrophic consequences that could flow from the defendant's failure to perform the contractual obligations in that case. The fire safety regulations reflected the public interest in the careful performance of the fire alarm services contract. Protecting the fiscal interests of insureds was "simply not in the same league as the protection of the personal safety of the citizens. As compared to the fire-safety regulations cited in *Sommer*, the provisions of the Insurance Law are properly viewed as measures regulating the insurer's performance of its contractual obligations, as an adjunct to the contract, not as a legislative imposition of a separate duty of reasonable care …". The claim therefore could sound in contract alone.

308. In *Abacus* a bank sued defendant security services contractors to recover damages for losses incurred during a burglary of a branch of the bank. Abacus sought to recover some US$590,000 cash which had been stolen and the value of property valued at some US$927,000 taken from the safe deposit boxes, together with damages for lost business, lost reputation in the community and punitive damages. Additionally the costs of repair of the vault of some US$85,000 plus additional security costs were claimed. There were therefore claims both for lost property, damage to property and pure economic loss. Distinguishing *Sommer*, the New York Court of Appeals dismissed the tortious claim saying:

> "Finally, we conclude that the complaint did not allege conduct that would give rise to separate liability in tort. Here, the allegations that a breach of contract occurred as a result of gross negligence does not give rise to a duty independent of the contractual relationship (see *Clark-Fitzpatrick …*; *c.f. Sommer* [the plaintiff's breach of contract claim against the defendant fire alarm company may also sound in tort where the defendant's alleged failure to act with due care affected a significant public interest independent of its contractual obligations])."

309. The focus in that succinct paragraph is on the nature of the burglar alarm service to be supplied under the contract, as opposed to the duty to report fires to the fire brigade in *Sommer* and the lack of any public interest involved which required an independent tortious duty to be owed as a matter of policy. The underlying decision of the Appellate Division was upheld (77 AD3d 431) where the court referred to *Sommer*, saying that the separate duty arose from the very nature of the services provided there to protect people and property from physical harm, the catastrophic consequences that could flow from the fire alarm company's failure to perform its obligations with due care and the public interest in the careful performance of the fire alarm services contract. The contrast was drawn specifically between *Sommer* and the matter under decision because "no public interest is implicated here" and therefore no basis for tort liability arose.

310. I accept Professor Sharkey's evidence in relation to the *AG Capital* decision of the New York Court of Appeals. There is a degree of uncertainty about the exact identity and nature of the contract which existed in that case between the claimant note holders and the defendant which was the Indenture Trustee, whose position was regulated by the Federal Indenture Trustee Act. Claims were made in contract for breach of the Indentures and the Additional Secured Indebtedness Registration

Statements ["ASIRS"], for breach of fiduciary duty and for negligence in failing to deliver the Registration Statement to the Collateral Trustee of earlier loan instruments. There is considerable discussion about the position of an Indenture Trustee and reference to a number of authorities where it was held that "prior to default, Indenture Trustees owe note holders an extra-contractual duty to perform basic, non-discretionary ministerial functions redressable in tort if such duty is breached". The claims for fiduciary duty were dismissed but it was held that the duty to perform basic non-discretionary ministerial functions did give rise to a tortious duty to act with due care. The contract claims could not run because of the terms of a release that had been agreed but the court decided that there were issues of fact which had to be resolved in relation to the tortious duty established by prior authorities. It was said that there were "issues of fact as to whether State Street, separate and apart from its contractual duty under the ASIRS, undertook and breached a duty of care, 'connected with and dependent upon the [ASIRS]', to act in accordance with the ASIRS and the CTA registration requirements to protect plaintiffs' security rights in the CTA collateral and whether plaintiffs sustained significant losses as a result of this alleged breach."

311. Professor Sharkey's evidence was that, under the Federal Indenture Trustee Act, there was no room for any exclusion of negligence on the part of the Trustee and the policy of the Act was therefore to create a liability to perform basic non-discretionary ministerial functions for the protection of the note holders. Although therefore there was no reference to policy as such, in the decision, once the peculiar position of Indenture Trustees was recognised, no different principle was being enunciated from those set out in the four authorities to which I have already referred.

312. Professor Zipursky's evidence was that it was always a question of fact for the court, whether or not there was a "special relationship" sufficient to give rise to a tortious duty of care, regardless of the existence of a contract. It was in that context that he relied upon the authorities relating to negligent misstatement, to which I refer later. He relied on a Federal decision of the US Court of Appeals, Second Circuit, in *Bayerische Landesbank v Aladdin Capital Management LLC* 692 F.3d 42 (2012). There, the claimant was not a party to a contract but was able, by virtue of the decision of the court, to bring a third party beneficiary claim. The question then arose as to whether or not a tortious duty could arise in the context of an allegation of gross negligence in the management of a portfolio on behalf of the investors. The court referred to the need for a legal duty independent of the contract to be violated for a tort claim to arise, citing *Clark-Fitzpatrick* and *New York University*. It was held that the claimant could be taken to have alleged material representations which had induced Bayerische to purchase the notes, including a representation of future contractual performance with care and skill. It was held that the claimant had sufficiently established, in order to withstand a motion to dismiss, a legal duty independent of contractual obligations imposed by law as an incident to the parties' relationship, in accordance with *Sommer*. Although the duty was assessed largely on the standard of care and other obligations set forth in the contract (to which the claimant was not a party), that duty arose out of the independent characteristics of the relationship between Bayerische and Aladdin in circumstances where the claimant purchased notes linked to the Portfolio that Aladdin was to manage under the contract itself. The duty was connected with and dependent upon the contract but sufficiently

sprang from circumstances extraneous to and not constituting elements of it, within the meaning of the expressions used in *Clark-Fitzpatrick*.

313. The court however went on to say this was not the end of the inquiry because of the absence of privity. It was therefore necessary to examine the ambit of the duty to third parties which the court then did by reference to the requirements for recognising liability of "professionals" to third parties in the analogous context of negligent misrepresentation claims.

314. Having therefore applied the *Clark-Fitzpatrick* and *Sommer* principles, additional principles were then considered, taken from the negligent misstatement cases to ensure that that there was nothing in those third party misstatement cases which would militate against the application of the principles applicable to contractual parties, arising from *Clark-Fitzpatrick* and *Sommer*, to a third party beneficiary claim. There is here no additional principle to those set out in *Sommer*.

315. It will be recalled that in *Sommer* in the context of the second guidepost referring to the potential imposition by law of a legal duty independent of contractual obligations as an incident to the parties' relationship, the position of "professionals, common carriers and bailees" was given as an example. In such circumstances tort liability for failure to exercise reasonable care would be imposed irrespective of contractual duties. That was said to be a result of policy.

316. There are a number of authorities which deal with the characterisation of "professionals". Both the experts agreed that lawyers and accountants were so characterised but there was disagreement as to the significance of this and the ambit of any further "special relationships" which could give rise to the imposition by law of a legal duty independent of contractual obligations.

317. There are a number of first instance decisions where the imposition of the duty has turned upon whether or not the defendant was to be regarded as "a professional" or undertaking "professional services". In *Robin Bay Associates LLC v Merrill Lynch & Co* 7 Civ. 376 (2008) the Southern District Court of New York characterised the defendant as a "placement agent to secure funding" as opposed to "a financial adviser" and concluded that there was no public interest element as was required for liability for professional malpractice in tort, in additional to contractual liability. The loss was purely economic which was at odds with the "long standing New York rule that economic loss is not recoverable under a theory of negligence". The court decided it need not decide whether financial advisers were subject to professional malpractice suits. The earlier decision in *TD Waterhouse Investor Services Inc. v Integrated Fund Services Inc*, No. 01 Civ. 8986 (2003) was cited. Professionals "subject to malpractice liability have extensive formal learning and training, licensure and regulation indicating a qualification to practice, a code of conduct imposing standards beyond those accepted in the market place and a system of discipline for violation of those standards."

318. In *TD Waterhouse* (*ibid)* a firm retained to perform accounting duties was found not to have the status of a professional under New York law because of the absence of most of these features. After citing *Clark-Fitzpatrick* and *Sommer* and the need for a significant public interest for the imposition of an independent duty in tort where the injury alleged was economic in nature (as opposed to physical injury or damage to

property and/or a cataclysmic occurrence) the court found that there was no room for the negligence claim in the provision of accounting advice and that the services provided were not "professional services".

319. A further example is provided by another decision of the United States District Court in *Deutsche Bank Securities Inc. v James M. Rhodes* No. 06 Civ. 413 (DC) (2008) where the issue was whether an investment bank's performance of a contract for financial services could give rise to a cause of action for malpractice. Once again reference was made to *Clark-Fitzpatrick* and *Sommer* and the principles there set out. It was said that professionals could be subject to tort liability on the basis of an independent legal duty imposed by law as an incident to the parties' relationship. It was then said that "in such cases it is public policy, not the contract, that gives rise to the duty of due care", clearly by reference to *Sommer* once again. It was then pointed out that the New York Court of Appeals had never found financial institutions such as investment banks to be professionals for these purposes but that, on the contrary, courts had found in actions involving the contractual duties of corporations and financial institutions, that an action in negligence would not lie and that only contractual remedies applied. The court found that the parties in the action in question were "sophisticated entities that entered into a time limited financial contract" and that no significant public interest was linked to the provision of investment banking services that would weigh in favour of imposing a tort liability for public reasons. There are therefore three first instance decisions which militate against the imposition of any tortious duties in the absence of a true "professional" relationship.

320. New York courts have held that in certain specified circumstances financial institutions may assume non-contractual duties if they have the status of "fiduciaries". This can arise where a financial institution has discretion and authority with respect to a current account, as opposed to merely accepting instructions on a non-discretionary account with occasional advice. The point is made clear in the Federal decision in *De Kwiatkowski v Bear Sterns & Co Inc.* in the United States Court of Appeals 2nd Circuit 306 F. 3d 1293 (2002). There it was said that a duty of reasonable care would apply to the broker's performance of obligations to customers with non-discretionary accounts only in relation to the individual transactions undertaken. The claim advanced however presupposed an ongoing duty of reasonable care, giving rise to obligations between transactions. It was held that in establishing a non-discretionary account, the parties ordinarily agreed that the broker had narrowly defined duties that began and ended with each transaction. The court said it was unaware of any authority for the view that in the ordinary case a broker could be held to have an open-ended duty of reasonable care to a non-discretionary client that would encompass anything more than limited transaction by transaction duties. In the ordinary non-discretionary account the broker's failure to offer information and advice between transactions could not constitute negligence.

321. The giving of advice was an unexceptional feature of the broker/client relationship but that did not alter the character of the relationship by triggering an on-going duty to advise in the future or between transactions, or to monitor all data potentially relevant to a customer's investment. There would have to be evidence of a broker undertaking a substantial and comprehensive advisory role of the kind which arises in a discretionary account for such liability to arise. Where there is "complete discretion

and authority over a claimant's investment account", a legal duty may be owed independent of contractual obligations as appears in *Assured Guaranty (UK) Ltd v JP Morgan Investment Management Inc.* 80 A.D. 3d 923 and *Ambac Assurance UK Ltd v JP Morgan Investment Management Inc.* 88 A.D. 3d 1.

322. What is plain from the authorities, notwithstanding attempts to argue the contrary, is that the "economic loss" rule which applies to strict product liability under New York law to restrict the end purchaser of a product to his contract remedies and prevent him claiming from the manufacturer for economic loss in tort, operates effectively in the ordinary contractual situation also, to prevent claims in tort for such losses. Such a claim can be put in contract but not in tort.

323. Although the New York Court of Appeals in *Madison Avenue Gourmet Foods Inc. v Finlandia Center Inc.* 750 N.E.2d 1097 stated that the rule had no application to a negligence claim for failure to keep premises in reasonably safe condition and to protect from economic loss in the absence of property damage, in *King County Washington v IKB Deutsche Industriebank AG, IKB* No. 09 Civ. 8387 (2012) the United States District Court for the Southern District of New York pointed out that in practice the principle had been applied broadly in negligence actions.

324. Professor Zipursky said, in evidence, that he taught his students that there was no general tortious duty not to cause economic loss, to which the exception was "a special relationship". In *King County* the court referred to "the economic loss rule" and the "economic loss doctrine" as preventing a plaintiff from recovering in tort for purely economic losses caused by a defendant's negligence, whether that was founded on a limited scope of duty or otherwise. Recovery of economic loss lay in the nature of breach of contract, as opposed to tort, but the unavailability of a contract remedy does not trigger an exception to the rule and the doctrine may apply where there is no contract at all between the parties. The presence of a contract or a financial transaction that is in the nature of the contract can however be a strong indicator that a plaintiff was not owed a legal duty that was separate and apart from the obligations for which he bargained and obtained in the transaction. Furthermore, the court referred to the limited exception of malpractice which was to be read narrowly to apply to professionals such as attorneys, engineers, accountants or architects with a contract to provide professional services.

325. In *Bocre Leasing Corporation v General Motors Corporation* 645 N.E. 2d 1195 (1995) the New York Court of Appeals, in deciding a product liability case by reference to the foundational decision in *East River S.S. Corp v Transamerica de la Val* (476 US 858) stated that the particular seller and purchaser were in the best position to allocate risk at the time of entering into their contract and that allocation was normally manifest in the selling price. To allow a purchaser to recover in tort for what was in sum and substance a commercial contract claim would be to grant the purchaser more than the benefit of the bargain to which the purchaser had agreed. If the purchaser has not protected itself with warranties in the contract, it should not be permitted to "fall back on tort when it had failed to preserve its … remedies." This principle is, if anything, more applicable to a direct claim between parties to a contract than to a claim by an end purchaser under a chain of contracts who pursues a claim against the original manufacturer. The judgment went on to say that, because the allocation of risk was fixed by the parties at the time of purchase, the plaintiff should be deemed to have assumed the risk of loss above and beyond his contract

rights. Courts should not therefore later modify the plaintiff's commercial contractual risks by imposing a belated tort benefit.

326. In my judgment, on the basis of the evidence that I have heard, the position is clear. Where there is a contract between the parties, a claim for economic loss will be governed by the contract and an independent duty in tort not to cause such loss will not arise unless there are policy reasons to impose an independent duty, such as those which apply in the case of fiduciaries, professionals, common carriers or bailees or where the nature of the services provided, the manner in which the injury arose and the nature of injury and resulting harm require, in the public interest, that a tortious duty be imposed.

327. None of those criteria are met in the relationship between DBAG and SHI, in the context of FX Prime Brokerage. This was an arm's-length Prime Broker relationship, where DBAG was not a "fiduciary", nor a "professional", offered no advisory services and fulfilled operational functions, whilst allowing SHI to trade in its name. The nature of Prime Broker relationships is set out earlier in this judgment. The nature of the services provided and the way in which loss was caused have nothing to do with physical harm nor with the kind of issues to which tort law is directed and no issues of public policy arise in that context, requiring an extra-contractual duty to be imposed. The complaint is made about the performance of alleged duties under the FXPBA and resultant economic loss – the loss incurred as a result of an alleged breach of the bargain made between the parties. There is no cataclysmic loss of the type to which tort law is addressed. (New York courts have rejected the events of 2008 as constituting a cataclysmic occurrence). There were a series of contracts between DBAG and SHI concluded in November 2006 which governed their inter-relationship with the detailed terms of Part 5 of the ISDA schedule, as set out in Annex 1, showing the absence of any reliance by SHI on DBAG as an adviser or fiduciary in respect of any transaction concluded by Mr Said. Economic losses suffered by SHI are either recoverable under such contracts or are irrecoverable, as a matter of the Law of New York.

328. On 8th November 2012 Justice Kapnick dismissed SHI's eighth cause of action for negligence, referring to *Clark-Fitzpatrick* and *Sommer* and the guidelines set out in the latter and referring also to the *Bayerische* decision. The judge referred to the facts pleaded by SHI and its contention that it had detailed the wrongdoings of DBAG as Prime Brokers and private bankers which were independent from any explicit contractual obligation. It contended that the position of a Prime Broker was akin to that of professionals, common carriers and bailees and that the result of DBAG's alleged wrongdoing was catastrophic losses in an "abrupt, cataclysmic occurrence" represented by the global financial meltdown in September/October 2008. Thus DBAG's position was said to be like that of the fire alarm monitoring company in *Sommer* in failing to perform the risk management duties it had undertaken. The judge rejected these arguments and accepted DBAG's submissions based on *Sommer*, where the court's conclusion rested in part on the nature of the injury, the manner in which the injury arose and the resulting harm which were typical of tort claims such as personal injury and property damage. She said that SHI was essentially seeking to recover economic losses sustained under the contract where a plaintiff sought enforcement of the bargain or merely alleged that the breach of contract arose from a lack of due care and no claim lay in tort, notwithstanding the use of familiar tort

language in the pleadings. Moreover, she accepted DBAG's contentions that SHI was attempting to circumvent the court's earlier ruling dismissing its breach of fiduciary duty claims, which had already been affirmed by the Appellate Division by that time. An allegation of reliance upon DBAG's superior knowledge and expertise in connection with its FX trading account ignored the reality that the parties had engaged in arm's length transactions pursuant to contracts between sophisticated business entities that did not give rise to fiduciary duties. Repeating those claims with a negligence label did not alter the fact that the only duties between them were based in contract.

329. On 2nd July 2013 the Appellate Division, First Department upheld Justice Kapnick's decision, stating that the negligence claim set out in the eighth cause of action was properly dismissed as duplicative of the contract claims, by reference to *Clark-Fitzpatrick*. The court also held that there was no "showing that the defendant was subject to duties beyond the roughly thirteen written agreements between the parties".

330. Whilst of course the pleas put forward in New York by SHI are not identical to those made in the English action, the essential principles which underlie the decision of Justice Kapnick and the Appellate Division are those which I have found to apply here. The best evidence of New York law must be the decisions of the courts there. The pleadings in each action may not be identical but the relationship between SHI and DBAG, the contracts between them and the alleged type of duties owed are the same so that, even though there is no issue estoppel, the decisions of the New York court carry huge weight. They proceeded on the basis of SHI's allegations, which doubtless put forward its best case. I have proceeded on the basis of the facts established by evidence and have come to the conclusion that the criteria for establishing any exception to the economic loss rule and/or an independent tortious duty outside the contracts have not been met. None of the tortious duties alleged can therefore stand.

9(b) Negligent Misrepresentation

331. The New York law of tort Professors agreed that the existence of a "special relationship" between parties is a threshold requirement to make out a claim for negligent misrepresentation under New York law. Furthermore, they agreed that the fact that the parties are in a contractual relationship or near contractual privity is insufficient to establish the "special relationship" required for that purpose. It was further agreed that *Kimmell v Schaefer* 89 N.Y.2d 257 (1996) "is an important negligent misrepresentation case in which the New York Court of Appeals analyses what will satisfy the special relationship requirement".

332. There the court stated that, in a commercial context, a duty to speak with care exists when the relationship of the parties, arising out of contract or otherwise, is such that in morals and good conscience the one has the right to rely upon the other for information. The reliance must be justifiable as a casual response given informally does not stand on the same legal footing as a deliberate representation for the purpose of determining whether an action in negligence has been established. The court said

that since the vast majority of commercial transactions are comprised of such casual statements and contacts, it recognised that not all representations made by a provider of services would give rise to a duty to speak with care. Liability for negligent misrepresentation was therefore imposed only on those persons who possessed unique or special expertise or who were in a special position of confidence and trust with the injured party, such that reliance upon the negligent misrepresentation was justified. Professionals, such as lawyers and engineers, by virtue of their training and expertise might have special relationships of confidence and trust with their clients, and in certain situations liability had been imposed for negligent misrepresentation when they had failed to speak with care. In this context reliance was placed upon older authorities such as *Ultramares Corporation v Touche* 225 NY 170 and *Glanzer v Shepherd* 233 NY 236.

333. The court went on to say that the analysis in a commercial case was necessarily different from those cases because of the absence of obligations arising from the speaker's professional status and that in order to impose tort liability there had to be some identifiable source of a special duty of care. The existence of a special relationship might give rise to an exceptional duty regarding commercial speech and justifiable reliance upon it.

334. There is therefore an issue of fact as to the nature of the relationship between the parties and whether it is such to justify reliance upon a negligent representation. The court said that a fact finder should consider whether the person making the representation held or appeared to hold unique or special expertise; whether a special relationship of trust or confidence existed between the parties; and whether the speaker was aware of the use to which the information would be put and supplied it for that purpose.

335. That principle is not at issue between the parties. It is clear, as Professor Sharkey says, that this is a principle which applies to negligent misstatement. It is not one which carries over into other claims of negligence for economic loss although Professor Zipursky sought to draw on those principles in the context of negligence actions, as I have already mentioned.

336. In the proceedings between SHI and DBAG in New York, on 9th November 2010, the Appellate Division affirmed the first instance judge's dismissal of SHI's negligent misrepresentation claim because of the "absence of a fiduciary relationship". In a terse paragraph, the court upheld Justice Kapnick's dismissal of SHI's claims for breach of fiduciary duty, fraudulent concealment and negligent misrepresentation, stating that the reality was that the parties engaged in arm's-length transactions pursuant to a contract between sophisticated business entities that did not give rise to fiduciary duties. Professor Zipursky pointed out that the lack of fiduciary duty was not enough for dismissal of the misrepresentation claim since the test was "a special relationship".

337. Justice Kapnick's judgment of 10th December 2009 had dismissed the same claims on the basis of the absence of a fiduciary or other special relationship between the parties and it was that decision which was upheld by the Appellate Division, albeit using different words. She referred to an earlier authority which stated that the plaintiff in that case had failed to plead a fiduciary or other special relationship sufficient to sustain the cause of action for breach of fiduciary duty and negligent representations.

She came to the same conclusion for SHI. Whether or not there is such a special relationship is obviously a question of fact but it would be a highly surprising result if this court were to come to a different conclusion from that reached by the Appellate Division of New York, albeit that the conclusion was reached on an interlocutory basis and on a pleaded case that was not identical to that pleaded or established here. (The allegations of misrepresentation in the US action related to SHI's exposure, DBAG's collateral requirements, the equity in the FXPB and Pledged Accounts and the amount of SHI's losses.)

338. New York law also recognises that the existence of express contractual disclaimers of reliance upon representations defeats that recognition of a "special relationship" upon which a negligent misrepresentation claim might be based. So, if contracting parties expressly agree that they are dealing with one another "at arm's-length", New York courts have refused to recognise negligent misrepresentation claims. In *HSH Nordbank AG v UBS AG* 95 A.D. 3d 185 (2012) the Appellate Division held as a matter of law that the plaintiff could not succeed in asserting a special relationship where "The parties expressly agreed that they were dealing with each other at arm's-length, that UBS was not acting as HSH's financial or investment adviser and that HSH was not relying (for the purposes of making any investment decisions or otherwise) upon on any advice, counsel or representations … of UBS."

339. On the basis of applicable New York law, the special relationship required for liability between commercial parties to a contract does not exist as between DBAG and SHI. Once again reference should be made to the nature of the Prime Brokerage relationship as set out above, which is not affected by the matters pleaded by SHI in support of any basis of liability in tort.

340. Furthermore, the existence of the FX ISDA and the Schedule, as set out in Annex 1, conclude this issue against SHI in respect of any transactions that SHI says it would not have concluded but for some representation made by DBAG, whether on the GEM web-site or by other means. (In the case of the GEM website, there are further limitations on liability set by the GEM terms and conditions, in any event).

9(c) Damages

341. As far as damages are concerned, the experts agree that, under New York law, consequential damages in negligence actions must be "actual" and "ascertained with reasonable certainty" as opposed to being remote or speculative. Professor Sharkey's view is that a plaintiff can recover lost profits only if it can be demonstrated "with certainty" that the lost profits were caused by the defendant's negligence and if the amount of lost profits can be proved "with reasonable certainty". Professor Zipursky's view is that the phrase "with reasonable certainty" applies to both limbs of the issue. Nothing is likely to turn on this.

342. Furthermore, both parties agree that under New York law, damages for negligent misrepresentation are governed by the "out of pocket" rule which limits damages to "actual pecuniary loss sustained as a direct result of wrong". Lost profits are therefore not recoverable in negligent misrepresentation actions to recover economic loss.

10. The Alleged Oral Agreements

343. There are a number of different oral agreements alleged by SHI, both agreements between SHI and Mr Said on the one hand and agreements between SHI and DBAG on the other. These different agreements relate to the types of trade which Mr Said was authorised to conclude on SHI's behalf and to financial limits imposed upon his FX trading and Mr Vik's FX trading and to a warning to be given by DBAG as margin limits were approached.

344. Mr Vik in his statement said that between September and December 2006, discussions took place between him and Mr Meidal on behalf of the bank which included several telephone conversations and two meetings at his wife's home which Mr Said also attended in part. The agreements which he reached with Mr Meidal were made mainly on the telephone. As set out in his statement or as stated in cross-examination, the following specific points were agreed:

i) Mr Said's trading account would be segregated from SHI's non-FX trading accounts.

ii) SHI's exposure would be limited to US$35 million and DBAG would have no recourse against SHI in respect of Mr Said's trading beyond that.

iii) The collateral for Mr Said's trading would take the form of a pledge to DBAG in a separate and segregated account with DBS.

iv) DBS would provide DBAG with a guarantee of US$35 million to support Mr Said's trading.

v) DBAG's recourse against SHI in relation to SHI's FX trading (whether through Mr Said or anyone else) would be limited to the amount of capital secured in favour of DBAG in the separate and segregated account, including built-up profits made on FX trading (the PAL).

vi) Mr Said would be permitted to trade only "plain vanilla" FX transactions in the nature, essentially, of FX forwards and options.

vii) Mr Said's trading would be monitored and reports made through the prime brokerage arrangements, effectively creating a "back office".

viii) The collateral for SHI's FX trading would be managed and Mr Vik would be told whenever the collateral requirements were approaching the limit.

ix) If the collateral in the separate and segregated account became insufficient trading could not continue.

x) There would be a new FX ISDA Master Agreement which would reflect the above points and would govern Mr Said's FX trading and any other FX trading in which SHI might engage.

345. Mr Vik's evidence in his statements, depositions and under cross-examination was that, after the relevant written agreements had been produced at around the end of November 2006, Mr Meidal told him that the agreements implemented the oral agreements.

i) There was discussion of the Said Letter of Authority and what it permitted Mr Said to do.

a) Mr Meidal told him that the provision stating that DBAG had no duty to enquire as to the nature of the relationship between SHI and Mr Said or as to any restriction upon his activities did not extend to limitations set out in the Letter itself.

b) Mr Meidal told him that Mr Said was restricted to trading in spot, tom next, forward foreign exchange transactions and currency options.

ii) There was discussion about the Structured Options wording in the FXPBA;

a) Mr Meidal said that this referred to options with a condition in them.

b) Mr Meidal said that it provided an additional protection to SHI as Mr Said would need permission from DBAG to conduct such trades.

c) Mr Meidal assured him that DBAG would be vigilant and diligent in relation to monitoring Mr Said's trading.

346. Furthermore, after all the contractual documents had been signed, he had a further conversation with Mr Meidal in which the latter confirmed all previous points which had been agreed.

347. These oral agreements are dependent upon the evidence of Mr Vik alone. Although originally it was alleged that the agreements between SHI and DBAG were made between Mr Vik on the one hand and Mr Meidal and Mr Brügelmann on the other, or, in other formulations, Mr Meidal and/or Mr Brügelmann, Mr Vik's evidence, in his statements, was to the effect that they were made with Mr Meidal alone. That change in SHI's case, in DBAG's submission, calls for comment. SHI asked the court to draw inferences from the fact that DBAG did not call its ex-employee, Mr Meidal, to give evidence. Mr Said has, likewise, not been called by either party although SHI maintains that it reached agreement with Mr Said on the self-same matters as it later agreed with DBAG. Of course it is possible for the Court to draw inferences of one kind or another from the presence or absence of witnesses but at the end of the day it is the evidence which is presented to the Court upon which it must primarily base its decision. There are a number of difficulties with Mr Vik's evidence about the agreements reached:

i) It is inconsistent with the written contracts which Mr Vik signed with DBAG.

ii) It is inconsistent with, as well as being unsupported by, any contemporary documents.

iii) It is inconsistent with Mr Said's evidence on deposition.

iv) It is internally inconsistent and has developed incrementally in the pleadings, in deposition and in witness statements.

v) It is implausible as the long list of items agreed, as set out above, itself suggests. For there to be agreements on all such matters, without any

documentary support in the shape of email exchanges between Mr Vik, Mr Said and DBAG, is inherently unlikely.

vi) It is inconsistent with Mr Brügelmann's evidence, inasmuch as he knew nothing of any such agreements, and would have been expected to know of them, if Mr Meidal had committed DBAG in the manner suggested. Nor did any members of DBS CRM (Credit Department) nor any members of DBAG's FXPB department have any knowledge of any such arrangement, which, if made, they should undoubtedly have been aware of, as it would have impacted on their roles.

vii) It is inconsistent with the parties' conduct after November 2006 and in particular the actions and inaction of Mr Vik in paying the margin calls without protest and closing out Mr Said's trading with substantial premium, way in excess of US$35m.

viii) The oral agreements alleged following execution of the written contract are improbable because of the lack of rationale for them and give rise to the suggestion by DBAG that they are a fabrication with a view to avoiding any argument based upon the entire agreement Clause and the "no oral modification" Clause in section 9(a) and (b) of the FX ISDA.

348. Mr Vik's version of events was that he had reached agreement with Mr Said on four fundamental issues by September 20th and that these matters were then agreed with "the bank" thereafter, by which he meant Mr Meidal of DBS, acting on its behalf and on behalf of DBAG also. He said that four terms were specifically agreed with Mr Said which were absolutely critical:

i) First the capital for his trading would be US$35 million and no more and that was the maximum amount that SHI could therefore lose.

ii) Secondly Mr Said would only enter into plain vanilla trades such as FX forwards and options, although he could combine them in any way he saw fit, provided that the other limits of the remit were complied with.

iii) Thirdly trading would take place in a separate segregated account and be separately collateralised from SHI's other non-FX trading.

iv) Fourthly, his remuneration would be 10% of his net realised profits.

349. These matters were, he said, agreed by about 20th September when he gave Mr Said the name of Mr Meidal as his contact at DBS and asked him to liaise with him to discuss the necessary arrangements for a prime brokerage account and the documentation necessary to enable him to commence trading. As appears in relation to the different types of limitation alleged, this cannot be the case. Whilst Mr Vik's evidence on deposition was that he had first been introduced to Mr Said in May 2006 at a meal at the golf club, and that he vaguely knew Mr Said before this, it was not until September 2006 that they met at Mrs Vik's house in Greenwich, Connecticut. Mr Said, in his deposition, recalled making a deal with Mr Vik shortly after the end of summer 2006 on a bench by the putting green in Mrs Vik's estate. Mr Said also recalled sending Mr Vik a proposal in which he suggested that he would do all of

SHI's FX trading but Mr Vik had rejected this on the basis that he wanted his FX trading to be separate from that of Mr Said. It was on 19th September that Mr Said emailed his former colleagues at CS telling them that he had begun working with Mr Vik in Greenwich.

350. The documents show that the arrangements reached at that stage between Mr Said and Mr Vik were somewhat loose. Mr Said considered that a Prime Brokerage arrangement was the optimum way for SHI to trade in FX. He therefore approached Mr Meidal on 20th October with that in mind and the matter progressed from there. It was not however until 30th October 2006 that Mr Said proposed to Mr Vik that he should be able to trade a portfolio himself. The email in question can only be read as showing that, prior to this time, what was envisaged was Mr Said sourcing opportunities for Mr Vik to make decisions about trading through a Prime Brokerage arrangement. The email read as follows:

> "Alex – I would like to propose that in addition to my role of sourcing opportunities in the currency (and other macro) markets for you I also be able to trade a (obviously much smaller) portfolio directly. We had talked about that briefly before I started and as I look at the markets I think it makes a lot of sense. There will be opportunities that are of the kind you like – pretty long term and with genuine home run potential and I will continue to spend a lot time finding and analysing them. But – there is good money in exploiting smaller and somewhat more medium term (a few months, 3-5%) type opportunities. But – to get to those you have to be nimble, quick and a little flexible. Also – they do not not often make it onto your radar screen if you are busy with other things.
>
> I think I can do both. In practical terms DB is all but ready with their prime broker set-up and I have pushed them pretty hard on the collateral side where they have now agreed to what I would consider very favourable terms. You do not need to move assets around for we can determine an amount that stays invested as it is, but is earmarked as collateral for "my" account (it cannot be pledged for anything else). Let me suggest that you allocate between 25 and 50mm$ of assets for this – big enough to make a difference to your bottom line over time if I am successful, but small enough not to go overboard – I want to grow into this. I would envisage keeping you closely in the loop on what I do and of course results (daily, weekly, as you wish) and of building a somewhat more diversified portfolio than the core bets we might put on for you at times, which by nature will be very concentrated. …
>
> Can we discuss this please?"

351. This email is inexplicable on Mr Vik's version of events. There could not, by 20th September 2006, have been an agreement between Mr Vik and Mr Said for Mr Said to conduct a Prime Brokerage account himself at all, let alone to segregated collateral of

any particular size or any limitation on the trades to be done. Prior to 30th October 2006, what appears to have been envisaged was a Prime Brokerage account where Mr Vik would make the decisions on being fed information by Mr Said ("sourcing opportunities"). As appears subsequently in this judgment, the basis of the Prime Brokerage arrangement for Mr Said emerged over a period of time following this email even though Mr Said had, between 18th and 20th October, discussed a sample portfolio with DBAG in New York which had given rise to a 200% VaR figure of US$28 million and an NOP figure of US$50 million. It can be seen that the 30th October email has these figures in mind but it was not until some time in late November that agreement was reached with DBAG on the amount of collateral to be posted and, since the account was to be Mr Vik's account at all times prior to 30th October, there could be no suggestion of any agreed limitation as to the type of trades. The only one of the four critical elements to which Mr Vik's evidence referred which could possibly have been agreed by 20th September was Mr Said's remuneration, fixed at 10% of net profits with the sum of US$30,000 to be paid monthly on account.

352. There is no record, email, diary entry or report of any business meeting between Mr Vik and Mr Meidal in the period September to December 2006 although there is reference in the bank's documents to a proposed meeting which was scheduled to take place in November, which may in fact refer to the meeting between Mr Said and Mr Quezada of the FXPB team. It was the practice of DBS employees to make visit reports for the file and, as Mr Vik recognised, it was the bank's practice to put in writing any agreement reached. Equally, there are no emails between the parties that make reference to any visit or to any agreement of the kind alleged by SHI and emails exist in relation to all other known meetings. If agreements of the kind alleged had been reached, I do not see how they could have been left without a formal signed agreement recording them or at the very least some exchanges between the parties which set them out or referred to them in one way or another. There is a complete absence of any such records.

353. SHI complains about the absence of disclosure by DBAG of records of DBS' telephone calls during the relevant period and DBAG makes the same point in relation to SHI's telephone records. (There were in fact no recorded lines at DBS before July 2007 and all calls thereafter were recorded and retained). SHI complains about the absence of any notes of Mr Meidal, as well as his absence from the witness box. SHI, whose disclosure in some respects was, to my mind, lamentable, suggested that DBAG had failed to disclose documents in DBS' possession showing Mr Meidal's schedules for the relevant time. Mr Vik maintained that, despite having three personal assistants who organised his timetable, he had no diaries or schedules which would record where he was at any time. That I cannot accept. None of this helps but the fact remains that there is not a single document passing between the parties or any internal document which evidences any exchange between the parties in relation to the alleged agreements.

354. Furthermore, Mr Meidal was a relationship manager at DBS. He would not have seen himself as able to commit DBAG and its FXPB desk to anything which varied the terms of the FXPBA, just as Mr Brügelmann would not. As appears from the documents, Mr Vik entrusted Mr Said to negotiate the terms of the FXPBA and did not do so himself. On his own evidence Mr Vik paid cursory attention to the contractual documents, signing them when requested by Mr Said who had asked for

five to ten minutes of his time for that purpose. The idea that in these circumstances Mr Vik, "who was a man for big ideas and large scale strategy", would descend into the type of detailed discussions necessary to conclude an agreement with Mr Meidal on the list of terms alleged, is far fetched.

355. Moreover, as a result of late disclosure by DBAG, long after statements had been exchanged, it appeared that Mr Vik and Mr Meidal had actually met at the Frieze Art Fair in London in October 2006 yet, despite Mr Vik's recall of the other meetings at his house, he had no previous recall of this at all until the document was produced showing that hospitality event, whereupon, for the first time in cross-examination he said that they would have discussed business there and the terms for FXPB trading. The fact that there were records of this (albeit discovered late) highlights the absence of any documentary record of a business meeting of the kind suggested by Mr Vik, in circumstances where every other business meeting with Mr Vik is documented in one way or another.

356. It is of course no surprise that a witness does not recall events which occurred over six years earlier, let alone with any precision and Mr Vik, in cross-examination, said that his memory was "fuzzy" for that time period. His evidence about these agreements however bears all the hallmarks of being fabricated in order to make a case and, even in the absence of evidence from Mr Meidal, I reject it.

10(a) The Capital Limitation Agreement

357. There is here alleged to be both an agreement between Mr Vik and Mr Said (the Said Contract) on the one hand and an agreement between Mr Vik and Mr Meidal for DBAG on the other (the Capital Limitation Agreement). The agreement between Mr Vik and Mr Said, it appears, must coincide with that made between Mr Vik and Mr Meidal because, at least on one formulation, it relates to Mr Said's authority to transact business for SHI. If there was to be any agreement of this kind with DBAG relating to the operation of the FXPBA and the FX ISDA and the trading under it, the personnel to agree to it would be expected to be found in FXPB and not in DBS. It was the personnel in New York and New Jersey who handled the FXPB account and would therefore be in a position to monitor it. It was these persons with whom Mr Said was in regular contact during the operation of the FXPBA and with whom he was in contact in relation to its terms and operation beforehand. DBS was always once removed from its operation.

358. There are a number of different formulations of the agreement with Mr Meidal. One formulation is an agreement that SHI's liability for any losses incurred in respect of Mr Said's FX trading was limited to US$35 million and DBAG would have no recourse to SHI in excess of that. A second formulation is that Mr Said's authority was limited to trades which required SHI to pay or would require SHI to pay no more than US$35 million in losses and/or which required SHI to pay no more than US$35 million by way of margin. The formulations thus put forward a limitation on liability on the one hand and a limitation on trading on the other. The trading limit was subsequently reformulated as a limit on Mr Said's ability to enter into and remain in trades which had that effect. This involved the idea that Mr Said could commit SHI and DBAG to a Counterparty Transaction and Agent Transaction with authority but that at some point, if the margin limits were exceeded, whether by reason of movements in the market in the value of trades or otherwise, there would no longer be

authority to remain in them. Finally, as put forward at trial, this later restriction was effectively excised on the authority case, so that a trade was authorised if, at the time it was concluded, it would not have the proscribed effect, even if subsequently it combined with other trades in the portfolio to have that impact. The US$35m limit then ceased to be such a hard and fast bright line. The notion of a trade concluded with authority subsequently becoming unauthorised by reason of market movements or withdrawal of cash from the account creates such obvious difficulties in the context of the Counterparty Transactions binding on DBAG that its impracticality makes agreement to it incredible in and of itself.

359. The nature of the agreement was elaborated in Further Information, when SHI was asked for an explanation as to the impact of losses and profits. SHI then put forward the case that the US$35 million was reduced by the net realised losses incurred by Mr Said's trading but that any net realised profits could restore the limit to US$35 million once again but could not increase the limit beyond that. Further Information also qualified the position to say that the trading limit operated by reference to the maximum entitlement of DBAG to margin, in accordance with the contractual documents.

360. The complexity of this alleged agreement is revealed by the term which SHI alleges should be incorporated in the agreement in its rectification case. It reads as follows:

> "i) The collateral which can support Mr Said's FX transactions is limited to the US$35 million limit. The Bank shall not permit Mr Said (on behalf of SHI) to enter into any FX Transaction if that FX Transaction would cause the Value at Risk for transactions entered into by Mr Said on behalf of SHI multiplied by the Independent Amount Ratio plus the Bank's Exposure in respect of transactions entered into by Mr Said on behalf of SHI to exceed the US$35 million limit. If the Value at Risk multiplied by the Independent Amount Ratio plus the Bank's Exposure is, at any time, greater than the US$35 million limit the Bank will ensure that sufficient open FX transactions are closed out such that the Value at Risk multiplied by the Independent Amount Ratio plus the Bank's Exposure falls below the US$35 million limit. The US$35 million limit is (i) US$35 million, minus (ii) any net realised losses on transactions entered into by Mr Said on behalf of SHI (net realised losses being realised losses on transactions entered into by Mr Said on behalf of SHI less any amount of realised profit Mr Said had made on behalf of SHI that remained available to be used as collateral in support of his transactions (but not such as to increase the limit above US$35 million).
>
> ii) SHI's liability to the Bank in respect of FX transactions entered into through Mr Said is limited to the sum of US$35 million and the Bank's recourse against SHI with respect to FX transactions entered into through Mr Said is limited to US$35 million."

361. The manner in which this is framed presents difficulties. How DBAG is expected to prevent Mr Said from entering into FX transactions which have the effect in question, when most FXPB transactions are concluded on an automated basis, is unclear. SHI appears to rely on the fact that, until trades are matched between the Counterparty and the Agent, there may not be any binding transaction but there are obvious difficulties in an FX Prime Broker monitoring trades as they are being concluded in order to avoid the margin being exceeded, rather than calculating margin after they are effected. There are even more obvious difficulties in requiring DBAG to "ensure that sufficient open FX transactions are closed out" when the US$35 million margin is exceeded. How this is expected to tie in with a US$35 million recourse limit as between DBAG and SHI is also uncertain, given liabilities that may already have been concluded as between DBAG and the Counterparty by Mr Said.

362. There is a further restriction alleged, inasmuch as it is said that Mr Said did not have authority to "trade on credit" by which is meant that he had no authority to enter into trades for which margin was not required by DBAG in accordance with its contractual entitlement. Of course, SHI traded on DBAG's credit, in its name, with Counterparties and, at all times, traded on margin arrangements with DBAG, as security for potential debts. Under the FXPB SHI did not borrow money from DBAG as such and all the collateral provided by way of margin simply represented a contractual figure, which constituted a protection for itself against SHI's default, based on DBAG's assessment of any diminution in the MTM valuation of the trades and the estimated costs of closing them down, bearing in mind the degree of illiquidity and "slippage" which might occur.

363. As explained by SHI or Mr Vik at one point, "trading on credit" was said to mean trading in circumstances where a debtor-creditor relationship was created between the parties on a debt over and above the capital provided in the Pledged Account. It was said that DBAG only had the right to make margin calls if a debtor-creditor relationship existed between DBAG and SHI which was not permitted. The agreement therefore was a variant of the Capital Limitation Agreement and tallied with some of the arguments SHI advanced on construction at one time or another. As part of this agreement and argument, it was said that if DBAG required capital in excess of US$35m for SHI's FX trading, SHI had no obligation to provide it, but could, in its discretion, opt to do so. If it did not do so, then it was said that DBAG was obliged not to allow the trade in question.

364. None of this optionality makes any sense in the light of SHI's express contractual obligations to pay contractual debts and margin:

i) To pay sums due on trades under the Trade Confirmations on the due date under Clause 2(a) of the FX ISDA.

ii) To pay interest on sums due under Clause 2(e).

iii) To pay the Delivery Amount on demand made by DBAG under Paragraph 2(a) of the FX CSA.

iv) To provide additional collateral under Part 1(l)(iii) of the FX Schedule.

v) To pay interest under paragraph 9(a) of the FX CSA.

365. This agreement, in whatever form it is put, is inconsistent with the Said Letter of Authority, the FXPBA, the FX ISDA and its Schedule and CSA, in which any limit of this kind would necessarily have appeared, had it been agreed.

i) The Said Letter of Authority set out the authority given to him by SHI to trade in FX and Options Transactions with DBAG but without any financial limit expressed.

ii) The Said Letter of Authority authorised Mr Said to sign and deliver various types of documentation including ISDA Master Agreements, CSA and security interests and other credit support documentation, again without any financial limit.

iii) The Said Letter of Authority expressly exempted DBAG from any duty to enquire further as to any restrictions upon Mr Said's activities.

iv) Justice Kapnick held that the Said Letter of Authority constituted a complete defence to SHI's allegations relating to unauthorised trades.

v) The FXPBA which governs SHI's authority to enter into Counterparty Transactions on behalf of DBAG and thereby committed DBAG to conclude Agent Transactions with SHI on an identical basis, identified types of transactions which SHI was authorised to conclude but imposed no financial limits by reference to any collateral required.

vi) The FXPBA made provision for financial limits in the shape of the Net Daily Settlement amount and the maximum Counterparty Net Open Position but nothing by reference to the capital allocated by SHI. The contractual limits referred to were capable of amendment by DBAG on twenty business days' notice.

vii) Paragraph 5 of Annex B of the FXPBA envisaged the possibility of a Ceiling Limit in the FX ISDA, but none appeared there.

viii) The FXPBA specifically provided for the posting of collateral by SHI with respect to its obligations under the FX ISDA, in accordance with the CSA, as opposed to making any reference to a limited liability of US$35 million.

ix) Clause 9(a) of the FX ISDA contains an entire agreement Clause which, as a matter of English law which governs it, takes effect as a binding agreement that the full contractual terms are to be found in it and nowhere else (see *Inntrepreneur Pub Co v East Crown Limited* [2000] 2 Lloyds Rep 611 at paragraph 7).

x) There are a series of provisions in the FX ISDA, Schedule and CSA which entitle DBAG to demand additional collateral, as set out earlier in this judgment and three provisions which entitle DBAG to terminate on the basis of inadequate provision of collateral, including paragraph 11(h)(v) of the CSA which provides for an additional termination event irrespective of whether or not additional margin has been requested. These provisions are directly

inconsistent with any restriction on SHI's exposure to the sum of US$35 million or to Mr Said's authority to conclude trades which breach that limit.

366. The history by which the FXPBA came into existence does not fit with Mr Vik's version of events. As appears from the email from Mr Said to Mr Vik on 30th October 2006, referred to above, it is clear that although Mr Said was seeking to set up an FXPBA from September 20th onwards, the idea was that he was to "source opportunities" for Mr Vik and to execute deals on his instructions. On a sample portfolio of spot trades presented to DBAG in New York, Mr Said had obtained a 200% VaR margin figure of US$28 million as against a US$50 million NOP figure. In that email, in which he proposed to Mr Vik that he be permitted to trade a smaller portfolio for his own account (about which they had, he said, talked briefly before he started) he suggested that assets need not be moved around but that "between 25 and 50 mm$" could be earmarked as collateral for his account, so that it could not be pledged for anything else. The suggestion of an allocation of a figure of this size was to be "big enough to make a difference to your bottom line over time if I am successful, but small enough not to go overboard". He said he would be keeping Mr Vik closely in the loop on what he did and supplying daily or weekly results as Mr Vik wished.

367. On 13th and 18th October 2006 emails from DBS to DBAG talked in terms of US$50 million collateral and by 15th November Mr Brügelmann, in an email, stated that he did not know the size of the collateral that SHI wished to post. On 16th November 2006 Mr Meidal appears to have been under the impression that US$50 million was indeed the figure that would be pledged to support Mr Said's trading.

368. Despite this aspect being a centrepiece of the agreements which Mr Vik says he made with Mr Said prior to 20th September and with Mr Meidal subsequently, the fixing of US$35 million as the figure for collateral seems to have occurred very late on. It was on 28th November that Mr Said emailed Mr Vik to say he had the documents for the FXPB account and that he needed five to ten minutes of Mr Vik's time that day for him to sign them. The Said Letter of Authority, the Amendment Authority, the FXPBA, the FX ISDA, the Schedule, the CSA and the Pledge Agreement were all dated 28th November 2006 and, in all cases, save the Said Letter of Authority, that date appeared alongside Mr Vik's signature and appears to have been entered by him. None of these agreements make any reference to the figure of US$35 million as will have been noted above. They refer to no figure at all and the CSA is framed in terms of the Allocated Portion of the Pledged Account, as calculated by DBAG in its sole discretion and notified by it to SHI from time to time. The Pledged Account was named in the Pledge Agreement as account 2011084 with DBS.

369. On 29th November 2006 Mr Meidal emailed Mr Vik, referring first to a sub-account at DBS to which Mr Vik had sent US$90 million as margin for his Futures Transactions. "The account currently holds the EUR/NOK and the NOK/SEK FX positions and the Argentinean bond positions traded by Klaus (Said)." The email continued:

> "As per the legal documents we sent to you, we are suggesting to open a new sub-account for Sebastian Holdings. Klaus would have a Limited Power over this account. We propose that the collateral for the PB FX line would be booked on this

> new account as well as other potential trades made by Klaus, including the two existing Argentin[e]an bond positions. The reason is to clearly separate Klaus' P&L from other trades.
>
> Klaus assumes that he needs approx. USD 75 million, USD 35 million for the FX line and USD 40 million for other trades mainly in fixed income (incl. the existing Argentin[e]an bond positions).
>
> Please confirm if you agree to transfer USD 75 million or alternatively the entire balance held in the existing sub-account to the new-sub account."

370. Mr Vik's response that day was short and to the point – "ok".

371. On December 7th DBS signed the TPMCA which referred to the sums in the Pledged Account as totalling on that date pledged assets with a current loanable value of US$62,933,152. DBS undertook to monitor the loanable value of the pledged assets and to advise DBAG if it fell below US$35 million.

372. Contrary therefore to SHI's case, it appears that, as between SHI and DBAG, it was Mr Said who put forward the figure of US$35 million for his FX trading, although he was also looking for US$40 million for other trades and Mr Vik gave his approval to this in his one word 29th November email response to Mr Meidal. US$35 million became the Allocated Portion notified by DBAG to SHI, which never changed throughout the life of the FXPBA. Whilst the basis of margin was changed by agreement between DBAG and Mr Said on behalf of SHI, there was no further earmarking of assets in the Pledged Account to increase the US$35 million to anything larger. The figure was then included in the TPMCA between DBS and DBAG, to which SHI was not even a party.

373. Mr Said's evidence in deposition on this point was limited. He stated that there were two things that formed the collateral pool in his mind. Primarily there was US$35 million but "[d]efinitionally whenever you have money … in an account like this, whenever you have made money in this, built a profit in the account, that automatically also forms collateral. So in my mind it was the US$35 million plus whatever profit was in there." In his re-examination by SHI's attorneys in his deposition, Mr Said was referred to paragraph 7 of his affidavit of 21st May 2009 in the New York proceedings in which he referred to the sample margin calculation effected by DBAG on the hypothetical portfolio of trades. In that and the two following paragraphs:

i) He referred to the figure of US$35 million which SHI had agreed to allocate for his trading, stating there that DBAG understood that his trading had to be separate and isolated from SHI's assets and that SHI was only willing to expose a specific sum in respect of it.

ii) He said that all the trades he did were based on the US$35 million pledged amount and that he understood at all times, as did the bank, that his trading was limited to the specific amount of collateral and no more.

374. In deposition however, he said that the only discussion he recalled with Mr Vik was after he got the number from Deutsche Bank for the hypothetical portfolio. He said he was not totally certain but he believed that the US$35 million number was his and that he came up with it based on the US$28 million figure mentioned by DBAG "to give it a little bit of leeway": "I told him that's what we should put in the account". When asked further about what he had said in paragraphs 7-9, he said that the affidavit imputed a lot of knowledge on his part as to the structure of SHI which he did not have and that, as he recalled it, it was a very simple discussion where the specimen portfolio suggested US$28m and he thought that US$35m was plenty.

i) He went on to say that all he was saying in his affidavit was his trading was limited to the specific amount of collateral "which of course is always the case. You can only trade to the degree of your collateral".

ii) He then spoke of what would have occurred had DBAG reported that the collateral requirements of his trades exceeded US$35 million and the accrued profits and said that in those circumstances he could not have continued to trade, whatever he had wanted to do. "That's the definition of a collateral call. You either put in collateral, you put in more money or you cut positions. So that would have been impossible. If I think back, however, to the general interaction, the general approach that Alex and I had towards this trading, what I think I would likely have done is thought real carefully how strongly I felt about the positions. If I felt very very strongly, which on some of them may have been possible, may have, I would have gone to Alex to ask and he would have been the arbiter".

iii) When asked subsequently in the deposition about whether he would have been in the EDTs when the "perfect storm" of October 2008 occurred, if DBAG had correctly reported collateral positions earlier, he said that he would have been in those trades if Mr Vik had agreed to add substantial amounts of collateral, which, given the amounts involved, he was doubtful about.

iv) Yet again, later he said that if there were MTM losses of US$40 or US$50 or US$60 million, he would probably have run with that because he was comfortable that they were only marked to market losses, the market was stable and he had made money elsewhere. If he had seen US$150 or US$200 million, that would have been no longer manageable, but with accurate reporting he would have gone to Mr Vik to see if he wanted to add more collateral.

375. It is plain from this that Mr Said understood that the US$35 million collateral placed some practical limitation upon the extent of his trading, but did not consider it more than this. Despite the earlier references in his affidavit, which he referred to as drafted by others, he plainly did not have any understanding that there was any trading limit to his authority, nor that the bank's recourse would be limited in any way by the amount of margin provided. If he had entered into an agreement of the kind suggested with Mr Vik, that would have made its way into the contractual documents which he negotiated with DBAG, since it would, so far as he was concerned, have been a basic restriction on his trading which had to be set out. It was not.

376. So far from understanding that he was subject to a US$35 million margin limit there are references to him in May and June 2008 telling Counterparties at GS and CS that he had margin available of US$70 million, based, it would seem, on a misunderstanding of 200% VaR. Such an understanding is wholly inconsistent with any agreement between him and Mr Vik as to a fixed collateral limit of US$35 million, let alone a trading limit at that level. (As appears elsewhere, Mr Said concerned himself little with margin requirements in the context of his trading in any event and Mr Brügelmann at the outset and Mr Walsh in October 2008 were asked by him to explain what the constituent figures on the GEM website meant in the context of the overall margin figures.)

377. The evidence shows Mr Vik's admitted expectation that the bank would wish to record agreements in writing, his readiness to leave the negotiation of the contractual documents to Mr Said, his lack of checking that the written agreements correlated with the oral agreements he alleged and the perfunctory approach he took towards signing those documents. I have already referred to the form of the original allegations, namely that Mr Vik made these oral agreements with Mr Meidal and/or Mr Brügelmann and Mr Brügelmann's subsequent disappearance from the picture, as set out in Mr Vik's evidence, and to the absence of any documentary support for the contents of the oral agreements as alleged, of the meetings in Connecticut or of the telephone calls relied on.

378. When it came to cross-examination Mr Vik was much less positive than his written statements. In reference to his discussions with Mr Said, when asked whether US$35 million was discussed and agreed with Mr Said as the maximum amount he could lose, Mr Vik replied in the affirmative and then said he would qualify that a little bit inasmuch as "that was the amount allocated to him, so that was all he could trade on and, as a result, that is sort of self-evident that he couldn't lose more than that. So that is probably a better answer." He went on to say that the chances of him losing more than US$35 million were remote but he had not had a conversation in which Mr Said had said that there was no way he could lose more than that. He did not remember any specific conversation about what effect Mr Said's profits would have on the collateral available to support his trading. On then saying that he did have an agreement with DBAG that accrued profits were not available to Mr Said, save to offset losses, he then said he did not remember having a conversation with Mr Meidal or anyone else at the bank on that subject. He stated in cross-examination that his memory was fuzzy in relation to the two meetings which he had said, in his statement, had taken place between him and Mr Meidal in Greenwich, with Mr Said present for part of them, and then suggested that there must have been discussion about the FXPB arrangements when he met Mr Meidal at the Frieze Art Fair in London in October 2008, which was nowhere referred to in his statements and the existence of which had only come to light in late disclosure by DBAG. He agreed that perhaps he had forgotten that he had attended the Frieze Art Fair in London with Mr Meidal and said that a lot of his lengthy witness statements was recollection refreshed by documents seen.

379. In circumstances in which it is clear from the documents that it was Mr Said who negotiated and reviewed the terms of the FXPBA, Schedule and CSA, with DBAG and DBS, it would be an extraordinary feature of the arrangements if some separate agreement was reached between DBAG and Mr Vik which was not recorded in

writing. The emails make clear that Mr Said talked to Mr Quezada and others about FXPB, that Mr Brügelmann was in correspondence with Mr Said about the question of margin, with Mr Meidal copied in and Mr Lay, PWM's relevant credit officer, also involved. Mr Said sought to obtain the lowest margining terms he could, thereby maximising leverage on existing assets and negotiating DBAG and DBS down from their initial demands to that which appeared in the CSA. There were a number of other people directly involved in the setting up of the FXPB arrangements at both DBAG and DBS.

380. It is simply not possible for there to have been an agreement of the kind which Mr Vik alleges between himself and Mr Meidal and for neither Mr Said nor Mr Brügelmann or any of these others to have been aware of it, as none of them were. If they had been aware of it, there would be some record. The monitoring of the account would have involved the calculation of the margin in advance of each trade being concluded, and the prevention of trades where they brought about an increase in the margin requirement over and above the limit. CRM would have had to know of this, as would Mr Brügelmann and personnel at FXPB if such activity was to take place.

381. Both Mr Said and Mr Brügelmann understood, as is obviously the case, that margining by a bank can create a practical limitation on the amount of trading that is carried out. If a bank requires more collateral from its client, the client has the two options to which Mr Said referred, namely to put up more margin or to reduce the trading positions to bring the overall position within the existing collateral provided. It is in this context that not only Mr Brügelmann but other personnel within DBAG and DBS referred to the US$35 million as "risk capital", "a risk budget", a "risk limit" or even a "trading limit". What is absolutely clear, as Mr Brügelmann said in evidence, is that there is no way in which it is possible to guarantee that exposure on FX transactions can be kept within a specified limit. It is in the very nature of FX transactions that the market may move and may do so violently, as happened in October 2008 following the collapse of Lehman Brothers. A trader may conclude transactions which, on a bank's calculation, for example, give rise to a margin requirement of US$32 million but movements in the market of the order of 10-20% would inevitably take the margin requirement beyond US$35 million, at which point the customer would have to decide which of the two steps referred to above he would wish to pursue. If particular types of trade were complex, illiquid and difficult to mark to market, and if circumstances constituted a one in a century event (such as the market movements in October 2008), a VaR calculation based on a 95% confidence level might well prove seriously inadequate since the circumstances would fall into the remaining 5% not taken into account. A bank's margin calculations could prove to be insufficient and if all the trades were closed down at this point, losses in excess of US$35 million could be realised.

382. The probability or possibility of huge losses occurring in such circumstances was remote and was seen to be remote by Mr Said himself, as his deposition recognises. The nature of the EDTs, as appears elsewhere, was that they combined a good probability of relatively small profits against a low probability of very large losses. Mr Said knew that each EDT with daily or weekly fixings over a period of a year could theoretically accumulate very large losses running into hundreds of millions of dollars but never considered that the market was likely to move in such a way that this would happen. As long as the market remained within certain parameters he expected

to make tens of millions of dollars profit on most if not all of these trades. Had they been margined with accurate MTM and VaR in accordance with the contractual methodology, DBAG would have been looking for additional collateral before the events of October 2008 and with that practical limitation on trading, Mr Vik would have been faced with the decision to which Mr Said referred in his deposition. There could and would however have been no guarantee that SHI's exposure was limited to the US$35 million figure, even though the expectation would be that losses would be unlikely to exceed it by much, if at all.

383. It is in this context that Mr Vik's alleged oral agreement has to be seen. SHI says it is a small step beyond the practical limitation of margin for Mr Meidal, on behalf of DBAG, to agree that there would be no recourse to SHI for any losses which exceeded that US$35 million limit in circumstances where DBAG was in a position to keep tabs on the transactions, mark them to market and call for appropriate levels of margin. There could, however, be no business rationale for such an agreement to be reached on the part of anyone at DBAG. It would have been an odd agreement to be made by anyone, but particularly by a relationship manager at DBS, as opposed to a senior figure involved in CRM or FXPB. Nor is it a limit which Mr Vik would have been likely to request since he could not have expected any bank to agree to it. As he well knew and recognised in cross-examination, an agreement as to the amount of collateral is very different from an agreement to a limit to exposure. And he himself, in an email to Mr Said of 7 January 2008, stated he did not think in terms of equity capital allocations and did not want that to be a restriction on Mr Said's activities if he had strong ideas. A term of this kind could only be seen by an individual at a bank as novel and important and one which would require discussion with others and memorialisation. That did not occur.

384. Whilst I referred at the beginning of this judgment to the possibility that Mr Vik might have deceived himself into thinking that some such agreement had been made, I do not consider that this can be the case. It is inconceivable that Mr Vik could have thought that he had entered into such an agreement with Mr Meidal which was not recorded anywhere in writing and which ran so counter to ordinary concepts of collateral and liability. The agreement is an invention on his part in circumstances where, by the time the margin calls were made, he was aware from Mr Said that DBAG had not been capable of marking the trades to market and therefore capable of seeking appropriate margin. From 16th October onwards he was requesting details of DBAG's margin calculations over the preceding months, whilst stating his inability to understand how DBAG had allowed losses of this size to occur when DBAG was assuring him that proper margining had been carried out. DBAG refused to admit what had actually happened and Mr Vik commenced proceedings in New York.

385. Paragraph 30 of the New York Complaint alleged an agreement to pledge US$35 million and an agreement that the maximum exposure of SHI in respect of the FXPBA trading would be limited to the same amount, going on to set out DBAG's failure to calculate VaR and MTM for the EDTs. SHI has sought, in this action, to make its point good about an exposure limit by reference to the terms of the FXPBA, FX ISDA, Schedule and CSA, by means of contrived construction arguments. The weakness of such arguments no doubt explains the alternative reliance upon oral agreements based on Mr Vik's evidence.

386. Yet, if Mr Vik had, for one moment in October 2008, considered that he had previously agreed with DBAG that SHI's exposure was limited to US$35 million, there is not the slightest chance that he would have decided on and agreed to an orderly close out of the trades concluded by Mr Said or ever have paid US$511 million by way of margin calls on Mr Said's FX trading, in order to achieve this. Indeed, on being told of potential margin calls by Mr Said, who told him on 10th October that closing out the trades would cost hundreds of millions of US$, on being told by DBAG through Mr Said of a likely first call of US$40-60 million and on being faced with the first margin call of US$98 million approximately, the very first thing that Mr Vik would have said was that there was an agreement under which SHI's liability to DBAG was limited to US$35 million. Mr Vik is forceful and demanding. He is not a man who shuns confrontation or who would meekly respond to a bank's demand for money and pay up, if he thought there was a good basis for refusing. There is not a whisper of any semblance of this oral agreement until January 2009, after payment of the margin calls without protest. I conclude that what Mr Vik has done is to seize upon the bank's failure to effect margin calculations, to seek to make capital of it and to fabricate an oral agreement with an individual who was once employed by DBS and who may now be sympathetic to his position but who was not, as he knew by the time of his statements, to be called as a witness by DBAG.

10(b) The Pledged Account Limit (the PAL)

387. In addition to the Capital Limitation Agreement of US$35 million in respect of Mr Said's FX trading, SHI also alleged a Pledged Account Limit in respect of SHI's FX trading as a whole (namely that of Mr Said and Mr Vik together). SHI's case as to this agreement has gone through several versions. The alleged limit is a limit on the total losses that SHI could suffer on Mr Said's FX trading through DBAG and Mr Vik's FX trading, once it commenced through DBAG in 2008. This too is a fiction. Although the argument overlaps with the argument that Mr Vik's FX trading with DBAG in 2008 was subject to the margin arrangements of the FX ISDA, Schedule and CSA, I here determine only whether there was an agreement that SHI could not lose more that the PAL limit on Mr Said's and Mr Vik's trading, if aggregated together.

388. Many of the same points apply in relation to this alleged limit as for the Capital Limitation Agreement, since it is said to have been made at the same time with Mr Meidal and features as an alternative trading or authority limit on Mr Said's trading alone. I need not repeat the points about the absence of evidence of meetings or of documentary support for any such limitation, nor of its inconsistency with the written agreements.

389. It is on its face, in its wider form, a highly surprising allegation. Although, as originally contemplated, Mr Vik anticipated making the decisions which Mr Said would execute under the FXPBA, the account was always intended to be separate from other trading and once Mr Said was given control over the FXPB account with DBAG, Mr Vik continued to conduct his trading in FX through DBS, which, he accepted in cross-examination, was not subject to any trading limit of any kind, and was secured against his general assets placed with DBS. Although he had authority to use it, it was not then anticipated that Mr Vik would use that FXPB account to trade through DBAG nor trade with DBAG as he later did in 2008 outside that account.

390. The idea that, from the outset in 2006, it was agreed that he and Mr Said would together be limited in their FX trading with DBAG, whether under a Prime Brokerage arrangement or otherwise, to a joint trading limit savours of the absurd. Mr Vik would thus be limiting his own trade for no good reason and doing so by reference to the losses which Mr Said might make, thus restricting his own trading scope considerably. If Mr Said could incur losses up to US$35m, Mr Vik would only be able to incur losses to the extent of the net profits that SHI happened to make and the balance on the Pledged Account. As in fact Mr Vik withdrew US$30m of Mr Said's profits at the end of 2007 and another US$75m approximately in mid 2008, this would have reduced his room to trade considerably in 2008, well below what he actually did.

391. Yet, as owner of SHI, there were substantial assets available as collateral for his trading outside the Allocated Portion, both in the Pledged Account and elsewhere with DBS in 2006-2007 and in DBAG from early 2008. Neither Mr Vik nor DBAG could ever have thought that he, the owner of SHI, was not permitted to incur FX losses in trading above and beyond the balance of the Pledged Account plus SHI's FX trading profit. It is inconceivable that he would have agreed to any such limit, nor agreed that his trading be limited by the amount of collateral supplied for an entirely different and specifically segregated purpose, as he testified, namely for Mr Said's trading, even with the addition of Mr Said's trading profits.

392. Nor, once he started trading FX with DBAG in 2008, could he ever have thought that his large directional trading in FX in 2008 was subject to such a small collateral requirement, let alone such a trading limit. The size of his positions made that impossible, as Mr Vik virtually accepted in cross- examination.

393. The PAL is represented by the Pledged Account balance plus SHI's net realised FX profits. It is right that paragraph 10 of the Schedule to the FX ISDA provides that payments of profits on transactions under the FXPBA should be credited to the Credit Support Balance, and that the CSA provides that the Credit Support Balance on any Valuation Date is the Allocated Portion. The CSA refers specifically to the Allocated Portion but this supports Mr Said's view, expressed in deposition, that it acted as additional collateral for his trading above and beyond the figure of US$35m. As a limit for his trading or as a limit on his authority, it can fare no better than the argument for a US$35m trading limit or limit on his authority but, as a limit on Mr Vik's ability to trade, it makes no sense at all. Mr Vik accepted that recourse for SHI's debts other than FX trading was not limited to collateral held by DBAG or DBS.

394. Following the transfer of most of SHI's assets from DBS to DBAG in early 2008, specifically for the purpose of providing collateral for Mr Vik's trading in Equities, F&O, swaps and FX at DBAG on the GPF platform at DBAG, there was no shortage of assets there to support that trading. What would be the point of a trading limit of this kind, from the perspective of Mr Vik, SHI or DBAG?

395. Despite Mr Vik's evidence at paragraph 95(b) of his first witness statement that it was expressly agreed between himself and Mr Meidal that the bank's recourse against SHI in relation to its FX trading would be limited to the amount of capital secured in favour of the bank in the separate and segregated account held by DBS, plus any built-up profits made on FX trading, Mr Vik did not maintain this point in cross-

examination. There was no suggestion that the PAL applied whilst Mr Vik was trading FX through DBS. He agreed that it would not apply if and when he commenced trading through CM Beatrice, which was anticipated to happen from May 2008 onwards and actually could have begun at the very time the margin calls were taking place, had Mr Vik not withdrawn from the arrangements made. Mr Vik then said that during the period in which he traded FX through DBAG he did not consider whether the PAL limit did or did not apply. On the following day he said that he did not rely on the PAL and did not even consider it until 2009 when it was brought to his attention by his legal team. The question of the PAL was, he said "really a legal question" as to what agreements governed. He was referred to his affidavit in the New York proceedings of 19th February 2009 where he said that the accounts of SHI opened at the bank's offices in London (meaning the accounts opened for his trading of Equities, Futures and FX) were unrelated in any way to Mr Said's FXPB account in New York. He agreed that the argument that his FX trading was subject to the PAL had not occurred to him at that stage. He was then referred to his further affidavit of 6th April 2009 wherein he said that the London accounts had no relationship to the New York FXPB account or Mr Said's trades at all and agreed that he thought of Mr Said's accounts as being in New York whilst his FX trading was through the London account. What became plain was that the PAL was a point first thought of by Mr Vik's English lawyers in the course of oral submission in the Vik Millahue proceeding on 8th March 2010. It thus becomes apparent that what Mr Vik said in his first witness statement about the PAL was simply an invention of evidence in an effort to support a lawyer's point. There was no evidence from anyone else upon which SHI could rely in support of this alleged oral agreement. Mr Said said nothing that would assist and Mr Brügelmann knew nothing of it, nor did any other DBAG witness. There is no documentary record or reference to the PAL anywhere in the contemporaneous material, whether prior to or following the execution of the FXPB documents at the end of November 2006.

396. DBAG are justified in pointing to this as a good example of Mr Vik fabricating evidence in support of a lawyer's contrivance. The extent of that contrivance was also revealed by the various formulations of the point by SHI on 24th March 2011, 22nd June 2012, 3rd August 2012 and 1st March 2013 in SHI's pleadings, the second of which was reflected in Mr Vik's first statement and in the term to be inserted in the FX ISDA by way of rectification. SHI makes none of these formulations good as oral agreements.

10(c) The Oral Agreements as to the types of trade

397. Whilst SHI's closing submissions state that it is no part of SHI's case that Mr Said's authority was more limited than the express terms of the Said Letter of Authority and/or the FXPBA, the construction it puts upon those documents is said to tally with oral agreements made between Mr Vik and Mr Said and between Mr Vik and a representative or representatives of DBAG, as confirmed by the latter. In its pleadings, SHI referred to "the Said Authority Agreement" which it said was contained in and/or evidenced by the two instruments referred to. In Further Information served on 28th July 2011, SHI stated that the Said Authority Agreement was made between September and November 2006 during discussions between Mr Vik, Mr Meidal and Mr Brügelmann and between Mr Said and other representatives acting on behalf of the bank. SHI referred to earlier pleaded references to discussions

which included telephone conversations in October, November and/or December 2006 and two meetings between Mr Vik, Mr Meidal and Mr Brügelmann in about November 2006 at Mrs Vik's house in Greenwich, Connecticut. The discussions were also said to have taken place at the time of the signing of the Said Letter of Authority. The further information then stated that the agreement was made between Mr Vik and Mr Meidal and/or Mr Brügelmann and/or the individuals at DBAG with whom Mr Meidal and/or Mr Brügelmann liaised in relation to SHI matters and/or who were otherwise concerned with SHI matters on behalf of DBAG and/or was contained in and/or evidenced by the Said Letter of Authority and the FXPBA.

398. SHI also alleged the existence of "the Said Contract" resulting from discussions between Mr Said and Mr Vik in which it was said to be an express and/or implied term that Mr Said would comply with the limits of authority granted to him by SHI, as expressed in the two instruments in question.

399. When Mr Vik's first statement was served, his evidence was that meetings and discussions took place between himself and Mr Said in September and October at his wife's house. There they discussed a portfolio that would comprise "plain vanilla" trades such as FX forwards and options combined in such a way as to provide appropriate strategies, diversification and hedges which would generate good profits for SHI, but with an exposure limited to the amount of capital that SHI was prepared to provide to support the portfolio. It was clearly understood, Mr Vik said, that Mr Said's mandate was to be specifically limited to "plain vanilla" transactions and to the management of the amount of capital given to him by SHI in a segregated account to support his trading. It was there, prior to September 20th, that the four critical terms referred to above were agreed.

400. As set out above, the evidence of Mr Vik in his witness statement was that the "Said Authority Agreement" was made solely with Mr Meidal by reference to the Said Letter of Authority and the FXPBA. In its closing submissions, SHI states that it has always accepted that it is bound by the terms of the written instruments but it is plain from the pleadings and from Mr Vik's witness statements that it was being said that there was both a prior and a subsequent agreement between Mr Vik and Mr Meidal that Mr Said's trading authority was limited to "vanilla trades" and that this was what the instruments meant and were agreed to mean.

401. Furthermore, not only did SHI allege that Mr Said's authority was so limited (paragraphs 47 and 47a of the RRRADC) but in paragraph 48 SHI contended that it was an express or implied term of the Said Authority Agreement and/or the FXPBA that DBAG would not accept, authorise or permit Mr Said to enter into any trades on behalf of SHI and/or DBAG other than the FX Transactions and Options described in the Said Letter of Authority and/or the FXPBA.

402. There is, self-evidently, a significant difference between an allegation of limits on Mr Said's authority and an allegation of an obligation on DBAG to refuse to permit any trade which went beyond such authority.

403. As I have already said earlier in this judgment, SHI set out the authority given to Mr Said to trade with DBAG in the Said Letter of Authority. It was signed by SHI and by Mr Said and addressed to DBAG. DBAG did not assume any obligations under it at all. It was the FXPBA which set out the authority given by DBAG to SHI to act as

its agent in effecting the Counterparty Transactions, as described, and by which DBAG agreed to enter into contemporaneous offsetting transactions with SHI as Agent Transactions. Neither instrument placed any obligation on DBAG to refuse any type of transaction proposed by Mr Said although DBAG could be at risk if Mr Said traded outside the limits of the authority given to him to transact business on behalf of SHI.

404. In the Said Letter of Authority, SHI expressly recognised that DBAG would rely upon it "in connection with FX and Options Transactions" which it had authorised Mr Said to conclude in the first paragraph. Furthermore, in the second paragraph it specifically accepted that the conclusion of such transactions and related documentation would be binding upon it, agreeing that DBAG had no duty to enquire beyond that. Any restriction suggested by SHI not encompassed in the words of the first paragraph and the definition of FX and Options Transactions is therefore directly inconsistent with the terms of this Letter. If the Letter, on its proper construction, does not restrict Mr Said to trading in vanilla options, there can be no other basis for any such restriction.

405. The FXPBA described the trades which are referred to as FX Transactions in the same way as the Said Letter of Authority and also included currency options in the same way as that Letter. It also however expressly referred to "Structured Options", defining them in terms which, on any view, included non-vanilla options. The only options, which are not Structured Options, according to the terms of the FXPBA, are those which are put or call options without special features and single barrier options. Any other option is a Structured Option. In his deposition, Mr Vik said that his understanding of what "plain vanilla" FX trades meant was "spot, tom next, forwards and currency options". He said in cross-examination that if asked in 2006 what the phrase "plain vanilla" meant that is what he would have replied but he would not be able to tell by looking at a trade whether it fell into that category or not. This answer is extremely odd because he would be specifying a limit that he did not understand.

406. At all events, by the terms of the FXPBA, SHI accepted that Mr Said would have DBAG's authority to enter into Counterparty Transactions which consisted of Structured Options provided that DBAG gave its consent. It further agreed that DBAG should conclude offsetting Agent Transactions with it on the same terms. Thus SHI agreed to be bound by Structured Options proposed by Mr Said to DBAG, should DBAG agree to them. Any restriction above and beyond the terms of the FXPBA in relation to types of trade is therefore inconsistent with the FXPBA. In particular, any limitation to vanilla trades is directly contrary to the authority given to conclude Structured Options with DBAG's consent.

407. Furthermore, an obligation on the part of DBAG not to permit Mr Said to conduct anything other than vanilla trades goes well beyond the ambit of the Said Letter of Authority and the FXPBA which essentially set out the authority given by SHI and DBAG respectively. There is not a hint of any restriction preventing either SHI or DBAG from authorising further trades which fall outside the express authority given. Indeed the absence of any duty to enquire, as it appears in the Said Letter of Authority, has been construed by the New York court as excusing DBAG from the need to enquire whether Mr Said had any authority above and beyond that given for the type of trades referred to in the Letter itself. Whilst that is not necessarily a conclusion to which this Court would have come because of the reference to FX and

Options Transactions in the relevant sentence, the idea that the parties could not authorise Mr Said to bind them to other transactions runs counter to the wording of the instruments, the objective purpose for which it can be seen they were given, and the permissive authority which they set out. The test under New York law for implying such a term is not met. The parties would not have considered such a term to be included and it cannot be said to be implicit in the agreement, taken as a whole.

408. I have already referred to the Said Contract made between Mr Vik and Mr Said and Mr Vik's witness statement which referred to the express restriction to vanilla trades being agreed between them prior to 20th September 2006. His evidence in cross-examination was that the phrase "plain vanilla trades" was used in discussions with Mr Said in contradistinction to "structured products" which was a concept with which Mr Vik said he was familiar in 2006. He said that he doubted if he had discussed the meaning of the phrase "plain vanilla" with Mr Said but that its meaning was well understood, as he had described it in his deposition. He understood that Mr Said, in his deposition, had said that the distinction was not obvious because different people had different ideas of what a vanilla trade was but his own understanding corresponded with the terminology used in the Said Letter of Authority and the FXPBA.

409. In his deposition, Mr Said had said that no limitation as to any type of trading was imposed upon him by Mr Vik and that he had no recall of any discussion with Mr Meidal as to the type of trading he anticipated doing. He would have had second thoughts about taking on the engagement, if that had been the case. The very object of him being taken on was to increase the width of the products traded by SHI. As appears elsewhere in this judgment, his evidence on deposition was that he described the nature of types of Structured Options (the exotic trades – the EDTs and OCTs) with Mr Vik before he entered into them. He discussed the risk characteristics of each of the different types of trades with Mr Vik and specifically recalled discussing the risk on the first EDT prior to entering into it in February 2008, at some point after discussing it with Mr Chapin of CS when in his car driving down to Newport. He would discuss matters with Mr Vik when they were in the office together and by telephone and email. Anything new would be passed by Mr Vik with an explanation of the basic pay-off characteristics and the risk but once he had done a structure two or three times he would not refer back to Mr Vik again. The email exchanges in 2008 particularly show this to be the case. There is no way in which Mr Vik could have read these emails without appreciating that Mr Said was engaged in trades which would not, on any view, be considered vanilla.

410. The documents both prior to and subsequent to the FXPBA do not bear out Mr Vik's evidence. Although neither Mr Said nor Mr Meidal gave evidence before the court and there is a vacuum with regard to the records of telephone calls between Mr Vik and Mr Meidal, both on Mr Vik's side and that of DBS, it would be highly surprising if there was not some documentary record in DBS of an agreement made by Mr Meidal which differed from the written agreements in the manner suggested. Exchanges between Mr Said and Mr Meidal and Mr Meidal and those responsible for preparing the contractual documents reveal no understanding on anybody's part that there was a limitation to vanilla trades. Mr Brügelmann had never heard of such a limitation and, as Mr Meidal's assistant, he could be expected to know of it if any such agreement was reached. I accept his evidence that he knew of no such limitation

and that, had any such agreement been reached, Mr Meidal would have told him. He did not see how Mr Meidal could have gone off on trips to the USA, made agreements with Mr Vik and come back without recording or telling anyone of the agreements reached. It was standard practice for DBS employees to make visit reports for the file but there were none for any trip at the relevant time. Similarly, if agreements were reached on the telephone as Mr Vik suggested, a report should have been made and Mr Brügelmann would surely have been informed, regardless of that. Mr Vik customarily dealt with Mr Brügelmann by email, sent on his Blackberry because he was constantly travelling and Mr Brügelmann thought that he dealt with Mr Meidal in the same way. Yet of such oral agreements above and beyond the written agreements, there was no trace.

411. It was on 20th September 2006 that Mr Said emailed Mr Meidal saying that he would be originating and executing trades and investments in the currency and fixed income markets for Mr Vik and that he wanted to set up a Prime Brokerage Agreement which allowed him to trade with one collateral posting and which gave him good back office and reporting functionality. He asked to be put in touch with the right people in the currency/Prime Brokerage area. On 22nd September Mr Meidal emailed Mr Vik proposing an interim arrangement until a Prime Brokerage Agreement for fixed income and FX trading was finalised. A limited power of attorney was signed, giving Mr Said authority to trade with a position limit of EUR 300 million in the interim. In this interim period and initially under the FXPBA, Mr Said referred every decision to Mr Vik for his confirmation before concluding a trade.

412. On 2nd October 2006 Mr Quezada sent Mr Meidal and Mr Brügelmann an FXPB Pitch Book and Web Report PDF for Mr Said to review. That Pitch Book, which is referred to elsewhere in this judgment, specifically stated that FXPB could accommodate exotic options. In an exchange on 10th October between Mr Brügelmann and Mr Said about "limits", Mr Brügelmann asked Mr Said if he would prefer his trading limits to be expressed in terms of NOP or VaR. He said that either was possible but if Mr Said planned to do exotic options, it would have to be VaR. Mr Said's response was to say that he thought VaR might be better as it captured the right risks.

413. On 18th October Mr Said sent an email to both Mr Meidal and a representative of FXPB in New York in relation to a meeting in New York to discuss the issue of NOP as against VaR in more detail. In preparation for it he produced a sample portfolio and said in the email that he would like to see what DBAG's models produced as VaR or NOP exposure and collateral requirements against that portfolio. The sample portfolio contained five spot positions randomly selected, according to Mr Said's deposition. No options were included but Mr Said specifically said in the email that he would like to see and understand how option structures factored into the sample, including exotics which he understood could not be margined under an NOP system.

414. In an email a year later to Mr Quezada and Ms Greenberg of FXPB, Mr Said, in seeking to persuade them to take in a Structured Option, referred to a discussion about the FXPBA and taking in "one off (non-standard)" trades wherein Mr Quezada had told him that this would not present a problem but requested that he should not swamp them with such trades. He went on to say:

> "Frankly a PB agreement where I can only do spot and simple options is of no use to me and that was discussed at the outset of our discussions."

Mr Quezada's recollection, as set out in his deposition, was that this was discussed at the time when the account was first set up and Mr Said had said that he would trade exotics at some point.

415. As already pointed out, the FXPBA which Mr Said negotiated on behalf of SHI specifically permitted trading in Structured Options. Mr Said reviewed drafts of it, approved the wording and presented it to Mr Vik for signature. In an email of 6th November 2006, Mr Said referred to a draft of the FXPBA that he had received on which he had a few questions which he would discuss with Mr Quezada but he found it essentially simple and uncontroversial. It is presumably to this discussion that Mr Said referred in his email a year later.

416. Following signature of the FXPBA and other contractual documents on 28th November 2006, Mr Said commenced trading under it, obtaining Mr Vik's approval to trading decisions in the first two or three months. Thereafter he made his own trading decisions and reported to Mr Vik weekly on a Friday about his activities that week. The emails generally included an update on the realised profits and loss position on the account, his views of the market and information about trades that he had concluded, with varying degrees of detail.

417. In the overall period in which he traded, Mr Said concluded ninety-four trades which could be described as "exotic" – forty-one EDTs and fifty-three OCTs. By contrast, he entered into seven hundred and twelve vanilla trades. The first of the OCTs and non-vanilla trades was concluded on 8th February 2007 and the first EDTs on 19th February 2008. If there was a restriction to vanilla trading in either the Said Contract or the Said Authority Agreement, Mr Said breached this no more than two months or so following the signing of the FXPBA. Moreover, as appears from the email exchanges between him and Mr Vik, he showed no reluctance to tell Mr Vik about such trades and Mr Vik raised no objection to them. Some of these trades were described in some detail, both OCTs and EDTs, and in particular in 2008 Mr Said kept Mr Vik informed of the progress of his EDTs, having explained their basic format and offered on more than one occasion to "walk through" the terms with him.

418. In his end of the year report on his profits, Mr Said specifically referred to Structured Options "net of several timer options and correlation swaps". Mr Vik accepted in evidence that he would have read this email, upon which Mr Said was claiming his 10% profit share and would have noticed this reference. A clearer reference to the conclusion of non-vanilla trades would be hard to find.

419. It is plain beyond peradventure that Mr Said did not see himself as being under any restriction which limited him to entering into vanilla trades only.

420. If Mr Vik had indeed entered into the Said Contract and the Said Authority Agreement that is alleged, there cannot be the slightest doubt that Mr Vik would have raised the point with Mr Said and with DBS or DBAG. He never did so. He had brought in Mr Said with a view to increasing the breadth of SHI's trading. In his statement he said that Mr Said would be engaging in much more active and diverse

trading in the execution of complex and diverse strategies but he drew the distinction, he said in evidence, between complex and diverse strategies with vanilla trades in the shape of straightforward options on the one hand and complex trades, complex options and structured products on the other.

421. Mr Vik's own approach to trading was that of a risk taker, as he himself had told Mr Said. He looked to "win big because we lose big sometimes as well". Moreover, Mr Said's trading was not even limited to FX. Prior to the conclusion of the FXPBA he had concluded Fixed Income investments in Argentinean bonds and the early exchanges with DBAG show that, even after the US$35m figure was fixed for Mr Said's FX trading (and became the Allocated Portion in the CSA), a further US$40 million was being discussed as capital for FI trading for him. As previously mentioned, a figure of something under US$70 million was in fact put into the Pledged Account. In mid-2007 Mr Said concluded a further Argentinean bond transaction and CD swaps with notional values of US$300 million. In August 2007, also, when vain efforts were being made to set up an FIPB, Mr Vik was keen to obtain facilities that would enable both him and Mr Said to trade "[a]ll products of any kind".

422. Although it appears that Mr Said's initial FX trading was in vanilla transactions and that he increasingly concluded more exotic transactions as time went by, it is clear from the evidence that whatever reservations he originally expressed, whether to Mr Geisker or Mr Quezada about exotic trades, once he had been introduced to the EDTs by Mr Chapin of CS in February 2008 he became increasingly enamoured of them as the only way to make money in what he perceived to be essentially a directionless market.

423. When all went wrong in October 2008, despite DBAG's futile attempts to conceal the problems it had in booking, valuing and margining the EDTs (of which Mr Said was only too aware), it was straightforward in referring to the EDTs themselves when making margin calls. By this stage, Mr Said had produced details of his trades to Mr Vik for him to review in order to work out a way forward. Indeed Mr Vik had asked Mr Said for (and it is to be assumed that he had received) five year charts on the currency pairs in Mr Said's outstanding trades. Over the course of the weekend of October 10th/12th and the week that followed when the margin calls were made, Mr Said and Mr Vik were in constant touch about those trades and the state of the market. It cannot seriously be suggested that Mr Vik was unaware of the essential details of the EDTs at this point (although there is good evidence that he was aware long before). Without protest, albeit asking from 16th October onwards for details of DBAG's prior margining of Mr Said's trades, Mr Vik authorised payment of over US$500 million by way of collateral and premium to close out trades. At no stage did he suggest that Mr Said had exceeded his authority in entering into non-vanilla trades. Nor did he make this point at his meeting with senior DBAG personnel on 30th October. Nor was the point made in the New York Complaint served in January 2009. The expression "vanilla trades" appears nowhere in any of the documents at all until the Defence and Counterclaim served in this action by SHI on 21st March 2011.

424. SHI relied upon a few of DBAG's internal documents and data in support of its allegation but those documents will not bear the weight which SHI seeks to put upon them. A client profile created for Mr Said's FX trading by Ms Greenberg of FXPB listed the products as "Spot, Fwd, Swap, NDF, Precious Metals, Vanilla Options".

This was an online form which had to be completed as a matter of administration. Ms Greenberg's evidence was that she could not recall why she had selected those products and did not recall spending much time considering or selecting them. The degree of care employed is revealed by the email which refers to the attached client profile for "Floyd Currency Trading LLC", rather than SHI. The purpose of the email profile was, according to Mr Giery, to set out the trade booking codes to be used in DBAG's systems for trades done. The document refers to file transmission by the client submitting trades manually online and this, as Mr Giery's evidence suggested, may in fact be the reason for the products listed as these would be capable of being submitted by the client through TRM, whereas Structured Options not only required DBAG's consent under the FXPBA but DBAG's involvement in booking. It is clear from other documents sent by Ms Greenberg at around the same time and afterwards that she had no understanding that there was a limitation on SHI's ability to conduct non-vanilla trades. This document cannot therefore reflect some communication from Mr Meidal of an agreement of the kind suggested.

425. Although SHI made a point about structured data which suggested that the permitted products for SHI on the initial GEM set-up were 13 month cash trades which would include swaps, spot and forward trades, this was later amended in February to include 13 month one-bar and vanilla options and Ms Greenberg at the time of effecting those amendments observed that the list of permitted products had been updated several times but still did not include all the products which SHI was entitled to trade. The structured data in fact always limited trades inaccurately to 13 months. Once again the explanation for the set-up may be that these particular products were those which could be manually submitted online by the client and fed into GEM web reporting, as two FXPB witnesses suggested. The structured data should have been based upon a form called a CIF or a MIF and that form for SHI simply referred to options, without any restriction to plain vanilla trades.

426. These snippets do not take SHI's case any further. The suggestion of any oral agreement to the effect suggested cannot stand in the light of the written agreements, Mr Said's deposition evidence, the documentary records, the commercial realities and the universal understanding of DBAG personnel. It is another invention of Mr Vik's or his lawyers.

427. None of the alleged oral agreements referred to in sections 10(a)-(c) were made prior to execution of the written contracts, at the time of execution or agreed or confirmed afterwards. The need for multiple expressions of agreement or confirmation results from the terms of the "entire agreement" sub-clause and the "no oral modification" sub-clause in Clause 9 of the FX ISDA. Mr Vik's evidence represented a crude attempt to escape the effect of these provisions and fails because of the absence of any agreement to the effect suggested at any time.

10(d) Common Understanding, Mutual Assumption, Estoppel by Convention, Acquiescence and Rectification

428. Each of the alternative ways by which SHI sought to introduce limitations for the types of trade to be conducted under the FXPBA or for financial limits to the transactions to be conducted, by reference to some form of trading limits, as a result of exchanges between Mr Vik and Mr Meidal all fall to the ground because of my rejection of Mr Vik's evidence. There were no collateral agreements as alleged and

no factual basis for asserting any common assumption, mutual understanding or acquiescence in an assumed state of fact or law which could give rise to any form of estoppel by convention whether considered as a matter of New York law or English law. Clause 9 of the FX ISDA militates against any such allegation in any event but as I have found that Mr Vik's evidence is a fiction, the precise effect of that Clause does not matter. There was, likewise, no continuing common intention or outward expression of accord consonant with the allegations made and so there is no room for rectification of the written contracts.

10(e) The Collateral Warning Agreement

429. This allegation first surfaced on 3rd August 2012 following the exchange of witness statements. It was alleged that in telephone conversations between October and December 2006 and during the two meetings previously referred to between Mr Vik and Messrs Meidal and Brügelmann in November 2006 it was agreed that whenever the collateral requirements of SHI's trading with DBAG were approaching the upper limits of the collateral then available for trading, DBAG would inform Mr Vik.

430. This allegation is a late entrant onto the scene in circumstances where I have already rejected the evidence of Mr Vik relating to meetings and telephone calls with Mr Meidal or Mr Brügelmann in 2006 relating to limits on Mr Said's authority, trading limits and limits as to the types of trade which SHI could conduct. There is no evidence of such meetings or telephone calls and the fact that this point surfaced long after the earlier allegations which I have already rejected as fabrications by Mr Vik militates against an acceptance of this as a further collateral contractual obligation undertaken by DBAG.

431. The emergence of this allegation as a plea is no doubt attributable to Mr Brügelmann's statement as to what had taken place on 14th November 2007 in the meeting in New York with Mr Vik and Mr Orme-Smith about the GPF account to be opened with DBAG for Mr Vik's own trading. In that witness statement Mr Brügelmann referred to Mr Vik's declaration at the meeting that he never wanted to be in a margin call situation. Mr Brügelmann said that was something that Mr Vik had explained to him on previous occasions in relation to the DBS accounts. Mr Vik then asked him as a courtesy to monitor the GPF account and to warn him when the value of the account was within 5-10% of a margin call though no specific agreement was made to that effect. The rationale for this is relatively clear. Mr Vik used Mr Brügelmann as his "go-to" man who executed his instructions for purchase and sales of assets for his DBS accounts and was to continue to do so for Mr Vik's trading on the GPF platform with DBAG. He thus had sight of all that was going on with Mr Vik's day to day trading. He was authorised to execute trades on behalf of SHI in respect of Mr Vik's trading on the GPF platform.

432. In his first witness statement Mr Vik had said that he wished to be informed immediately if there was any chance that the positions taken by Mr Said were too large to be supported by the US$35 million allocated as collateral to his trading and that he was told by Mr Meidal and Mr Brügelmann repeatedly that DBAG had good collateral management systems and would therefore give him such information. He said that Mr Brügelmann was supposed to maintain overall supervision of SHI's trading in London and New York and he relied on him to do so. There was no

specificity as to the time when such assurances were given or such an agreement was made.

433. In his second statement, following the amendment by SHI to plead the Collateral Warning Agreement, he said that there was an agreement between SHI and DBAG that it would notify SHI whenever there was a risk that its trading could no longer be fully collateralised by the existing collateral. He said that he did not discuss a precise number with Mr Meidal or Mr Brügelmann but he thought that "an accurate reflection of what was intended" was that a warning should be given when SHI was about 10% away from reaching the US$35 million figure. He said he had no recall of the specific conversation with Mr Brügelmann to which the latter had referred on 14th November 2007 but there had been many conversations about this.

434. Mr Brügelmann's further statement pointed out the difference between Mr Vik's own trading at DBS and on the GPF account with DBAG on the one hand and the trading of Mr Said on the FXPB account on the other. On the former, Mr Brügelmann supplied daily figures to Mr Vik whereas on the latter Mr Said made his own reports to Mr Vik and it was only for the occasions that Mr Vik met with Mr Brügelmann that the latter made enquiries and obtained some figures about Mr Said's trading on that account. (Mr Brügelmann only met Mr Vik three times in 2007 and three times in 2008 and those appear to be the only occasions upon which there was any discussion of Mr Said's trading, following much lengthier discussion on other subjects with Mr Brügelmann and others). So far as he was concerned, he did not have access to information in relation to the FXPB account without asking for it whereas he had been given specific authority by Mr Vik to access DBX for the GPF figures and saw them daily in order to report to Mr Vik. Whereas he was asked, as a courtesy, to notify Mr Vik if he was getting close to a margin call on his own trading (which Mr Brügelmann executed on his instructions), because Mr Said reported directly to Mr Vik on his trading Mr Brügelmann was not asked to provide similar information on Mr Said's account. There was never any specific agreement to give a notification about potential margin calls on Mr Said's account.

435. In cross-examination Mr Brügelmann said that, at the meeting of 14th November in New York Mr Vik had said that he did not want to be in a margin call situation, which was something he had said on previous occasions. Mr Brügelmann said that as a matter of good client service he said he would keep an eye on the account to which he had access and tell him when there might be a potential call on its way. In January 2008, Mr Brügelmann observed to Ms Hart in a telephone call that he needed to make contact with Mr Vik once SHI were "5% close" to a margin call because when he and Mr Orme-Smith had seen Mr Vik, Mr Vik said he did not want to get into a margin call situation and said he wanted to be told before. Likewise, in August 2008 Mr Brügelmann emailed Mr Orme-Smith referring to the meeting with Mr Vik in which he had asked to be kept abreast of his margin situation well ahead of any margin call. There is also a reference in Mr Brügelmann's email following a meeting with Mr Vik on 7th May 2008 when Mr Vik had a series of meetings with different DBAG employees before speaking alone with Mr Brügelmann at the end. Following this meeting Mr Brügelmann sent an email to Mr Orme-Smith referring to Mr Vik stating again that he did not wish to get close to any margin calls, at which "a smile went over Clare's [Claire's] face". Claire Davies was involved in the discussion relating to GPF, being a member of Hedge Funds Credit who had some expertise to bring to bear

in that area. She would not have been present in the discussion between Mr Vik and Mr Brügelmann about the FXPB account when Mr Brügelmann produced some figures he had obtained from GEM, in accordance with his normal practice for meetings with Mr Vik. All the other persons involved in these discussions on DBAG's side, apart from Mr Brügelmann, were persons whose role was limited to GPF, whilst Mr Brügelmann's prime functions related to Mr Vik's own trading, not that of Mr Said. I find that Mr Brügelmann was wrong in his evidence under cross-examination when he said that there was discussion of the FXPB account in the presence of Mr Orme-Smith and Claire Davies.

436. Mr Vik's own evidence, when cross-examined, was that he could not remember any specific discussion with Mr Meidal about a collateral warning during the set up of the FXPB account for Mr Said's trading. He considered that he had a general unwritten agreement in relation to all his accounts.

437. I reject Mr Vik's evidence that there was any understanding at all relating to the FXPB account. Mr Brügelmann and Mr Vik had a close relationship in relation to Mr Vik's own trading because of the daily instructions that Mr Vik would give to Mr Brügelmann and the daily reports that Mr Brügelmann would give to Mr Vik. In that context Mr Brügelmann was entirely up to speed with what was going on in Mr Vik's trading accounts but this was not true of the position with regard to Mr Said's trading, as Mr Vik must have known. Mr Vik received very little reporting from Mr Brügelmann on Mr Said's FXPB account, being reliant upon Mr Said himself to make reports as he did weekly, religiously at the end of week. In consequence, Mr Vik knew more about Mr Said's trading than Mr Brügelmann ever did.

438. Once again the reaction of Mr Vik to the events of October 2008 is significant in this context. At no point did he ever suggest that Mr Brügelmann should have supplied a warning about Mr Said's margin situation. By October 10th, at the latest, Mr Vik knew from email exchanges with Mr Said that the cost of closing out the account would run into hundreds of millions of dollars. This meant that margin limits had long since been exceeded and yet there was not a murmur of complaint from Mr Vik that Mr Brügelmann had failed to tell him of this at any time beforehand.

439. Mr Brügelmann's conduct is likewise consistent with his evidence that the discussion related only to Mr Vik's trading account. On 3rd September he did give Mr Vik a warning about his proximity to a margin call on his trading accounts in an email which is the cause of a different complaint by Mr Vik, namely that the warning was wrongly based upon an understanding that Mr Vik's FX trading was governed by the Equities PBA and not the FXPBA.

440. The fact is that the conduct both of Mr Brügelmann and Mr Vik is consistent with what the documentary records show, namely that Mr Vik asked for a margin call warning in respect of his own trading and Mr Brügelmann told him that he would give such warning.

441. There is no indication anywhere in the documents that Mr Vik ever asked for a margin warning in relation to Mr Said's FXPB account which was always regarded as something distinct from Mr Vik's own trading. I find that Mr Brügelmann, when he spoke of giving a warning, did so only in relation to the accounts where he had immediate visibility, namely those where Mr Vik used him to execute trades on his

behalf and to which he had authorised access. Neither he nor Mr Meidal had authorised access to the FXPB account. Any agreement on this, as for the Capital Limitation Agreement, would be expected to be made with FXPB personnel not DBS personnel.

442. There is an issue between the parties as to whether or not Mr Brügelmann undertook a binding obligation on the part of DBAG as a collateral agreement. There was no formal agreement in the shape of a written contract nor even an exchange of correspondence or emails. On Mr Brügelmann's evidence there were a number of conversations in a business context but the effect of the binding agreement alleged by SHI would be a significant alteration in the obligations of DBAG under the FXPBA, the FX ISDA and the CSA annexed. Mr Brügelmann would not have considered himself able to vary or modify the CSA and it would be hard to see how Mr Vik could have thought that he could, since he was a relationship manager at DBS. What Mr Brügelmann was doing was managing the relationship with Mr Vik in an effort to assist but there was no intention on his part to change DBAG's entitlement to call for additional collateral in circumstances where the contracts allowed it. Nor could Mr Vik have thought that anything that Mr Brügelmann offered to do in this context by way of warning could affect DBAG's right to demand margin in accordance with the terms of the CSA.

443. The Collateral Warning Agreement is inconsistent with the contractual rights of DBAG to call for margin, whether or not it is alleged that the giving of the warning was a pre-condition to the right to call for margin or it is said that it is a breach of contract not to give such a warning before making such a call. The alleged oral agreement touches on central rights of DBAG to protection as provided in the FXPBA and the FX ISDA.

444. The nature of the alleged duty is not clear. SHI accepts that if it was not practicable to give a warning because of sudden large market movements, there would be no liability. As appears hereafter, in circumstances where DBAG did not know what its margin entitlement was because Mr Said persuaded DBAG to take in EDTs which it could not value or margin on its systems, DBAG could not give any warning and the agreement/waiver of any duty to report MTM and margin carried with it the waiver of any duty to warn.

445. The agreement to warn is alleged to be collateral to the FXPBA although it relates to giving a warning in respect of margin calls which would be made under the FX CSA. The FX ISDA includes Section 9(a) and (b), the entire agreement and no oral modification provisions. Furthermore, Clauses 12.6 and 29.1 of the Equities PBA referred to the absence of any representation or warranty made outside the terms of the agreement which constitutes the entire agreement and understanding of the parties with respect to its subject matter.

446. Whilst the entire agreements clauses prevent any assurance given in the course of negotiations from having legal effect, they are not directly applicable to subsequent variations of the contract. The no oral modification Clause is effective under New York law only where modification remains executory and is not the subject of partial performance in the sense of action which is unequivocally referable to the alleged modification. In English law as applicable to the FX ISDA and 2008 Agreements, the

terms take full effect with the clearly expressed intention that the parties' agreement is to be found in written contracts and nowhere else.

447. The 3rd September email is, in reality, explicable only by reference to the conversations between Mr Vik and Mr Brügelmann, insofar as a warning relates to Mr Vik's own trading on the GPF platform under the Equities PBA. There is however no conduct which is capable of amounting to performance of any amendment to the FXPBA and in circumstances where the parties have agreed to formalities of the kind which appear in all these agreements, in order for contractual rights to be affected, I conclude that Mr Brügelmann did not enter into a binding contractual commitment on behalf of DBAG to give a margin warning which could have any impact upon DBAG's right to call for margin under either the FXPBA or the Equities PBA or the ISDA agreements which related to them. Mr Vik expected any commitment made by the bank to be made in writing and this was not. He knew that what he was getting was assistance from his relationship manager without commitment on DBAG's part. There was, within the meaning of the authorities, no animus contrahendi or intention to create legal relations in the sense of a subjective intention on either party to enter into a binding contract.

448. As a matter of fact, DBAG's practice set three different levels at which action was or was not taken. Initial margin was set at 200% of 5 day VaR for Mr Said's account- the maintenance level. The call level was 150% and the close out level was 100%. The practice was not to call for margin at the 200% level but only at the 150% level, so that, in effect there was latitude given to the customer as against the margin requirements agreed and which were supposed to appear on the GEM web reports. An email of 18th October 2006 to Mr Said spelt out the practice of DBAG to call for margin at the 150% level and to close out at 100%. The effect would be that the customer would be notified of a deficiency in margin at a level greater than that at which a call could be made. As to causation, I need say nothing further but it is plain that if DBAG had issued a margin warning to Mr Vik, as opposed to Mr Said, about Mr Said's FX trading, Mr Vik would have had a discussion with Mr Said about his margin requirements and the trading and the FXPB account. If a margin call had been made, then Mr Said would have had to discuss the matter with Mr Vik. There is no reason why DBAG would not have observed its ordinary practice in that connection in calling for margin at the 150% level.

449. In Annex 3 appear the margin figures as calculated by the forensic accountants. As mentioned elsewhere I conclude that with the profits Mr Said was making Mr Vik would not have stopped Mr Said's trading or required him to reduce his positions whilst trading appeared profitable and until the margin figures hit US$150-$200 million in September 2008.

11. The Meaning of *Currency Options* and *Structured Options*, the Said Letter of Authority and the FXPBA

450. The Said Letter of Authority referred to *currency options*, whilst the FXPBA referred to *currency options* and *Structured Options*. In neither instrument was the reference to *currency options* made to a capitalised term, so that they were not defined by reference to the 1998 ISDA FX and Currency Option Definitions (the "ISDA Definitions"), as published by ISDA and EMTA. The FXPBA contained its own definition of *Structured Options*.

451. There is a dispute between the parties as to the extent of Mr Said's authority to bind SHI to various types of transaction concluded by him in the name of SHI. DBAG has accepted that it is bound by Mr Said's actions in relation to the Counterparties under the terms of the FXPBA while SHI maintains that Mr Said had no authority to bind it to various offsetting transactions under the FXPBA because they fell outside the terms of the authority given thereby and in the Said Letter of Authority. Clearly the authority given to Mr Said under the FXPBA to bind DBAG to the Counterparties and to bind SHI to DBAG was identical, but the parties have taken different stances in relation to that. The issue is less a matter of construction between the parties and more a matter of application of the terms used in the agreements to the transactions which are disputed – the EDTs and the OCTs. Were they *currency options* or *Structured Options* within the meaning of the FXPBA and Said Letter of Authority?

452. The FX ISDA Schedule and the Amendment Agreement of 28 November 2006 both stated that they governed FX Transactions and *Currency Option* Transactions, as defined in the ISDA Definitions, unless otherwise agreed between the parties, but that is of no direct assistance in construing the FXPBA and Said Letter of Authority, save insofar as the ISDA Definitions represent market understanding. Each confirmation expressly stated that the transaction recorded therein was subject to ISDA terms and Definitions, but that does not help in determining whether it was truly a *currency option* or *Structured Option*, although it shows that the parties wanted them treated as an FX Transaction or *Currency Option*, within those definitions for the purpose of incorporating ISDA terms.

453. The ISDA Definitions contain the following:

> "**Section 1.5. Currency Option Transaction** "Currency Option Transaction" means a transaction entitling Buyer, upon exercise, to purchase from Seller at the Strike Price a specified quantity of Call Currency and to sell to Seller at the Strike Price a specified quantity of Put Currency.
>
> …
>
> **Section 1.12. FX Transaction** "FX Transaction" means a transaction providing for the purchase of an agreed amount in one currency by one party to such transaction in exchange for the sale by it of an agreed amount in another currency to the other party to such transaction."

454. The definition of *Currency Option* Transaction is wide and would encompass vanilla and exotic options with any number of additional terms and conditions attaching to them. In 2005, ISDA produced a Barrier Option Supplement to the ISDA Definitions which made it clear that the definition of *Currency Option* included Barrier and Binary Options. The Volatility Swaps Supplement specified that these are to be treated as a type of FX Transaction. These definitions exist to facilitate better trading and to provide a general framework to document trades, where standard ISDA templates can be used and tailored for non-vanilla trades. The question still remains as to what the market sees as being *currency options* and what falls within the definition of *Structured Options* as set out in the FXPBA.

455. It is necessary to determine what is meant by a currency option and a *Structured Option* by reference to market understanding, as opposed simply to legal analysis of the terms of the trades done, as recorded in Trade Confirmations, which incorporated the ISDA Definitions. I had reports from two experts and heard evidence from each about market understanding – from Mr Malik on the one hand, the expert engaged by DBAG, and Professor Wystup on the other, the expert engaged by SHI. I will say more about these experts later.

456. The disputed transactions which, in SHI's submission, fell outside the ambit of Mr Said's authority are as follows: the Target Profit Forwards and Pivot Target Profit Forwards, the Forward Setting Currency Options, the Knock Out Currency Options, the Double Knock Out Currency Options, the Knock Out Timing Options, the Digital Currency Options, the Dual Range Digital Currency Options and the Fade-in Forwards. Both experts agreed that the Correlation Swaps did not fall within the definition of *currency options* or *Structured Options* in the agreement.

457. As a matter of legal analysis, an option, in simple terms, gives the holder the right but not the obligation to do something, often to purchase or sell, those being respectively referred to as a call option and a put option. A *currency option*, in its ordinary form, is therefore an agreement between two parties which entitles one party to purchase from or sell a specified currency to the other. The ISDA Definitions are set out above for a Foreign Exchange Transaction and a *Currency Option* Transaction. The ISDA Definitions list call and put options as Currency Option Transactions entitling the buyer or seller, as the case may be, to purchase or sell the relevant call or put currency.

458. It is again plain that, as a matter of freedom of contract, parties can negotiate and agree terms and conditions for options as they think fit, so that the basic form of option may become more complex. There may be conditions attached to the exercise of an option or an option may be deemed to be exercised or treated as exercised automatically in given circumstances. The parties can agree that no currency need be delivered and that, on exercise, automatic exercise or deemed exercise there is simply a pay-off which represents the profit or loss made on the transaction by reference to a base currency. The parties may also agree a series of put and call options over a period of time with daily or weekly exercise and a resulting pay-off which is the net result of this combination of options. Such transactions may limit the total profit payable in respect of any series of options.

459. The experts helpfully produced an "Agreed FX Primer" which set out an overview of the FX market and of FX products including, for the most part, agreed descriptions of the different types of product in issue in this action, although they were unable to agree on a description of Fade-in Forwards. Reference can be made to this document or to the experts' reports in relation to each of the types of disputed transaction and I will not attempt to set them out here. I will however, later, set out their description of Target Forward Products (as Professor Wystup preferred to refer to them) including Target Profit Forwards (TPFs) and Pivot TPFs. Whatever else the term *Structured Option* may mean (a term which Professor Wystup said he had not come across before this litigation) it must connote a degree of complexity or structure to it. In a letter from ISDA in December 2009 (and therefore over a year after the events in issue in this litigation) the following appeared:

> "Currency options can take many different forms. There are "plain vanilla" options where one party (the "buyer") pays a premium to the other (the "seller") in order to have the right at expiration or during a specified period to exercise the option into a spot foreign exchange transaction for a specified currency pair. There are also "structured" options, which have different features that allow the option holder to achieve different results, the most common of which are known as "barrier options" (i.e., knock-in and knock-out options) and "binary options" (i.e., one touch and no touch options). These structured options look at the spot exchange rate for a specified currency at expiration or during a specified period in order to establish whether the option is exercised or the option holder is entitled to a specified payment."

460. In the FXPBA, *Structured Options* have their own defined meaning, namely an option other than one which is a put or call option that does not have special features or a single barrier option. Self-evidently therefore, any *currency option* which does have special features or more than one barrier is a *Structured Option* for the purposes of the FXPBA. This does not however help with regard to the question as to whether or not what is being considered is truly a *currency option* in the first place.

461. A further term which is used in the market is the expression "Exotic Options". In Mr Malik's view the term is synonymous with *Structured Options* as used in the market, namely more complex options with special features of one kind or another which take them outside the range of what are considered as vanilla options. Over time, the experts agreed, the market's perception changes as to how exotic a product is.

462. In the Agreed FX Primer, Target Forward Products (TFP) are described in the following manner:

> "2.16.1. In a TFP, the investor agrees to buy a specified amount of a currency at an agreed rate (the strike price) on a number of dates ("fixing dates") which can be daily, weekly or monthly, depending on the contract.
>
> 2.16.2 On each fixing date a settlement amount is determined. The settlement amount for a purchased TFP is calculated as (spot – strike) x notional per fixing date. If this amount is positive, i.e. spot is greater than strike, it is a gain to the TFP investor. Otherwise it is a loss (i.e. a gain to the TFP seller).
>
> 2.16.3 The positive and negative amounts accrue with each fixing date and are typically cash settled on the final settlement date. The terms of the trade do not contain any cap on the investor's potential losses).
>
> 2.16.4 If the sum of positive settlement amounts reaches or exceeds the pre-specified target profit, the TFP terminates. The sum of positive settlement amounts (which is capped by the target profit in the SHI set of transactions) and the sum of

negative settlement amounts are either paid by the seller and buyer respectively on the settlement date or are cash settled by the payment of a net amount by either the seller (if positive amounts exceed negative amounts) or the buyer (if the opposite is the case).

2.16.5 As long as the sum of positive settlement amounts stays below the target profit, the trade continues to exist and settlement amounts continue to be determined and accrued. As is the case when the TFP terminates due to the target profit being met, the accrued positive and negative settlement amounts are paid or cash settled on the settlement date.

2.16.6 The investor in a TFP faces a limited upside (gain is capped at target profit) and a potentially unlimited loss. Typically the TFPs are "zero-cost" structures with a strike price that allows investors to buy the notional amount at a better-than-market outright forward rate.

2.16.7 At inception, the strike price of a TFP transaction is typically in the money (in that the strike is better than the outright forward rate). The investor hopes the TFP will remain in the money and the target profit will be reached within a short period of time.

2.16.8 However, if the FX rate was to move below the strike price (and stayed below) soon after inception, the likelihood of achieving the target profit becomes low. In this scenario, the investor would accumulate losses.

2.16.9 It is possible that the investor will not make a profit even if the target profit is reached. This is because the sum of the negative amounts may exceed the sum of positive amounts on the date when the target profit is reached and the transaction terminates. A TFP is therefore a means by which an investor can express a combination of a directional and low volatility view, as if the market moves in his favour the trade will terminate early and he will receive a profit."

463. The Agreed FX Primer describes "Pivot" TFPs in the following way:

"2.17.1 In a pivot TFP, the payment by each party is by reference to three prices (the "low strike price", the "high strike price" and a "pivot"), instead of just one, as in a TFP. A pivot TFP pays out to an investor if the FX rate remains within a particular range and close to a pre- determined pivot.

2.17.2 The investor receives a settlement amount if the FX rate is between the high strike price and the low strike price and has to pay a settlement amount if the FX rate is outside of this range (see diagram below).

2.17.3 As in a TFP, the positive amounts and negative amounts (to the investor) accrue throughout the life of the transaction and if the sum of the positive amounts reaches the target profit, the transaction terminates.

2.17.4 In a pivot TFP, the settlement amounts are determined by reference to the pivot. On each fixing date, if the fixing is above the pivot, the settlement amount is calculated as (high strike – spot) x notional per fixing date. If the FX rate is below the pivot, the settlement amount is calculated as (spot – low strike) x notional per fixing date.

…

2.17.9 … The terms of the trade contain no cap on the amount of the investor's losses which are dependent upon the amount of the average fixing, while the profit is capped at the target profit. A pivot TFP is therefore a means for an investor to express a view on the volatility of the FX rate. Here, the investor benefits if the FX rate fixings are close to the pivot, however it doesn't matter if the FX rate fixings are above or below the pivot. An investor in the pivot TFP depicted above would be of the view that the volatility of USDJPY would remain low and the trade would terminate early as the target profit would be reached.

2.17.10 If this view was incorrect and the FX rate moved beyond the high or low strike prices, so the trade did not terminate early the likelihood of achieving the target profit would become low. In this scenario, the investor would accumulate losses. This would place the investor in a similar position to being out-of the money on a "sold" vanilla option on each fixing date."

11(a) The Expert Evidence

464. The fundamental difference between Mr Malik and Professor Wystup can be expressed relatively shortly. Professor Wystup's view was that there were two distinctive features of *currency options*, without which a transaction could not properly be so termed. The first was an element of optionality, namely a discretion on the part of the holder whether to exercise the right to purchase or sell, as the case may be (a call or put option) without any obligation to do so. The second was that an option could not have a negative payoff and result in loss. Mr Malik's view was that the market considered that *currency options* could consist of a series of bought and sold options, that any seller of an option had an obligation to fulfil the sale (if the buyer chose to exercise the option) and that a sold option always contained the possibility of a negative pay-off. If the market price moved below the strike price on the sold option, and a deal was cash settled, the seller would suffer a loss representing the market differential. His view was that each of the disputed EDTs and OCTs (other than the correlation swaps) was taken by the market as representing a series of embedded bought and sold options, in whatever language the trade confirmations

were expressed, and that the final pay-off represented the aggregation of the sums payable on automatic or deemed exercise of the options on the fixing dates, subject to the condition agreed as to a maximum profit – the target feature. Professor Wystup considered that the combination in a single contract of a portfolio of options could not be considered a "*currency option*" although it might be considered a "Structured Product" or an "FX derivative".

465. Mr Malik expressed the opinion that market participants used the terms FX options and *currency options* interchangeably and would regard the EDTs and OCTs to be a form of FX transaction. They would also consider them to be *Currency Options* as defined in the ISDA Definitions with the exception of the correlation swaps which would be "Foreign Exchange Transactions" but not *Currency Options*. With this exception, all of the EDTs and OCTs would be *Structured Options*, both within the meaning of the term as ordinarily used in the market and within the definition of the FXPBA, save for Knock Out Options which have only one barrier and therefore are simply *currency options*.

466. Professor Wystup took the position that *currency options* meant simply vanilla options and did not include anything other than straightforward put and call options. He divided exotic options into three categories, namely first, second and third generation exotics. None of the EDTs or OCTs were in his view vanilla (as is common ground) but, as he put it, on a "very generous" reading of *currency options*, Digital Options and Knock-out Options fell within the meaning of the phrase and Knock-out Timing Options were on the borderline. Everything else fell outside it. When looking at *Structured Options*, he offered three potential meanings, the broadest of which would encompass "market standard products" – i.e. first generation exotic options, in his classification. He was insistent that *currency options* and *Structured Options* must have a non-negative pay-off whilst recognising that there were some grey areas imported by market standards in relation to volumes, exercisability and risk profiles.

467. Professor Wystup had never traded a TPF (which he accepted had been in the market since 2004). Since November 2003 he had been the managing director of Math Finance AG which he described as "a global network of financial engineers which advises market participants on FX options, software and trading". He is an honorary professor of quantitative finance at the Frankfurt School of Finance & Management and an associate fellow in the Finance Group of Warwick Business School at the University of Warwick. He is also a lecturer in Financial Engineering Programmes at the National University of Singapore. He describes himself as having worked in the FX options industry since 1991 and, following internships, worked for three years between 1996 and 1999 as a consultant and foreign exchange options quantitative analyst at a private bank in Frankfurt. Between 1999 and 2004 he worked at a Frankfurt bank as a quantitative specialist, risk manager and product developer in the Global Foreign Exchange Options Department where he was responsible for developing and implementing FX derivatives models, generating tailor-made structures for the bank's clients and internal and external consulting for all FX options matters. The reality was that he had never worked as a trader or in a front office role and had no experience of FXPB. He said that he had experience on the FX structuring desk dealing with a lot of salespeople who in turn dealt with clients in buying and selling FX and that he was involved in training.

468. Mr Malik, in the relevant period of 2007-2009, was head of DCRM Solutions at Barclays Capital. He ran the front office trading and structuring team that risk managed, traded and distributed contingent credit risk arising from Interest Rate/FX, commodity and emerging markets derivative deals in the rates market world. During his time he helped manage counterparty risk arising from vanilla swaps and options, exotics, TARNs, FX2 and choosers (TARN is another term used for a TPF). From 2001-2007 he had set up his own fund business in India to manage money for individuals and trained investment banking professionals in, amongst other things, FX and credit products. He had extensive experience prior to that, going back to 1990 as managing director in fixed income credit trading and structured credit.

469. Professor Wystup's opinions were hampered by the fact that in August 2011 he had been interviewed by Freshfields, who were acting for DBAG, and had expressed to them, at that stage, views which were diametrically opposed to those he gave to the Court.

470. Despite efforts to explain this away, the fact remains that, when first sent copies of trade confirmations for two TPFs, he concluded that they fell under the category of options which he considered a broad term. Moreover he considered that it would be highly impractical to create a full list of what fell within the definition of options and that it would be more usual for prohibited trades to be specifically listed in a contract or for there to be an explicit statement that only vanilla trades were allowed. This was, he said, not only a matter of common sense but he said that he had never seen anyone approach the issue differently and it was not something that, so far as he was aware, had ever been questioned. Unless therefore there was explicit exclusion in an agreement, a TPF would be an option. A *currency option* was a very general term and any book written on the subject would cover a lot more than vanilla options.

471. On 10th August 2011, when looking for an expert who might be able to give evidence on the issues which arise for my decision in this area, Freshfields contacted Professor Wystup, enclosing an extract of part of the Defence and Counterclaim which set out SHI's argument that Mr Said had exceeded his authority in entering into EDTs at paragraphs 85 and 86. In the Defence and Counterclaim, it was said that each of the EDTs was not an FX transaction because they each contained a Target Knock-out event feature which meant that they were "exotic FX derivative transactions" and not FX or Option transactions. Moreover, it was alleged that the EDTs did not give SHI a right to exercise as opposed to an obligation, and their character was such, by reference to pricing/valuation, trading, risk management and documentation that they were not vanilla transactions. Also enclosed were the FXPBA and the Said Letter of Authority together with two trade Confirmations from CS of an AUD/NZD Target Redemption Forward with a strike at 1.2440, with daily observations for a year and a USD/CAD Pivot Target Accrual Forward with a low strike, a high strike and a pivot, running for a year, with daily fixings. Additionally the declaration of an expert Mr Jananayagam, put forward by SHI in the New York proceedings, was sent to Professor Wystup, in which he expressed the view that the EDTs could not be categorised as "*currency options*" as such terms were used in the FXPBA and Said Letter of Authority. Mr Jananayagam expressed the view that an option was a financial instrument which gave the right but not an obligation to the option buyer to purchase or sell an asset at a pre-agreed price on a specified date. A *currency option* therefore allowed the buyer the right but not the obligation to purchase or sell one

currency in exchange for another and no such right was given to either SHI or DBAG in the EDTs.

472. With the benefit of these documents sent to him on 10th August, Professor Wystup gave his views in a telephone consultation on 18th August with representatives of DBAG, Freshfields and DBAG's New York attorneys. Notes were taken by a representative of each of those entities and expressed clearly what Professor Wystup was saying at the time. I have already expressed in outline the record of his view as noted by the Freshfields' representative which concluded by disagreeing with Mr Jananayagam's affirmation and the views expressed in it. The notes of the representative of DBAG (a member of its legal department) referred to Professor Wystup's view that a market view of the difference between vanilla and exotic options depended upon the person being asked. A trader would merely distinguish between a vanilla option and a structured option. His own experience was gained within a group of colleagues within the bank and the range of corporate and institutional clients with whom he dealt. He was specifically asked in the call if he would be able to testify that TPFs would be covered by an ISDA to which his answer was yes. He said he was familiar with the Target Redemption Forwards but had not seen the TPF before with its "extra knock-ins and knock-outs" but he considered those as merely tweaks from the ones he had seen. He regarded Target Redemption Forwards as a type of Forward and a TPF was an FX Forward or an Option and would be treated as such unless specifically excluded in an agreement. It would be hard to list products and keep them up to date in an agreement, so the general practice would be to include everything but list exceptions. If only vanilla trades were intended, that is what would be expressly said. When referred to Mr Jananayagam's views, he said he did not agree. The EDTs were not vanilla put or call options but *currency option* was a general term and in any book that you opened, you would see a whole variety of options and not just vanilla. Based on his experience the market would regard these transactions as options or FX forwards.

473. The notes of another representative of Freshfields were to the same effect. Market views would depend on the identity of the person asked as to whether something was vanilla or exotic. An experienced options trader would consider all as options and would specify if he wanted to trade vanilla alone. Options included the whole product range including "super-derivatives". He said he had no familiarity with FXPB and no experience of the terms in which authority was given to traders. He had come across TPFs but not the pivot trades which were more recent but both were properly described as FX options and would be covered unless specifically excluded in an agreement. A TPF was a type of forward, and because of developments, it would be difficult to list a set of authorised products in a Master Agreement and keep it up to date. Hence such an agreement would tend to be general and only list the exceptions that were not permitted. He had not seen it done differently. He specifically disagreed with Mr Jananayagam's declaration that exotic derivatives, including knock-outs, would not fall into the category of options or forwards. He saw currency option as a very general term which would include vanilla trades but was not exclusive to it. Any book that you opened regarding options would provide you with a wide variety of them. When asked if he had ever had to give an expert report on whether a pivot or TPF would commonly be regarded as an FX forward or an option, he said that he never expected anyone to doubt it.

474. In a follow up email the same day, Professor Wystup made a suggestion to Freshfields. He said that if further evidence was needed for the scope of the terms “forwards” and “options” in Prime Brokerage Agreements/Master Agreements/ISDA Agreements, his consulting company could carry out a survey of the number of banks known to them and take statements. He concluded by saying “I think it is clear anyway, but having some supporting material could support your claim”.

475. Professor Wystup’s evidence to the court was that, at the time he expressed these views, he had not taken much trouble to review the documents he had been sent, had not spoken to others in the market and had not sufficiently thought through the issues as he had by the time he came to provide his reports and give evidence. In a statement, he said that the views expressed in the telephone consultation were his “initial views, expressed off-the-cuff” and gave “a completely bank-focused approach”. His responses were formulated on the call without prior consideration. He used labels loosely and now considered that there was a significant difference between an internal bank trading mandate and a client-facing contractual trading authority and he was only considering the former in the telephone call.

476. Later in the witness statement he said that he had used the term “option” in a very broad and loose way and had not settled exclusively either on “forward” or “option” as a classification for the TFPs. The reference to “option” was likely to have been because his peer group often addressed pivots and TFPs when talking or writing about options and he was using the word in the way that some of his peer group did use it. This of course is, in fact, very much to the point. If others in the market consider these types of trades as options, then later reflection and analysis may not in fact assist.

477. Whilst professing a consciousness of his duties to the Court, Professor Wystup, both in his reports and in his oral evidence, was a very unsatisfactory expert. He was partisan and argumentative and sought to argue questions of construction of the contracts rather than focussing on the question of how the market understood the position. His views, expressed in the telephone call, were close to those of Mr Malik, at a time when he was anticipating that he might give expert evidence on behalf of DBAG. When consulted by SHI, he changed his views to give diametrically the opposite opinion without any qualifications or reservations and without any explanation of any kind until he was faced with the notes of what he had said in the telephone call in August 2011. I did not therefore find him an expert upon whose market views I could rely.

478. By contrast, Mr Malik came across as a man who knew the market at first hand in a trading context as well as in the context of talking to back offices and clients. As he said, people in the market did not tend to analyse the transactions in question but simply thought of them as *currency options*. There were indicia as to why this might be so but the rationale for the view was not something that would be discussed much or expressed in the market. The Trade Confirmations were usually expressed in terms of “pay-off” but the underlying basis of the disputed transactions was the series of call and put options for each of the fixing days, which he described as “embedded” within the terms of the deals. The concepts for *structured options* had been developed from more straightforward options and strategies of trading straightforward call and put options. This was done in order to sell products on the market that met particular business needs and in particular the desire of hedge funds and traders to speculate in

currency without payment of premium – "zero cost options". Combining vanilla options provided some degree of flexibility for investors (Call Spreads, Risk Reversals, Straddles, Strangles and Butterflies) whether for hedging purposes or otherwise, but the strategies provided by the use of such options might not capture the market view of the investor. Customised products therefore were brought to the market which came to be known as "exotic" *currency options* or "*structured*" options, according to Mr Malik. The latter phrase was usually used to describe transactions which had the combination of options or embedded options which Mr Malik said were inherent in the EDTs.

479. The vast majority of trading on the FX market which is the world's largest and most liquid financial market with a daily currency turnover of nearly US$4 trillion, is speculative. One of the attractions of buying options is that for a fraction of investment of option premium, investors are able to assume risk on the whole investment but, with zero cost options, the attractions become even more obvious. If the underlying asset moves in favour of the holder, substantial sums can be earned. Moreover, although options fall to be exercised, if an option is "in the money" there would be no reason not to exercise it and in practice exercise always occurs absent an operational error or an oversight on the part of the buyer. Where there is a combination of options, the party in the money is always treated as having exercised the option.

480. Mr Malik's evidence was that TPFs were very popular vehicles for investors who wished to express a highly customised view on a currency pair. Although profits were limited by the target feature, the investor was compensated for the limits on the upside by not being required to pay an upfront option premium and by a strike price that allowed the investor to buy or sell the currency pair at a better than market strike price. The agreement to buy and sell the currency was structured through the purchase and sale of embedded options by the bank and the investor to one another. Both TPFs and Pivot TPFs can be described as transactions that provide the holder with a higher probability of a relatively smaller gain and a lower probability of a relatively larger loss. The experts agreed that the maximum loss was readily capable of calculation by multiplying the daily notional by the number of fixings. In practice, the loss would not be expected to be anything like that amount but would all depend upon the market movements.

481. If the example is taken of a TPF with a daily notional of 100 on a USD/JPY trade, where the holder makes a profit if the FX rate settles at above 100 and makes a loss if it settles below, with a target profit of 5, the pay-off to the investor on any day represents the result of the investor purchasing a call option (which benefits if the FX rate rises above the strike price of 100) and the pay-off to the bank on each day can be regarded as the investor selling the bank a put option at the same strike price of 100 so that the position loses money if the FX rate falls below that level. Thus the purchase of a call option and the sale of a put option at the same strike price is embedded within a TPF structure on each Observation Date or fixing date. As Mr Malik explained, the FX market has evolved so that the transaction documentation (the term sheets and trade confirmations) simply document the pay-off rather than documenting a series of combinations of options for every day of the duration of the transaction. Each option is taken to be exercised if it is in the money on any Observation Date so that profits and losses accrue over the period of the transaction, subject to hitting the

target profit, in which case the transaction knocks out. That represents a condition which applies to the body of options taken as a whole and consequently to each and every option, when considered in conjunction with the others.

482. In a Pivot TPF, the payment by each party is by reference to three strike prices, as previously set out. The pay-off in a Pivot TPF is also structured by the use of embedded options. The investor and the bank purchase and sell to one another a series of embedded daily call and put options at different strike prices. The target feature once again operates as a condition of each and every option transaction, taken in conjunction with the other. If, for example, the FX rate is 101 and the low strike price is 98, the pivot 100 and the high strike price 102, the pay-off represents the following four options for each fixing. The investor sells an out of the money put option at the low strike price of 98. The investor purchases one in the money call option at the low strike price of 98 (the two in combination operate as a synthetic forward with a strike price of 98). Additionally, the investor sells two call options at the pivot of 100. Holders are again taken to have exercised their rights under these embedded options if the options are in the money. The effect of this combination of options is that the investor makes a profit if the FX price is between 98 and 102 (above the low strike price and below the high strike price) and makes no money at all if the FX rate equates with the high or low strike prices. As soon as the rate moves outside the high or low strike, the investor starts to accumulate losses. Thus the purchaser of a TPF is expressing a market view about volatility, hoping and expecting that the currency stays within the high and low strike prices. The closer the FX rate to the pivot, the more profit is earned until the target figure is reached. Generally, the longer the transaction goes on, the more chance there is of a change in the rate which would take the FX rate beyond the strike level with accumulation of losses in consequence. Again, as with TPFs, investors are compensated for the loss of potential upside by avoiding the need to pay any upfront premiums as well as receiving a better strike price at the outset. In the event that the investor has to pay out on a pivot TPF, the exposure is equivalent to that of the sale of vanilla options.

483. The term sheets and trade confirmations set out the basic details of trade date, notional amount, high strike, low strike and pivot, together with the observation dates and the duration of the transaction by reference to the settlement date. The target cap level and the target knock-out event are specified and an explanation given as to the sums owing by way of settlement depending on where the FX rate settles as against the pivot and strike prices. Each transaction specifically incorporates the provisions of the ISDA Definitions whilst the trade confirmations provide that, in the event of any inconsistency, the terms of the confirmation will prevail. The confirmation supplements, forms part of and is subject to any ISDA Master Agreement between the parties. The standard non-reliance Clause appears in the confirmation whereby the investor represents that it is acting for its own account, has made its own independent decisions as to whether to enter into the transaction or not and exercised its own judgment as to the suitability of it, without reliance upon any communication from the other party as investment advice or as a recommendation to enter into the trade. The investor represents that it is capable of assessing the merits of and understanding the terms, conditions and risks of the transaction and accepts those risks.

484. Although therefore SHI, in the person of Professor Wystup, points to the absence of any express language referring to the series of options exercisable on each observation

date, the incorporation of the ISDA Definitions and the reference to strike prices reveals the basis upon which these deals were originally constructed and the existence of the "embedded options".

485. Mr Malik's evidence was that, in his experience, which was substantial in the area, market participants would classify TPFs and Pivot TPFs as *currency options*. He produced trade publications and research documents which spoke about the matter confirming that view. Articles by representatives of BNP Paribas, HSBC, ICICI Bank and Unicredit in such publications as SuperDerivatives and FX Week reveal this market understanding to which Mr Malik testified. He referred to ISDA surveys in 2004 and 2008. He said that quants, pricing people who had worked with him and clients he had spoken to all referred to them as options, particularly those he advised in 2007-2008, often in relation to deals done in 2006 or earlier.

486. The pay-offs were determined by reference to an underlying currency pair or pairs. They were conditional and explicable by reference to a series of options, even though they were more usually labelled by reference to their conditional pay-off features than as options per se. The existence of the negative pay-off was a function of selling options, rather than buying them. Of course even a bought option has a negative pay-off in the sense of premium paid in the ordinary way, but the sale of an option will always give rise to a negative pay-off after the event (if exercised) because the seller is obliged to sell when the market has risen from the agreed price on the exercise of the option by the buyer. Whether a straight line TPF was seen by some as a strip of cash flows or a strip of forwards, that was not the issue because the market participants classified them as *currency options*. Moreover the effect of incorporating the ISDA definitions was to treat these as *currency options* within those definitions, as between SHI, the Counterparty and DBAG.

487. Professor Wystup's position in reality depended not upon market understanding on which he was probably ill-equipped to speak in terms of trading experience but on his analysis of what an option truly was and his construction of the contracts. Neither was a matter for an expert unless the analysis was one which was shared in the market as the basis for classifying trades. Professor Wystup divided products into options, option-like derivatives (which did not have optionality but did have a non-negative pay-off) and non-option like derivatives which had no optionality and could have negative pay-offs. He further classified what he described as vanilla options on the one hand and first generation, second generation and third generation Exotic options and structured products, refusing to accept that *Structured Options* was a recognised term in the market. He accepted that no-one in the market talked of trading first generation, second generation or third generation exotic options but maintained that TPFs and Pivot TPFs were traded as such and not as *currency options*. Exotic options were not *currency options* unless they fulfilled what Professor Wystup saw as the indispensible requirements of an option, namely the granting of a right to be exercised (not an obligation) and providing for a non-negative pay-off.

488. Whilst Professor Wystup said that many people in the market used terms loosely and carelessly as he had done on occasion and that his current analytical view was the correct way to view these products, even he recognised that one touch exotic options were treated in the market as options, without any exercise and where the buyer had no discretion. Furthermore, there is no doubt that the grantor of a call option is obliged to sell if the option is exercised and is at risk of a negative pay-off (a loss) in

doing so. Professor Wystup accepted in cross-examination that as soon as there was a leg of a transaction where the investor was short, there was the possibility of a negative pay out and a combination of a bought call and a sold put option could give rise to that.

489. The other pillar in Professor Wystup's analysis therefore was that single products were to be distinguished from structures and strategies of trading and if an instrument included a series of options, whether linked with other terms and conditions or not, it could not itself be seen as an option but was a "structured product". This was a phrase which Mr Malik saw as describing a combination of a cash product with a derivative, whether in the context of FX, Interest rate or Credit transactions. In my judgment, it is a term which covers a multitude of products and is so imprecise that it is of little value. Professor Wystup said a package of options was not an option and that an instrument was not the equivalent of its component parts, nor of the products to which it could be decomposed, nor of the products that could dynamically replicate its risks. He said it was highly artificial to explain the EDTs and OCTs in terms of options even if they could be broken down and represented in this way. It is hard however to see how an option can cease to be an option when combined with other options in a package and, when authority is given to trade in options in the plural, why there is a problem with structures which put together a series of options. Even on its own terms, Professor Wystup's analysis did not hold together.

490. Professor Wystup said he could not give evidence of a general understanding in the market that *currency options* meant only vanilla options. He did not maintain that *currency options* could not include exotic options but concluded that this was what was meant by the phrase when used in the FXPBA. He said that there was no general market understanding, though there were people in the market who regarded TPFs as options and it was reasonable for them to be booked in an options book by an options trader at an options desk. He refused to accept that *structured options* were seen by the market as synonymous with exotic options despite the market literature to that effect.

491. Professor Wystup's view founders on a number of obvious points:

i) The question is one of market understanding not analysis of the constituent elements in any transaction.

ii) An option transaction can plainly include any number of different terms and conditions above and beyond a straightforward put or call option, without ceasing to be an option.

iii) The FXPBA specifically refers to *Structured Options* as having "special features" other than a "single barrier". Barrier options with more than one barrier are self-evidently possible candidates as *Structured Options*.

iv) A *currency option* does not cease to be such if it appears in the same instrument as another currency option. Even Professor Wystup was prepared to some extent to recognise that combining two *currency options* in one transaction could not negate their character as options.

v) A non-negative pay-off is not a constituent element or essential criterion for an option. The sale of an option when the market has moved inevitably involves a loss, if exercised.

vi) The authority given to Mr Said and SHI was to trade in *currency options* in the plural and *Structured Options* are plainly regarded as a class of such options under the FXPBA for which DBAG's prior consent is required. It cannot therefore be said that Mr Said's authority did not extend to trading *currency options* in combination or as part of a structure with special features, terms and conditions. To the contrary, this is exactly what appears to have been envisaged.

vii) The trade confirmations specifically referred to the ISDA Definitions effectively providing that these transactions be treated as governed by ISDA terms.

viii) If the market regards EDTs and OCTs as *currency options*, *structured options* or exotic options, no questions of decomposability arise. The reason however that they are accepted in the market as being *currency options* is because their pay-off characteristics derive from the combination of options, combined with the target knock out feature and the acceptance that each option is taken to be exercised when it is in the money.

ix) Once this is recognised, it is clear that there is optionality within the transactions albeit that the exercise of in the money options is taken as read in each situation, whether on the part of the investor or the bank.

x) There is no difficulty about the FX rate being "the underlying" for any of the EDTs or OCTs (save for the correlation swaps). The transactions are entirely sensitive to the movement of the FX rate in question.

xi) As Professor Wystup recognises, all zero cost options have negative MTM at inception since otherwise a bank would make a loss at once. The absence of premium accounts for this and it cannot be a requirement of an option that premium be paid.

xii) The EDTs and OCTs were traded with various counterparty banks as *currency options* and the evidence of Mr Said, in his depositions, and indeed in the email exchanges with Mr Vik and others, shows that this is how he considered them too.

492. Professor Wystup's classification fits neither the contract nor market understanding. Professor Wystup's position is untenable in the light of the contractual documents which do not limit *currency options* to vanilla options only nor to some class of standardised market product of first generation exotics. His views are inconsistent with the literature about the market, including the Foreign Exchange Committee of Federal Reserve Bank of New York's Annual Survey of 2008, the ISDA 2004 Operations Survey, the ISDA 2008 Survey and the Bank for International Settlements Triennial Survey, quite apart from Mr Said's evidence and Professor Wystup's own views expressed to Freshfields. *Currency options* are not limited in the way in which he suggested and in the end he was prepared to accept that it was a term which could

have a narrow meaning of vanilla puts and calls or it could have a broader meaning where exotic options were included. He said it was all a question of context.

493. The context here is the FXPBA and the Said Letter of Authority and of a general market understanding of which Mr Malik gave evidence and whose evidence I unhesitatingly accept. TPFs were traded from 2004 onwards and much more commonly in the years 2007/2008. They were regarded by those trading in the market as *currency options* and as *Currency Options* within the meaning of the ISDA Definitions. In particular they were seen as *structured options* or exotic options.

494. While I regard the TPFs and Pivot TPFs as little more than bets on currency (hence Mr Said's description of them as "range bets") the market developed these products out of options and considers them to be *currency options* which can be used as speculation – as a bet on the market movements of currencies.

495. Not only was Professor Wystup's initial view, as expressed to Freshfields, consistent with this, but so also was an article which he had jointly authored in which he described target redemption products under the heading of "Options". Further a course offered by his consulting company again referred to target redemption forwards in the context of foreign exchange options.

496. The market view is what counts and I am satisfied that Mr Malik's evidence, which coincided with that of Professor Wystup when first approached by Freshfields, reflected the market view. Professor Wystup's reasoning did not hold together and his approach in evidence was not to give evidence of market understanding, but of his analysis and construction.

497. Whilst the focus of the evidence was on the TFPs and Pivot TFPs, the effect of the evidence covered the range of EDTs and OCTs. I accept therefore Mr Malik's market view in respect of all the EDTs and OCTs and not just the TPFs and pivot TPFs, so that all (save the Correlation Swaps) fall to be treated as *currency options* which Mr Said was entitled to trade under the FXPBA and Said Letter of Authority.

11(b) Clause 2(iii) of the FXPBA

498. I have decided that there were no oral agreements of the kind alleged by SHI so that Mr Said did not act in breach of the authority given to him in other respects, whether by reference to any supposed financial trading limits (the Capital Limitation Agreement or the PAL), "trading on credit" or limits on the type of business to be concluded. There remains a further point taken by SHI in its closing submissions where it is said that thirty-one of the EDTs were unauthorised because there was no compliance with the terms of Clause 2(iii) of the FXPBA which required any Structured Option proposed by SHI as a Counterparty Transaction to be approved by DBAG at the time of its execution by SHI, failing which DBAG would not be responsible for the Counterparty Transaction in question.

499. This point goes nowhere. Mr Said's evidence was to the effect that all the "offline trades" were the subject of prior approval by Mr Quezada or Mr Walsh but even if that had not been the case, DBAG accepted the trades by processing them and settling them, thus accepting liability on them to the Counterparties. The Counterparties have been paid in respect of the transactions in question. DBAG was entitled to waive the

need for prior approval, should it so wish and, if it did so, SHI would be bound by the off setting transaction which it had agreed to conclude with DBAG in respect of any such Structured Option accepted by DBAG.

12. The VaR Parameters

500. Although a great deal of time and energy was spent on the subject of VaR during the course of the proceedings, I need not dwell on it to the same extent as many of the issues which arise because, at the end of the day, there was a considerable measure of agreement between the parties and their respective experts on the subject. Those experts were impressive and had undoubted expertise in the subject matter.

501. I have set out in other sections of this judgment the early history by which Mr Said came to agree VaR terms with DBAG in November 2006 and how that was enshrined in the FX CSA as 2 x 5 day VaR. I have also set out elsewhere:

i) the difficulties which the ARCS VaR system had in coping with complex trades which included the EDTs and many of the OCTs and

ii) the problems which arose in respect of the MTM on vanilla trades as reported in GEM as a result of feed issues from ARCS VaR.

502. There was however a further issue which ran parallel to those issues from March 2008 onwards in relation to the perceived inadequacy of the agreed VaR parameters in capturing the risk in SHI's portfolio. Mr Gunewardena, Ms Serafini, Ms Liau and Ms Miranda all joined DBAG as a team from GS in 2006, and Mr Spokoyny joined them in 2007 as a risk officer. He was set to work to build a new margining and risk system for the FXPB platform in circumstances where DBAG calculated Initial Margin for its FXPB clients by two different methodologies, namely NOP (Net Open Position) and VaR. The majority were on NOP margining. Variation margin reflected the MTM of the transactions or assets in question under either methodology. Mr Spokoyny and Ms Serafini introduced a new stress-based margining methodology which was implemented for a limited number of clients in 2008.

503. Margin requirements for NOP clients were calculated by DBAG's GEM system itself, both for IM and variation margin (MTM). For VaR clients, the potential future exposure and MTM of positions and the aggregate MTM of the portfolio were separately calculated by the ARCS VaR system and then fed into GEM. GEM would then subtract the potential future exposure from the aggregate current exposure of the portfolio to derive the 5 or 10 day VaR. Any VaR multiplier that had been agreed with a particular client would then be applied by GEM to give an overall initial margin requirement for the client. Additionally, however, a liquidity add-on could be calculated using a template spreadsheet that sat above, and took information from GEM. Such calculations were then added to the margin shown on the GEM system and details would be sent to CMV who would input this into their system to generate the margin requirement. Trade details, MTMs and portfolio level VaR requirements and the overall margin requirement (including both initial margin and variation margin) were reported to clients using a web-based reporting interface linked to GEM. Liquidity add-on did not appear there and, if agreed, would appear in margin statements from CMV which were usually sent only if there was a margin call or if requested by the client.

504. On joining DBAG, Mr Spokoyny began a general exercise to review the margin terms which DBAG had in place with all its FXPB clients and the types of assets that were posted by those clients as collateral, whilst also considering the counterparty risk posed to DBAG by those clients. As part of the review he designed a series of stress tests which worked by applying hypothetical "shocks" in exchange rates, volatility and interest rates to a client's portfolio and to specific currency pairs: e.g. dramatic changes caused by large moves in the oil price and similar dramatic economic events. The object was to ascertain the magnitude of losses that any client might suffer if any of these hypothetical shock events occurred. The hypothetical losses thus calculated were then compared to the level of collateral required from each client under existing margin terms and if there was a significant shortfall, this was referred to within DBAG as "Gap Risk". If a Gap Risk was calculated, it was intended that the FXPB team should seek to negotiate amendments in margin terms, or increase the level of fees, or ask the client to reduce risk in the portfolio or, in the worst case scenario where DBAG would not want to continue acting as prime broker, terminate the FXPB relationship. The results of the stress tests that were carried out were not typically shared with clients.

505. Neither Ms Serafini nor Mr Spokoyny considered that the VaR simulation used by ARCS VaR protected DBAG sufficiently against counterparty risk for VaR margined clients and steps were generally being taken to negotiate a change from VaR-based margining to NOP-based margining with clients who traded options. In 2007 and 2008, Mr Spokoyny believed that a more conservative confidence level should be used and that the Monte Carlo simulation used by ARCS VaR should use historical data for longer time periods and should incorporate "jumps" or pre-determined movements in the exchange rate for developed market currencies as well as emerging market currencies (which it already did). He also held the view that ARCS VaR did not accurately account for the increased liquidation costs that arose if a client held particularly large positions.

506. In August 2007, a potential Gap Risk was identified in relation to SHI but prioritisation of other accounts meant that Mr Spokoyny did not complete his stress tests and report on SHI until 11th March 2008, when he identified significant Gap Risk. There was thereafter discussion as to whether the counterparty risk on the client should be borne by PWM, by FXPB or GPF where most of SHI's assets with DBAG and DBS were by then located. Mr Spokoyny continued to carry out stress tests on the portfolio as it appeared in GEM which included some resurrecting fader options. His evidence was that they appeared in groups of four entries which appeared to him to be offsetting put and call options. He did not consider that they added materially to the risk in the portfolio. Mr Spokoyny's evidence was that he did not know that each set of four entries represented an inadequate proxy for an EDT with a large notional value when all the daily fixings were taken into account. The stress testing which he carried out therefore failed to take account of the true nature of these transactions and the full risk presented by them, even where they did appear in GEM. Where they remained unbooked, there was nothing Mr Spokoyny would have been able to see and therefore no reason for him to know of their unbooked existence. It was not until October 2008 that he came to understand the true position.

507. Between late March and early May of 2008 there was a series of internal discussions about this Gap Risk, involving Mr Spokoyny, Ms Liau, Mr Giery and Mr Quezada of

FXPB, Mr Brügelmann of PWM/DBS, and Mr Lay and Mr Halfmann of PWM CRM. By the time of the first of the telephone calls on this subject on 28th March 2008, Mr Spokoyny had identified a Gap Risk which could be as much as US$100 million, without reference to the terms of the EDTs (of which four had been concluded by this date). In the call, Mr Spokoyny suggested NOP terms by reference to the different currency tiers or an amendment by increasing the VaR multiplier and changing 5 day terms to 10 day terms. There was a suggestion that Mr Said created strategies of a kind that did not lend itself well to the VaR calculation. Matters were left on the basis that FXPB should come up with figures that should be discussed.

508. An analysis carried out by Mr Spokoyny subsequently showed a Gap Risk of US$95.5 million on his stress testing. On NOP margining, his calculation showed that Gap Risk would not exist.

509. On the 9th and 10th April there were exchanges of emails in relation to this Gap Risk. Mr Lay's immediate reaction was to say that the VaR FX limit for SHI was suspended and that no further exposure could be entered into by the client which provoked the immediate response from Ms Liau that SHI was not in breach of its existing margin terms. Mr Brügelmann, with the aim of overcoming the issue, asked for further details of Mr Spokoyny's analysis and sent an email to Mr Orme-Smith of GPF requesting that he block US US$100 million in SHI's GPF account to secure any potential shortfall until new margin terms had been agreed. Mr Orme-Smith responded "Noted – thanks". CRM personnel regarded this as an effective blocking and Mr Brügelmann plainly regarded this as a practical solution, even if the ring fencing was not legally enforceable. SHI was never told about this and waxed indignant about it at the trial. Nothing ever came of this ring fencing and GPF Risk objected when the matter came to its attention and Mr Orme-Smith, on 21st July 2008, stated that his email was never intended to be an agreement to such ring fencing and that he had never been in a position to achieve that in any event. In the meantime on 15th April 2008 Mr Spokoyny sent Ms Stingelin details of his stress methodology with a Trade Details Report downloaded for GEM, which included eight entries for "Resurrecting Fader Options" (four each for EDTs 1 and 2). Each entry included N/A in the MTM column which should, in my judgment, have alerted Mr Spokoyny to a potential problem, but, on his evidence, did not. His review of Trade Details in GEM did not lead him to think that there were trades which materially added to the risk of which he was failing to take account. Had he investigated the position then, as he did in October 2008, the problem would have been evident to him.

510. On the 2nd May 2008 there was another conference call with Mr Giery, Mr Quezada, Mr Brügelmann, Mr Lay, Mr Halfmann and Ms Stingelin who was the Head of Private Client FX. The purpose was to discuss a new prime brokerage account that SHI wanted to set up for Mr Vik for FX and/or FI and the margin terms for the existing FXPB account. In the course of this call, Mr Brügelmann explained that there could not be separate FXPB accounts for the same legal entity with different margining methodologies. Whilst Ms Serafini and Mr Spokoyny saw the solution as being the application of the NOP methodology to Mr Said's trading account, Mr Giery and Mr Quezada explained that Mr Said was concluding structured options and pivot faders that they did not think could be margined by NOP but could be captured in ARCS VaR. The suggestion was made of trade level margining by a methodology approved by CRM. Mr Spokoyny expressed his disquiet that the calculations

performed by ARCS VaR were less than transparent because one could not see each and every trade being modelled but only a composite number produced as the margin figure. He explained that the ARCS VaR system could not readily be changed in order to give DBAG what he considered an adequate protection against the counterparty risk and this would affect all other clients and involve significant investment in hardware and time. In that call, Mr Quezada referred to pivot accrual faders which presented difficulties in booking, saying his only recourse was to go to a quant expert in the sales desk who was reluctant to help. He expressed the view that if these types of trade could not be booked in an automated fashion, FXPB would probably not accept them. Mr Giery said that they could not book some of the stuff that Mr Said was doing at the moment and that it would take somebody in the Structured Options Group to do it and they would then have to value it daily using DB Analytics spreadsheets which FXPB did not have.

511. The end result of the telephone call appeared to be a consensus that, if Mr Said wanted to trade in such "funky stuff" he should only do so as direct trades with the DBAG trade desk which could use the DB Analytics tool, and that such trades should not be accepted by FXPB for give up even though this would mean a "tough conversation with Klaus because he saw it as a window of opportunity to make money".

512. It was then suggested and agreed that Mr Brügelmann, in his scheduled meeting with Mr Vik on May 7th, should tell him that there was a need to change Mr Said's margining to NOP, and for NOP to be used for any FX and FI trading by Mr Vik. Mr Brügelmann said he would seek to spin an argument on the basis of concentration of risks, liquidating risks and correlation breakdown. The VaR solution was not however completely out of the question if there was development which enabled sub-accounts to function on the system with different margining methodologies. Mr Quezada wished to go down that route because of the limitation that NOP might impose upon the types of trade which Mr Said could conduct, even though he had recognised earlier in the call that there were still issues about how to book the trades, whether VaR could capture the full risk and that the easy solution was to insist that he conducted the "funky structures" in direct trades with the DBAG trade desk or with CS or MS under separate ISDA agreements with them.

513. Following this call, Mr Walsh and Mr Quezada spoke to Mr Said on 5th May in a telephone call and Mr Brügelmann met with Mr Vik on 7th May. I have set out elsewhere in this judgment details of the telephone conversation of 5th May in which Mr Said persuaded Mr Quezada and Mr Walsh to take in the EDTs on the basis that he did not require the MTM to be reported, that there was nothing for DBAG to do save enter cash settlements at knockout and stated that margining was a matter for DBAG not for him. In the meeting on 7th May, Mr Brügelmann told Mr Vik of the issues in relation to setting up an FXPB and FIPB account for him, and the potential deficiency in the existing margining arrangements for Mr Said. I have made findings about exactly what was discussed on that occasion but the idea of using a separate legal entity for Mr Vik's FX Prime Brokerage potentially overcame the difficulties of sub-accounts with different margining methodologies. Mr Vik refused to discuss the potential shortfall in the margin calculations and insisted that Mr Brügelmann talk to Mr Said about it. The overall effect of these exchanges was that Mr Said's trading would continue on VaR (including EDTs) whilst DBAG, for its own protection,

wanted to amend the VaR parameters to ensure a larger measure of protection and would discuss them with Mr Said.

514. On 14th May Mr Brügelmann sent an email to Mr Quezada, Ms Liau and Mr Spokoyny saying that he had spoken to Mr Said who was expecting Mr Quezada to call to discuss the VaR issues.

515. By 19th August Mr Spokoyny had conducted further stress tests which indicated that the Gap Risk had reduced to about US$40 million but the EDTs had still not been taken into account because of their absence from GEM and Mr Spokoyny's lack of understanding as to what the resurrecting fader entries truly represented. In a call of that date, Mr Spokoyny explained that Mr Said's net open position in his FXPB account had reduced from over US$1 billion earlier in the year to some US$600 million at that point and that the current margin requirement was US$23.5 million when he thought the current risk was actually more like US$50-60 million. On discussing what changes might be required to the VaR parameters, Mr Brügelmann said that he had spoken to Mr Said who had told him that he would not agree a move to NOP margining. Mr Spokoyny said that the 95% confidence element of the VaR calculation could not be changed but the multiplier could be altered and a liquidity add-on employed. He then carried out calculations thereafter and worked out what such an appropriate multiplier might be.

<u>12(a) The Changed Parameters</u>

516. It was on 8th September 2008 that Mr Quezada and Mr Spokoyny met with Mr Said at DBAG's offices in New York. Details of this meeting appear in section 15 of this judgment but in essence Mr Spokoyny explained the need for an increase in the margin terms and how his stress tests worked while Mr Said stated his view that these stress tests gave rise to conservative results. Mr Said was told that there were still problems in booking the trades but that DBAG would get to it shortly.

517. With no agreement reached on 8th September, Mr Quezada and Mr Spokoyny spoke on the telephone to Mr Said on 30th September, suggesting amended VaR terms of 3 x 10 day VaR + liquidity add-on, which, as set out in section 15 of this judgment, Mr Said was not prepared to accept, seeking to minimise the margin to be provided. Mr Said said that DBAG probably had no risk on the account because Mr Vik stood behind it.

518. On 6th October Mr Spokoyny emailed Mr Said to inform him that he had received approval within DBAG to amend the margin terms to 2.5 x 10 VaR + liquidity add-on which would have the effect of increasing Mr Said's current collateral requirement from approximately US$21 million to US$40 million. Mr Spokoyny sent with the email an attachment setting out the liquidity add-on methodology. Within a matter of minutes Mr Said replied, accepting that offer with the words "That seems fair. I can live with that."

519. I have decided elsewhere that Mr Said had authority to vary the margin terms and conclude therefore that the new margin parameters were applicable at the time when the first margin call was made. In any event, SHI accepted Mr Said's agreement as binding on it when paying the margin calls between October 13th and October 22nd, thereby ratifying any excess of authority.

12(b) The Computer Models

520. There is one further range of issues concerning VaR which relates to the different computer models built by the parties' respective experts Mr Millar and Dr Drudge. The complexities of some of the structured options, including all of the EDTs, were such that DBAG's ARCS VaR system could not capture the risk. In order to calculate DBAG's contractual entitlement, each of the parties instructed an expert to construct a model which could calculate margin in accordance with the FX CSA which required VaR to be calculated in accordance with the methodology determined "[by DBAG] in its discretion which it customarily uses with its counterparties". The models built by Dr Drudge and Mr Millar gave rise to comparable but different results.

521. Whilst, in the light of my other findings, it does not matter which of these two models produces more exactly the contractual margin requirement, out of deference to the work done on the subject I set out my conclusions on this matter.

522. Although at one time DBAG put forward methods of calculating Initial Margin, in the course of 2012 it recognised that this was not a VaR methodology at all and, during his cross-examination, Mr Millar accepted that zero VaR could not constitute part of a VaR methodology either.

523. In overview, the purpose of the methodology utilised by DBAG was to estimate, using recent market data, the potential change in the value of a portfolio of financial instruments over a specified time period and within a specified confidence level of 95%. The specified time period was usually two days, five days or ten days. The "Disclosed Methodology" of which this is an overview, was the only VaR methodology used by DBAG in respect of counterparties (i.e. customers of DBAG who traded with DBAG's FX Trade Desk and/or under a FXPB relationship with it) who were margined according to VaR methodology between 2006-2008. The methodology was calibrated to calculate the potential change over a five day period and consisted of the following components:

i) market data extractions/transformation (used to generate the data to be used by the Monte Carlo engine),

ii) the Monte Carlo simulation engine (used to generate one thousand paths for the FX spot rates used by the pricing engine),

iii) the Pricing engine (using the trade data, pricing functions and simulated risk factors),

iv) the P&L vector construction module (which took the difference in MTM between the MTM of the trade value under one of the one thousand Monte Carlo scenarios and the original value of the trade (i.e. the current actual MTM of the trade)),

v) the VaR calculation module.

The component parts of the methodology are illustrated in Annex 4.

524. The market data used by ARCS VaR to value a portfolio of FX trades consisted of FX spot rates, LIBOR interest rate curves and at-the-money FX implied volatility curves. The market data were then used to produce the necessary inputs for the Monte Carlo engine. The last ninety days of London close of business daily spot FX rate changes with EUR as the Reference Currency were used to generate a linear correlation matrix which was then used to control the evolution and joint behaviour of spot rate changes in one thousand scenarios so that FX rates that tended to move in line with each other tended to maintain the same behaviour in the Monte Carlo simulation. The last ninety days of London close of business daily spot FX rate changes were also used to calculate the historical volatility of each currency pair. The standard deviation of the returns was used in the Monte Carlo engine to determine how much an individual FX spot rate can change.

525. The Monte Carlo engine within the VaR process generated one thousand new sets of FX spot rates. Based on the starting FX spot rates, a new set of spot rates was predicted. Each FX rate could move up or down each new day in a random Brownian motion with the size of the random move related to the standard deviation of the FX rate but with the FX rate changes of all the currency pairs constrained by the correlation. Occasionally, a “jump” could occur. This occurred with a degree of probability to which I shall return and did not need to obey the derived correlations. There was an additional rule in the model which did not allow more than one jump to occur for a currency pair.

526. In this way one thousand predictions were made for what the FX spot rates would be in five days time. The conditions used to generate these (the historical standard deviation, correlations and pre-defined jumps) were known on any day but the final predicted rates were slightly different every time they were generated and the system recorded the predicted rates for a number of different periods.

527. The methodology assumed that all other market data (implied volatilities and interest rates) did not change over the simulation period.

528. The change in value of the portfolio of trades was calculated for each of the one thousand five day scenarios (i.e. the difference between the scenario valuation and the original valuation). These were ordered in terms of descending loss (i.e. the biggest potential loss was the first). The 95% five day VaR is the fiftieth largest potential loss of the one thousand losses calculated.

529. Attention should be focused on a number of elements in the disclosed methodologies, namely the Monte Carlo engine, the jumps and the approach to implied volatilities.

530. In their joint memorandum Mr Millar and Dr Drudge set out the areas of agreement and disagreement between them in relation to their respective VaR methodologies. Mr Millar used DBAG’s proprietary Monte Carlo VaR methodology (the Disclosed Methodology or DM) whilst Dr Drudge used an alternative approach, commonly used in the Financial Services industry, which was referred to as the Prism Methodology or PM. Mr Millar and Dr Drudge agreed that the use of either a Monte Carlo simulation as used in the DM or an historical simulation as used in the PM was an acceptable theoretical basis for the calculation of VaR and both were in general use in the Financial Services industry. Assessment of the relative qualities of the DM and the

PM and of their results is necessary in the light of the portfolio of trades and the market conditions.

531. Mr Millar and Dr Drudge agreed that the VaR results calculated by them were consistent with their respective methodologies and where there were differences in the results, they identified the primary factors that they believed caused those differences, as set out below:

> "a. The existence of jumps in the (Monte Carlo based) Disclosed Methodology. Jumps do not form part of the historical simulation used by Dr Drudge to calculate VaR. The jumps have the effect of increasing the VaR results where specific currency pairs are included within the portfolio.
>
> b. Differences in the historical time period used to generate predictions of potential future losses. The Disclosed Methodology uses a shorter period of historical data (90 business days) than the Prism Methodology does (250 business days). Mr Millar and Dr Drudge agree that generally where a shorter period of historical data is used, more recent changes in market data have greater impact on the VaR results.
>
> c. Differences in the way that potential losses over a five day period are computed between the Disclosed Methodology and the Prism Methodology. The Prism Methodology calculates losses over a one day period and then scales these figures to five days whereas the Disclosed Methodology uses an estimate of the variation in the underlying variables over a five day period and uses these to calculate losses over this period. In the case of SHI's FX portfolio the risk profile is such that the effect of using a five day computational method increased the VaR results.
>
> d. Differences in the treatment of potential changes in implied volatility. The Disclosed Methodology does not stress implied volatility, but the Prism Methodology does. Including such a stress within the methodology should generally have the effect of increasing the VaR results under the Prism Methodology."

532. The effect of these different factors was that the VaR results produced on SHI's FX portfolio using the DM produced larger VaR figures on a portfolio level than those produced using the PM.

533. The Joint Memorandum continued:

> "2.9.1 Mr Millar and Dr Drudge agree that implied volatility is a factor affecting valuation of TPFs, particularly at deal inception. In addition, when considering the impact of stressing the implied volatility parameter at an individual trade level, Mr Millar and Dr Drudge agree that there can be a significant impact on the overall VaR calculation for the individual trade,

as explained in further detail in paragraph 2.9.4 below. However Mr Millar and Dr Drudge also agree that the impact of stressing the implied volatility parameter at portfolio level will not always be material, depending on the particular constituent trades contained in the portfolio and market conditions, as set out below.

2.9.2 Mr Millar and Dr Drudge agree that their VaR results indicate that the approach set out in the Disclosed Methodology which does not include the simulation of changes in implied volatility contains other features, as set out above in paragraph 2.8.2, which result in higher VaR calculations than Dr Drudge produces using the Prism Methodology when applied to SHI's FX portfolio. The Prism Methodology does include the simulation of changes in implied volatility.

2.9.3 On this basis Mr Millar and Dr Drudge agree that when applied to SHI's FX portfolio (for example as produced for each of the Alternative Scenarios by Mr Millar), the Disclosed Methodology does not produce unreasonably low VaR results as a result of not simulating changes in implied volatility. Mr Millar and Dr Drudge's area of disagreement regarding commercially reasonable VaR estimates is detailed in section 3.

2.9.4 When considering the theoretical impact of stressing the implied volatility parameter at portfolio level, Mr Millar and Dr Drudge agree that the following factors are likely to be relevant:

a. The relative sensitivities of the individual trades to other risk factors being stressed by the model, in this case FX spot rates, driven by the current economics of the trade in the portfolio. For example a TPF that is out of the money would be much less sensitive to movements in implied volatility in comparison to a TPF that is not out of the money, for example a TPF that had been recently traded.

b. The relative variability of each risk factor. For example if as a consequence of a particularly quiet historical observation period implied volatility was not expected to move very much then it would not be expected that VaR would be highly affected, and conversely if implied volatility had experienced large moves over the historical observation period, this would have a greater impact on the VaR.

c. The degree of diversification across all of the trades in the portfolio and how this generally decreases the marginal impact that risk factors have at trade-level. For example whereas the valuation and risk of a certain trade might be strongly affected by a certain risk factor (i.e, an FX spot rate or implied volatility), if the proportion of trades in the

portfolio affected by that risk factor is small, then at portfolio level the risk factor may not be significant at all.

d. The inter-relationship between these aspects of the VaR methodology. For example in the case of EDTs the impact of including jumps in an FX spot rate may mean that, as the sensitivity to implied volatility decreases the more the trade is out of the money, and as VaR scenarios are likely to include jumps, the number of VaR scenarios where implied volatility would have a significant impact may be minimal for currency pairs where the Disclosed Methodology prescribes jumps.

2.9.5 As a result of this, the potential impact of shifting the implied volatility parameter on VaR results over time at the level of any particular portfolio will depend on the trades which constitute that portfolio over time. See the comments made by Dr Drudge below in relation to his conclusions regarding commercial reasonableness following examination of the VaR results."

534. The areas of disagreement therefore were comparatively few. Dr Drudge agreed that the numbers produced by the DM for SHI's FX portfolio as it was constituted over time were not unreasonable inasmuch as there was little difference in the VaR amounts computed using the DM and the PM. However in Dr Drudge's view the DM would not be a commercially reasonable choice for all portfolios composed of trades of the types represented in SHI's FX portfolio because it could have led to either systematic underestimates or over-estimates of VaR for instruments of the types listed in the portfolio. Mr Millar was unaware of any agreed yardstick to measure commercial reasonableness and pointed to the degree of latitude which existed in the margin calculations made by different banks.

535. Mr Millar considered that, for DBAG to move from the DM to the PM would represent a considerable challenge in terms of time and expense in creating a new model. Operational considerations would come into play in such circumstances. Dr Drudge in cross-examination accepted that it would be a significant decision for the bank to change to the PM from its existing system. Practicalities would arise with the impact on all portfolios managed by DBAG to be taken into account.

536. Backtesting is the principal performance indicator for a VaR methodology but the method must be theoretically sound and qualify as a VaR methodology. In Dr Drudge's first report in reply he said that "the principal concern when assessing the reasonableness or otherwise of a particular approach to calculating VaR on a derivative portfolio is how it performs in back testing, in other words whether breaches of the VaR amount occur with approximately the correct frequency over the relevant VaR time horizon." On backtesting for the whole portfolio, the "actual" outcomes exceeded the DM VaR figures 7.5% of the time as opposed to 10.42% of the time on the PM. Looking at the EDT portfolio alone, the difference between "actual" and the DM was 6% whereas the difference between "actual" and the PM was 15%. On a backtesting basis therefore the DM produced more accurate results.

The reason for this was that, in the events that happened, the VaR was substantially more determined by changes in spot rate than by implied volatility.

537. Dr Drudge agreed that, in the market conditions that were actually observed during the period, there was no systematic understatement of VaR for the TPFs on a portfolio basis by the DM.

538. Essentially Dr Drudge's criticisms related to the jumps and the approach to implied volatility. DBAG's ARCS system included jumps for emerging market currencies – in fact for everything except Tier 1 currencies, those which were considered the most stable. In fact the only currency pair with jumps that applied to the EDTs were the BRL trades, though jumps appeared on other traded currencies as well.

539. The point put to Mr Millar in cross-examination was that the jump up and jump down rate used in the DM was 7.24%. The mean size of the jump was 15% and the standard deviation was 7.5% of that. If the figures were taken as meaning literally 7.24 jumps per annum up and down, the probability of a jump in any five day period was 13.9% in either direction. With a generation of one thousand different paths in the DM, nearly 28% of those would experience a jump up or down which meant that jumps would occur more often than 5% of the time in any five day period. That, it was said, was not consistent with a 95% confidence level VaR. Mr Millar rejected that criticism.

540. The VaR number is the estimated loss in value of a portfolio that is unlikely to be exceeded over a specified time period, given a specified confidence level, here 95%. It is an estimate because it inherently requires assumptions. It does not guarantee a maximum loss figure and there is about a 5% chance that the actual loss will be greater than the VaR number produced over a five day period. It is not an attempt to capture all possible losses and the assumption is that in about 5% of cases it will not. This calculation of VaR at this confidence level is by definition the 95th percentile worst loss – the fiftieth worse loss in a thousand scenarios. The purpose of the jumps was however to make allowance for the risk associated with currencies exposed to unlikely but relatively severe events not reflected in the ninety or two hundred and fifty days historical data used in most VaR calculations. In the DM, as utilised by DBAG in its systems and by Mr Millar, a flat rate judgemental assumption was made for all currencies in particular tiers. It was an assumption which was made that fell into the 95% calculation but was not factoring in an unlikely risk that would necessarily occur in less than 5% of cases as such.

541. Mr Millar pointed out that a jump of the size in question actually occurred in October 2008 and was similar to the jumps in 1999 and 2002 with BRL. It could not therefore be said it was inappropriate and backtesting of the model showed that the assumption had proved correct. It was a subjective judgment about assumptions to be put into the calculation to get 95% VaR over five days. The assumptions that were put into the model were different to the actual assessment of the confidence level at 95%. If the judgment had been based on short term historical movement only, jumps would not be present but it was inherently reasonable to take into account events beyond the ninety day or two hundred and fifty day period and to allow for them in some way, as the jumps did. Backtesting showed the assumptions to be well founded for the SHI portfolio in the present case.

542. Banks used tools of this kind to build in assumptions about event risks and liquidity risks in order to factor them into VaR models, although they might not call them jumps or make the same assumptions. It was not however right to say that this was an external element that should be outside the VaR calculation in the same way as a liquidity add-on or a fat tail add-on which were specifically designed to take account of matters that the VaR calculation did not. Whilst what was being built into the 95% VaR figure was an event which might take place less frequently than in 5% of cases, that was not uncommonly done. There was a great deal of latitude in the definition of VaR when computing a 95% VaR figure and very often the jumps or tools used were achieved by reverse engineering. In fact, the BRL EDTs suffered greater losses in their lifetime than the VaR calculations for them under the DM. The DM therefore did not in fact take account of the worst possible loss scenario. The assumption was built in in order to get to the 95% confidence level and was not designed just for extreme events but also for lesser events covering factors like difficulties in closing out positions or liquidating portfolios. Mr Millar did not think it fair to say that the reasonableness of the parameters should be assessed solely by reference to the frequency of extreme events.

543. The DM took no account of the sensitivity of the portfolio to movements in implied volatility per se, whereas the PM did. There was compensation for the absence of the volatility parameter by the use of the jumps which made assumptions about changes in spot rate, though these were not directly related to volatility as such. If however implied volatility shift were to be inserted on top of that, there would be an element of double counting. The effect of the differences between the DM and the PM and their approach to implied volatility and the jumps depended upon the constitution of the portfolio in question and, in the case of SHI's portfolio, when taken as a whole, it was more sensitive to movements in spot rates than to movements in implied volatility. Where jumps had the effect of offsetting the absence of implied volatility shifts, that might or might not be random but the effects on this portfolio had an offsetting effect in practice. Mr Millar made the point that he did not consider the sensitivity of this portfolio to vega to be very high and he could not build in implied volatility into the DM without making assumptions that, to his knowledge, did not replicate anything that DBAG would have done.

544. He accepted that all models were subject to a degree of imperfection in one respect or another, including as they did various assumptions and attempts to produce VaR calculations of risk to the bank. He did not consider that the DM was rendered unreasonable by exclusion of the implied volatility parameter that appeared in the PM. There was compensation by the provision of jumps, by the longer period during which the DM considered the change in FX rate (five days as opposed to one day scaled up to five) and the shorter time period of ninety days, as opposed to two hundred and fifty days which made the DM more reactive to short term changes in spot rates. When performance of the model as a whole was taken against "actual", the DM achieved results which were closer to reality than the PM. The main differences between the PM and the DM appeared in late July to late September where the jumps made most of the difference and where the DM was closer to reality than the PM.

545. Dr Drudge accepted that the numbers produced by the DM were not unreasonable but targeted the jumps as an area for criticism. He accepted that the DM with jumps produced higher figures than the PM on 75 observations at trade level and that,

(without jumps) the DM still gave higher figures than the PM at portfolio level. Dr Drudge accepted that the PM, without jumps, did not allow for events which might affect the spot rate but which had not been seen within its relevant historical time series, such as particular geo-political risk events, sovereign risk events and the like which did not occur with great frequency but could nonetheless take place. He accepted that jumps did seek to take these events into account and accepted that the range of movements in the spot rate under the DM, with the jumps for the USD/BRL, was in line with the range of movements in the spot rate that was observed in the market in September and October 2008. In his view however, jumps or similar tools, whether the result of stress tests or otherwise, were more commonly added on top of VaR rather than blended into the VaR methodology. His essential criticism was therefore that the jumps in the DM were to be found in the VaR calculation as opposed to being outside it as an add-on. He would not criticise the view that risk in emerging market currencies was not adequately reflected by a particular period of historical data and banks were entitled to make different assumptions of risk in producing their numbers. For him, the question for BRL was whether it was reasonable to put in a once in ten year event or a once in five year event, as he saw it, into a five day 95% VaR.

546. The following exchange took place in cross-examination:

> "Q. The terminological or definitional difference, can I suggest, between you is that you are saying it may be the ninety-fifth worst output of this model or this disclosed methodology, but because it reflects within the assumptions used in the disclosed methodology more extreme assumptions for size and frequency of particular emerging market currency spot rates changing, it is not the ninety-fifth worst outcome during a normal market period?
>
> A. Yes, I think that … I think that is about right. Ultimately you can put anything into the 95th percentile if you choose to, right."

547. Ultimately, in cross-examination, Dr Drudge agreed that, for the portfolio as it was constituted, given the backtesting numbers that Mr Millar had produced, the bank was acting commercially reasonably in not changing its VaR methodology simply because it might be possible to come up with one that was perhaps even better in its backtesting performance.

548. My conclusions on the basis of this evidence are as follows, in the light of the contractual provisions requiring calculations, valuations and determinations to be made "in good faith and in a commercially reasonable manner" and for VaR to be determined by DBAG "in accordance with its methodology determined in its discretion which it customarily uses with its counterparties".

i) DBAG's ARCS system had jumps in it and that was not commercially unreasonable and represented a genuine attempt by DBAG to take account of events which could properly be taken into account in assessing a five or ten day VaR at 95% confidence level. Mr Millar was therefore right to include them in his DM model.

ii) Although Dr Drudge considered that jumps were inappropriate because they catered for occasions falling within the 5% of occasions outside the 95% VaR, that is a restrictive approach with regard to the calculation of the 95% confidence level. There is much latitude given in the assumptions to be fed into a 95% VaR calculation and it is not uncommon to see such approximations made as a matter of reverse engineering in order to take into account events which fall outside the period of historical data which feed into the engine, but are recognised as being events which can and do occur (in the case of the BRL in 1998, 2002 and 2008). There is nothing objectionable about building in such events into the 95th percentile as opposed to treating them as an additional add-on outside the VaR calculation.

iii) Jumps cater not only for extreme events but also for other factors such as the difficulty in closing out positions or liquidating portfolios where there are levels of less extreme stress. Jumps attempt to capture that as well as the more extreme situation.

iv) The DM, which does not include the simulation of changes in implied volatility, has other features which take this into account in one way or another, namely the jumps, the use of a ninety day historical data period and the computing of potential loss over a five day time period as opposed to scaling up the outputs of a one day period. The jumps, in particular, compensate for the absence of implied volatility in relation to currencies other than Tier 1 currencies.

v) Backtesting shows that, for the SHI portfolio, the DM produced results closer to the actual than the PM, in particular in September and October 2008. There was no systematic under-estimate or over-estimate of VaR.

vi) In consequence, I conclude that the calculations produced by Mr Millar's DM model represent VaR, calculated in accordance with the methodology which DBAG customarily used with its counterparties and that the results were commercially reasonable and therefore represent DBAG's contractual entitlement to margin in the relevant periods (subject only to any minor alterations necessary to take account of the Dual Currency Range Trade).

<u>13. The problems created by the OCTs and the EDTs for DBAG's systems</u>

549. SHI has devoted a great deal of time, energy and print to its submission on the vagaries of DBAG's systems and in particular to the inconsistency between such limited print outs as exist in respect of the period 2007-2008 and what appeared on the system when access to DBAG's GEM Web Reporting was restored on May 10th 2012. There are undoubtedly unexplained anomalies, despite the best efforts of Deloitte, DBAG's forensic accountants, to resolve the questions.

550. It is also the case, as appeared clearly from the evidence, that there were problems with DBAG's systems at the time. The exact nature of these difficulties does not, in my judgment, ultimately matter, because what Mr Said came to appreciate in 2007 and 2008 was that *Structured Options*, within the meaning of the FXPBA, created real problems for DBAG's systems. As appears hereafter, he understood that various OCTs and all EDTs either did not appear at all in GEM Web Reporting or appeared

sporadically, popping up now and again and that the MTMs, where they did appear, produced spurious numbers so that portfolio VaR margining, based upon such MTMs, was chaotic.

551. Since he made the point that he did not rely upon GEM as a risk management tool, was not interested in MTM valuations of his *Structured Options* and regarded margin requirements as simply a matter for DBAG, none of this concerned him save in so far as the appearance of MTM figures, when they did appear, might distort the overall figure for his trades or might produce a portfolio margin figure greater than DBAG's contractual entitlement. In consequence he wanted the EDTs removed, when they appeared, or the MTM zeroed out. As he knew, the inevitable result of the non-appearance of the EDTs in the GEM web reports to which he had access and on which he was told that margining was based meant that he was getting "freebies" in respect of that element of the margin calculation which should have reflected the EDTs.

552. Nonetheless, in order to gain some understanding of the events as they unfolded, it may be necessary to set out something of DBAG's systems. I do so by reference to SHI's closing submissions in the following paragraphs.

> "**Booking**
>
> 297. Although some simpler trades could be processed either automatically or semi-automatically after being entered by the client in TRM, complex trades (such as the EDTs and OCTs at issue in this litigation) had to be booked manually in RMS. Of course, for that approach to do any good, such bookings had then to flow through into the relevant systems to ensure that they were valued, margined and reported. In theory, the initial manual entry of trades proceeded as follows:
>
> (1) For "indirect" trades, i.e. those traded by Mr Said with third-party banks, FX PB (usually Mr Walsh) would book both legs onto the system. Where Mr Walsh was unfamiliar with a trade type, his general practice was to try to book it in the first instance and then ask for help if he had problems (but to ask first if he really had no idea). He would often book a trade as "pending" and then ask someone to check it. Trades saved as pending would be visible to other users but not flow through [DBAG's] systems, and so not appear in GEM.
>
> (2) For "direct" trades, i.e. those entered into with [DBAG's] trading desk:
>
> (a) Simple trades were booked into RMS by the salesman (such as Mr Geisker). Complex trades were booked into RMS by the trader (such as Mr Chin), who then sent the salesman an email containing its basic details, from which Mr Geisker would then create a Generic Sales Ticket.

(b) In the usual scheme of things, trades booked by the desk to be given up to SHI's FX PB account would be booked as a pair of offsetting trades between the trading desk and FX PB, although sometimes when FX PB could not book a trade it would ask the desk to book a trade directly to the client account.

Confirmation

298. Confirmations of options and complex trades (for both the client and the counterparty) were generated by the FX Options Operations team. Evidence on that process was given in particular by Mr Manrique. As he explained, once a trade had been booked in RMS it moved through a series of queues, through which many simple trades moved automatically, but complex trades such as OCTs and EDTs had to be manually processed. Until a trade passed the relevant check at each stage, it did not move on to the next queue. The procedure was designed to check that each trade was properly booked in [DBAG's] systems, confirmed and processed.

(1) First, trades entered the "New Queue", where they remained until their RMS bookings had been verified by Mr Manrique's team.

(2) After being so verified, trades moved into the "Production Queue", where they remained until confirmations had been produced for them. Generally speaking, the more complex the option, the more manual was the production of the relevant confirmation.

(3) After their confirmations had been generated, trades entered the "Dispatch Queue". All confirmations other than those automatically generated for some vanilla put and call options were checked by a second member of the team (i.e., other than the person who had produced the confirmation).

(4) After confirmations had been sent, trades entered the "Return Queue" until they had been confirmed by the counterparty/client.

299. These queues were monitored regularly by Mr Manrique's team, and in particular his manager, Ms Oglivie, in order to identify and escalate trades – generally only exotics – that had become stuck, and were thus not being properly handled. Trades that had not been booked into RMS at all, of course, had no way of making it onto Mr Manrique's radar.

Knock-out/settlement

300. If a trade knocked out, it was the job of the person who had booked the trade (whether within the trading desk or FX PB) to change its status on RMS. That led to it being placed in the "Knock-Out Queue." A similar process occurred when a trade settled, although Mr Manrique was uncertain how far the triggering of settlement and calculation of the amount took place manually. In each case it was then the job of FX Operations to ensure that both parties agreed on the outcome.

Valuation and margining

301. VaR, on an FX PB client's portfolio, was calculated (or at least was meant to be calculated) in a system known as ARCS, which took a feed of open positions from RMS and in turn fed the VaR calculated on that portfolio to GEM, which reported the figure it received and included it in its margin calculations.

302. The system that calculated MTM valuations of a client's individual trades depended on the client's margin basis:

(1) NOP-based clients' positions were valued directly in GEM, which could value and margin only a very limited set of trades: spots, forwards, non-deliverable forwards, swaps, Euro options and single-barrier Euro options. Of those, only the latter (termed Knockout Currency Options in the experts' lists) fall within the sets of trade types referred to in this litigation as OCTs (and then at the simplest end).

(2) For clients margined, like SHI, according to VaR, MTM valuations of individual trades were provided (or at least were meant to be provided) by ARCS. ARCS could value a wider range of trade types than GEM, but still only a limited set. That fact was known within FX PB, although knowledge of precisely which trades ARCS could handle was rather more patchy, as the events described below demonstrate.

303. ARCS's trade-type limitations applied to its calculation of VaR as well as to that of MTM on individual trades. [DBAG] admits that it failed to report accurate MTM valuations of, and ARCS was unable accurately to margin, the trades known in this litigation as EDTs and OCTs."

553. Mr Said was given access to the GEM Web Reporting System which was accessible through a web browser, displaying a number of reports generated by DBAG's GEM system which was much more extensive and contained various internal administrative facilities and functionalities, to which various DBAG personnel had access but Mr Said did not. SHI's access to GEM Web Reporting was withdrawn on 6th November 2008 but was restored in May 2012 for the purposes of this litigation. In its closing submissions SHI stated that, at least in terms of trade population, the material which emanated from DBAG's systems from May 2012 onwards (the 2012 Reports) was not

reliable evidence of the information that was in fact available to Mr Said through GEM web reporting during the period of his trading.

554. In May 2008 Mr Said listed the reports that he considered of main importance to him, when asked which reports he currently used on the GEM Web Reporting system. Included amongst those were the Open P&L and the Collateral Summary Screens. There was another screen which showed open trades on a per trade basis, namely the Trade Detail (Outstanding Trades) Report, which appears to have taken a slightly different format from the Open P&L Report, at least according to the Presentation sent to Mr Said on 4th December 2006. However each included a cash section dealing with swaps and forwards and an options section with columns setting out the currency pairs involved, the trade date and the current MTM value (the 2012 Reports are much the same as one another rather than taking different formats from each other). When Mr Said complained about the problems he experienced with MTM in 2007-2008, he referred to the Open P&L report, not the Trade Details (Outstanding Trades) report. Alongside the Collateral Summary report there was also a Margin Status report but it was the Collateral Summary report which Mr Said used and which Mr Giery said was the primary tool used by DBAG to monitor Mr Said's collateral position. The 2012 Reports do not include historical sets of either the Collateral Summary or the Margin Status reports because they cannot be generated retrospectively. There are however reports which set out the history of certain figures which appear in those reports.

555. The aggregate of MTM open positions was referred to in the Collateral Summary report as the Available CMV Amount, which was calculated in ARCS VaR and fed from there to GEM rather than by GEM itself calculating the sum of the individual MTM figures it had received from ARCS VaR. During the period in which Mr Said traded OCTs and EDTs, there were significant differences between the Available CMV Amount as set out in the Collateral Summary report and the sum of MTM values on individual trades which were simultaneously reported by GEM.

556. SHI's closing submissions in respect of reporting of trades include the following:

> "343. Setting aside the valuation issues experienced by Mr Said throughout the duration of the FX PB relationship, described in more detail below, Web Reporting was designed to, and did, report the relevant trade details for swaps, forwards, cash trades, and vanilla and single barrier options (known in the experts' lists in this litigation as Knockout Currency Options). As to more exotic options, however, the position was considerably more complicated.
>
> > (1) There were certain trade types that could be booked in RMS but did not feed through to GEM, and thus did not appear in GEM reports or Web Reporting at all. As would become clear in October 2008, these certainly included the DBA Security trade types used to book EDTs by [DBAG's] trading desk, but also, for example, correlation swaps, which do not appear in any of the 2012 Reports.

(2) Other exotic trade types did feed through to GEM after a fashion. However:

(a) GEM and Web Reporting could not properly report the trade details for those trades, not least in that their reports did not include fields for all of the relevant information.

(b) Further, at least some such trades did not (when booked and open) appear in the relevant reports with any regularity. For example, as described in more detail in section D14, trades booked as "Resurrecting Fader Options" only appeared at random intervals in the Open P&L report used by Mr Said.

(c) Yet further, at least some such trades, when they appeared at all, were ascribed an MTM value of "N/A", or zero; and when, conversely, an MTM value was reported, it was for at least some such trade types not remotely accurate.

344. The evidence in respect of the problems to which these system failures gave rise in the course of Mr Said's trading is discussed further below. However, it is important to note that, even now, the nature and even extent of some of those problems remains a considerable mystery. For example, while (halfway through the trial) [DBAG] produced a letter from Deloitte that purported to address the zeroing out of the Available CMV Amount in historical reports, no explanation has been given of why (as further described below) certain trades would pop up in Mr Said's Open P&L reports at apparently random intervals. Even more fundamentally, as noted above, there is very little reliable evidence of quite what data (or even simply which trades) were included in the reports available to Mr Said in any given report on any given date, and it does not seem that the 2012 Reports in particular can be relied on for that purpose. [Deloitte's maintained that zero appeared wherever there was a timing issue with the feed from ARCS to GEM on MTM whereas n/a appeared where there was no feed at all from ARCS VaR to GEM.]

…

346. Daily monitoring of the collateral position on Mr Said's FX PB account was the responsibility of the CMV team. The team, which was distributed across three time zones to ensure 24-hour monitoring, used GEM for that purpose, and was thus plainly reliant on the trades having been booked properly into RMS and fed properly into GEM. As Mr Gehlfuss explained:

(1) The Net Equity figure calculated by GEM was automatically compared to three multiples of (what was intended to be) the VaR on Mr Said's portfolio:

(a) a "maintain level" of 200% of VaR, corresponding to the Independent Amount Ratio of 200% defined in ¶11(h)(i)(B) of the FX CSA;

(b) a "call level" of 150% of VaR; and

(c) a "close-out level" of 100% of VaR, corresponding to the Close-Out Ratio of 100% defined in ¶11(h)(i)(A) of the FX CSA.

(2) The result of this automatic comparison was displayed using a "traffic-light system" where "green" indicated the client had provided sufficient collateral to cover their exposure (i.e. greater than the maintain level); "yellow" indicate the collateral was below the maintain level but above the call level; "amber" indicated below call level but above close out level; and "red" was below the close-out level.

347. Should the Net Equity drop below the call level, CMV would, in line with the policy of full collateralisation, issue a margin call to the people specified in the relevant "Notes" field for the client in GEM: in the case of SHI, Mr Said and Mr Vik, copying various Bank/DB Suisse employees. Other than consulting with DB Suisse CRM as to whether the TPMC[A] could be increased, the issuance of such a call was a purely mechanical exercise devoid of any qualitative judgment."

557. As mentioned elsewhere in this judgment, and referred to in the above passage in SHI's closing submissions, there was an ongoing problem with the MTM valuation on the GEM Web reports in relation to the MTM valuation of vanilla trades. The continuing problem was that ARCS VaR was not properly feeding MTM through to GEM so that Mr Said was complaining about the inaccuracy of the MTM figures in the Open P&L Report and about some vanilla trades not appearing until some time after they had been concluded. This problem surfaced in January, April, June and July 2007 and on 31st July 2007 Mr Said expressed his exasperation in an email to Mr Giery. He referred to erroneous P&L numbers appearing which were the same as the day before and the absence of the previous day's deals on the system because they had not fed through. Mr Giery responded that the question had been escalated to senior IT management and that all agreed that this was unacceptable. He explained that both VaR and individual trade P&L was calculated in a separate risk engine and that the individual trade P&Ls had to be consistent with his overall VaR number (which was of course a portfolio figure). He told Mr Said that the problem was that the feed from that separate risk engine into the reporting engine had failed several times in the previous month. Though he did not name the engines concerned, it is clear that he was referring to ARCS VaR as the separate "risk engine" in which both VaR and MTM was calculated and to GEM which was the "reporting engine".

Although SHI suggested that this was not clear from the email, in my judgment it was. When the email referred to "[y]our VaR and the individual trade PnL is calculated in a separate risk engine" and talked of a "feed from that engine into the reporting engine", it is plain that Mr Said must have understood that VaR and MTM (both elements in the margining calculation) were the subject of calculation by the same "risk engine".

558. The problem was system-wide and was not unique to reporting for SHI's portfolio. As SHI was margined on VaR, trade level valuations in respect of SHI's trading through the FXPB Account were calculated by ARCS VaR and those calculations were carried out a number of times each day. The valuations were then sent to GEM in batches and were used to populate the Open P&L report and the Trade Details (Outstanding Trades) Report that could be viewed through the web reporting interface. New trade MTMs would only appear in the reports once they had been sent to GEM by ARCS VaR. The delay in the feed between ARCS VaR and GEM meant that the valuations displayed on web reporting were not updating as frequently as they should have and there was a considerable delay between the time when a trade was booked and the time when the trade details and MTM values for the trade appeared in the Web report. In addition, the rates used by ARCS VaR and GEM to recalculate MTM valuations for FXPB transactions throughout each day were updated at different intervals. This meant that for clients such as SHI who were margined using VaR, the open P&L report in GEM would have displayed a different revaluation rate (the GEM rate) to the one that had actually been used by ARCS VaR to calculate the MTM values which actually appeared in the report.

559. In order to resolve this issue in the interim, before a permanent fix could be achieved by IT, a separate P&L Reporting Account was created (referred to from time to time as a "dummy" reporting account) in GEM based on NOP but which would be accessible only to DBAG personnel and not to clients such as SHI. It would show MTMs calculated by GEM and not by ARCS VaR and would therefore provide a work-around solution to the feed problem from one to the other. As Mr Said would not be able to access this newly created report, manual spreadsheets would be prepared on a daily basis of the MTM (referred to by Mr Said as his P&L) of these vanilla trades at close of business, reflecting the trades shown on GEM and the NOP MTMs thus calculated. On 1st August 2007 Mr Said was told by Mr Quezada and Mr Giery of this separate account reflecting the MTM of open trades on NOP based calculations "calculated in real time", with Mr Giery enclosing "a cut of your current Open PnL out of our internal risk engine". The attached spreadsheet which was the first of the "manual" spreadsheets produced set out the trades as they appeared in the Trade Details (Outstanding Trades) Report available to Mr Said and then corrected the MTMs contained within it by reference to the NOP-based MTM system within RMS, using a pricing module to convert euro figures into USD. The spreadsheet itself refers to the RMS mark to market figure for each trade with two main headings – "CASH" and "OPTIONS".

560. This dummy P&L Reporting Account was not however immune from problems despite avoiding the feed issues from ARCS VaR to GEM. The new account was set up as a parent of the ordinary reporting accounts, so that the trade population of the two should have been identical but, even on the first spreadsheet, Mr Said identified missing trades and not only the Correlation Swaps which were not recorded in GEM

at that point. So also it might be expected that one-off exotic transactions booked in RMS but not in GEM would not appear in the spreadsheets produced by DBAG. The evidence of Mr Giery and Mr Walsh was that although the MTM figures for cash transactions came from GEM/RMS to give the unrealised P&L, the MTM for the options still came from ARCS VaR up until mid-November 2007 but thereafter, according to Mr Walsh who took responsibility for provision of the spreadsheets, those sections were taken from the P&L Reporting Account and therefore from GEM/RMS. The manual spreadsheets did not however ever include trades which had been booked in RMS but not in GEM, regardless of the source of MTM figures.

561. As indicated elsewhere, the problem on these vanilla trade MTMs resurfaced from time to time with the provision of manual spreadsheets between 1st August 2007 and 26th November 2007, 5th to 7th February 2008, 19th to 22nd February 2008, 12th May to 7th July 2008, 21st July to 27th August 2008 and again on 19th September 2008. This problem was wholly unconnected with the issues relating to the reporting of OCTs which, with the exception of Knock-Out Currency Options, Digital Currency options and FW Setting Currency Options, either did not appear in GEM Web Reporting or the manual spreadsheets or appeared only sporadically.

562. I do not intend to recite the whole history of reporting of OCTs and EDTs from February 2007 till October 2008 (in the manner that SHI's closing submissions do). It will suffice to refer to some examples and the key points. Of the 804 trades executed by Mr Said in his FXPB account, there were 53 OCTs and 41 EDTs, as subsequently classified by SHI and DBAG. DBAG, since February 2012, has accepted that its systems could not accurately value or margin the EDTs and, for the purposes of this action, has also since accepted that the same holds good for the OCTs, with the exception of 29 knock-out currency options. Some 8% of trades were therefore not accurately valued or margined.

563. The first OCT which presented a difficulty was OCT4, described as a knock-out timing option or an e-timer, concluded by Mr Said on 25th April 2007, about which Mr Said consulted Mr Vik beforehand (see the section of this judgment rehearsing Mr Said's FX trading). Mr Walsh asked for Mr Geisker's assistance in booking this, although he appears subsequently to have been able to book OCT12 which was an identical form of transaction, both being direct trades with DBAG.

564. On 12th June 2007, Mr Said wished to conduct a trade with CS, referred to by it as a Gated Range Accrual (OCT7). Mr Walsh referred the matter to Mr Giery, making reference to OCT4 as a similar trade which had been done directly with DBAG. Mr Giery's response was to raise three points. The first was to check whether it could be supported; the second to check whether it could be included in VaR and the third was to ensure that Mr Said knew that it could not be reported properly, if it could be booked. The initial reply with regard to VaR was that, if the trade was not covered by ARCS VaR, it would be possible to book trade level margin in Sentry but a subsequent response in relation to OCT4 was that trade level margin could be provided for each. The figures would not therefore form part of the overall VaR calculation for the portfolio and as SHI's FX trading was not set up to feed through to Sentry, any trade level margining would not have been included in SHI's overall web based report of margin calculations at all. Mr Quezada gave instructions to take the trade in and to inform PWM, presumably with a view to CRM conducting trade margining, but in fact only Mr Meidal and Mr Brügelmann were contacted and the

matter never got to Mr Lay or Mr Halfmann for such assessment of any margin. It does not appear that any margin was therefore actually calculated for these trades at all. Mr Walsh could not recall whether he did or did not tell Mr Said that the trade could not be properly reported and he himself, in his evidence, said that he did not understand either the details of margining or the systems under which they took place.

565. Some three weeks later another Gated Accrual Trade was concluded by Mr Said (OCT11) which again was the subject of exchanges between Mr Vik and Mr Said, as referred to elsewhere in this judgment. Mr Walsh appears to have taken this trade in without further ado on the basis that OCT7 had been accepted. OCT12 was another extinguishing timer option in DBAG's sales desk parlance and was a direct trade concluded with Mr Said on 7th August. Mr Geisker booked OCT12 directly to SHI's account as he had done with OCT4 and Mr Avery confirmed that, as an extinguishing timer, it should be covered by VaR. In an email from Mr Quezada to Mr Said, he stated that the MTM had been confirmed with David Geisker. In DBAG's parlance for the trial, OCTs 4, 7, 11 and 12 were all Knock-Out Timing Options.

566. In the daily run of reports generated by Deloitte in 2012, these four Knock-Out Timing Options appeared on only four apparently random dates in June and August 2007 in the Open P&L Report, though they do appear more often in the Trade Detail (Outstanding Trades) Report, but usually with a zero or n/a figure for MTM. If this reflects the position in 2007, SHI is right in saying that they "popped up" with "sporadic" appearances in the same way that EDTs subsequently did.

567. At the end of June 2007 Mr Said was seeking to conclude two Correlation Swaps which, it is accepted by the experts, are not currency options but which Mr Said expressly referred to Mr Vik on 25th June, asking if Mr Vik had any questions about the trades. The email explained the details and I have rejected Mr Vik's evidence that he did not understand what he was being told. He did and must be taken to have approved the conclusion of the trade which was in two parts. Between them, Mr Walsh, Mr Giery, Mr Quezada and Mr Thaung exchanged emails and a hard coded trade level margin of 8% of notional appears to have resulted. The correlation swaps do not seem to have appeared in GEM at all if the 2012 Reports accurately reflect the position in 2007 in this respect. Nor did they appear in any of the disclosed manual P&L spreadsheets prepared by Mr Walsh. Any trade level margining would, for the reasons set out above, not have fed into GEM for SHI. SHI accepts that not only was it likely that Mr Walsh told Mr Said that the Gated Range Accrual concluded in June 2007 would not be reported properly (as Mr Giery instructed Mr Walsh to tell him) but that Mr Said got used to the fact in 2007 that various types of OCTs would not appear in GEM at all.

568. On 18th October 2007 Mr Said concluded transactions that are described as Fade-In Forwards but are probably better described as Pivot Accrual forwards. CS referred to them as Pivot Accruals and DBAG referred to them as Resurrecting Fader call options. These transactions constituted OCTs 16 and 18 (with CS) and OCTs 17 and 19 with DBAG. As described by Mr Malik (and it will be recalled that the experts could not agree upon a description) each of the transactions that are described as Fade-in Forwards are made up of two components, each of which in turn is a combination of put and call options. One component consists of the purchase of a call option and the sale of a put option at the same strike with a barrier (a pivot) at a higher level. The other component has the same barrier or pivot but consists of the

purchase of a put option and the selling of a call option at a strike higher than the pivot. Together they constitute a Pivot Accrual Forward. There is no knock-out feature in this and the investor with this combination of options accrues a gain for each fixing date when the FX price is within the range of the high and low strike prices, either side of the barrier or pivot. The final payout is determined by reference to the accumulated gains on each fixing. This is therefore effectively a bet by the investor that the FX price will stay within the range of the strike prices. Professor Wystup, consistent with his view, saw these transactions as a combination of two forwards, rather than options, but that explanation does not account for the profits and losses which accrue by reference to the pivot or barrier and the high and low strike prices. Only Mr Malik's explanation adequately fits the pay-off and the form of the transaction thus demonstrates the nature of the embedded options within it. It was to these transactions that Mr Said was later to make reference when first concluding the TPFs and telling Mr Walsh of DBAG about them.

569. On 17th October Mr Walsh asked Mr Avery whether DBAG would be able to take in OCT16 and OCT18, the Pivot Accruals which Mr Said wished to conclude with CS. He asked Mr Avery if the risk could be captured for this trade, setting out the essential details of it as a one month EUR/NOK Pivot Accrual with 23 fixing dates, the upper strike, the lower strike and the pivot level. He chased for a response the following day. Although there is no record of any direct response, it appears from an exchange between Mr Quezada and Mr Walsh on 20th and 22nd October that Mr Avery confirmed that the risk could be captured because it was a "Resurrecting Fader option" even though the subject matter of the email exchange appears as an American Reverse Knock-Out (OCT20). OCT20 could not be described as a Resurrecting Fader – it was simply a Knock-Out Currency Option and it appears that Mr Walsh was confusing the issue but was in fact referring to the Pivot Accruals/Fade-in Forwards. As will be seen, when a list of trade types which could be valued in ARCS VaR was forwarded by Mr Avery on 30th November, it included FX Resurrecting Fader options although, as was to appear in a further email exchange relating to TPFs, the system could not cope with Resurrecting Faders which had a large number of observation dates or fixings. As OCT16 and OCT18 had 23 such fixings, it is not clear whether that in itself constituted a problem.

570. So far as OCTs 17 and 19 were concerned, which were direct trades with DBAG, it seems that either Mr Geisker or Mr Chin booked them directly into RMS since Mr Walsh asked for an RMS number for them. They were booked as FX Resurrecting Fader options which should have fed through to ARCS VaR and GEM. The confirmation which Mr Geisker sent to Mr Said who forwarded it to Mr Walsh described the transactions as Resurrecting Faders. Mr Walsh referred, in a conversation with Mr Giery, to the booking of what were presumably the CS Resurrecting Faders as "a nightmare".

571. If regard is had to the 2012 versions of the Open P&L reports, these Pivot Accruals/Fade-In Forwards appeared only very occasionally in the GEM Web Reports. OCTs 16/18 (the CS transactions) appear only on 12th November 2007 and OCTs 17/19 do not appear at all on that date. In the manual spreadsheets produced by Mr Walsh there is no reference to these transactions at all.

572. On 28th November 2007, Mr Said made a provisional agreement with CS to trade OCTs 23 and 24, a Forward Volatility Agreement in CS parlance, or a FW Setting

Currency Option in DBAG parlance. In an instant messaging chat with Mr Chapin of CS, Mr Said said he needed to hear back from DBAG on booking, but that CS would have to let him out in the extremely unlikely event that DBAG would not handle the trade, since they had done Pivot Swaps, Gated Accruals and Correlation Swaps. He told Mr Chapin that if DBAG gave him "any stick", he would take out a bigger stick, with Mr Chapin commenting that "you are good at that". He was having difficulty making contact with Mr Quezada.

573. Mr Walsh sought assistance in an email to Mr Quezada, Mr Giery and Ms Greenberg, asking whether the trade could be taken in but got no response from the first two and a reply from Ms Greenberg that she was unable to take the decision, any more than Mr Walsh was.

574. About half an hour to an hour later, Mr Said and Mr Chapin continued their instant messaging chat with Mr Chapin asking whether DBAG was "still holding out". Mr Said responded that the "guy is off desk" (meaning Mr Quezada) but he was trying again and then later said that DBAG was being a pain. He continued by saying that there was no need to worry as he would "browbeat them into [this]", despite their apparent new appreciation that the exotics were not enumerated as such in the FXPBA, which, as he put it, would be a stupid way of doing it. He said he would get it sorted.

575. An email from Mr Said to DBAG stated that he was surprised that there was any issue about the trade because, when he had discussed the FXPBA at the outset, he had talked with Mr Quezada about one off (non-standard) trades and had been told they would not be a problem as long as DBAG was not swamped with them. He said that there had since been a few of them but never more than two or three outstanding at any time and none were ever an issue as *Structured Options* were provided for in the FXPBA. He then said that a prime brokerage agreement where he could only do spot and simple options was of no use to him and that was discussed at the outset. The particular trade was time critical and he had been waiting for a response but the issue was deeper because it went to the basic understanding of DBAG's approach to Prime Brokerage and the agreement between them.

576. It appears that a little later he sent a further email to Mr Quezada, Ms Greenberg and Mr Walsh saying "I've had enough of this. Our agreement provides for structured options – this is a structured option. There is plenty of precedent. We have tons of collateral. Your unresponsiveness is making it very difficult. I am doing this trade before it runs away. If you decide NOT to book it, I will unwind it at my cost and we will then deal with the relationship impact. I would have preferred to discuss this but since no-one answers my phone calls that is difficult."

577. SHI recognises that this was typical of Mr Said's approach in such situations. This was, as he said, a Structured Option for which, as he knew, he needed DBAG's consent but he was prepared to put pressure on to get it dealt with urgently so that the trade could be done and to threaten the destruction of the relationship, not just with him, but more importantly, with Mr Vik.

578. In his further instant messaging chat with Mr Chapin, Mr Said said that he needed DBAG to "play ball" and that he had begun to "draft 'Klaus' emails" which Mr Chapin regarded as "fun" and wished to receive a blind copy of the email which is

presumably the one to which I have just referred. Mr Said later reported that "the browbeating worked" and sought a term sheet for "the dimwits" and "goons" at DBAG.

579. DBAG agreed to take in the trade as can be seen from the email from Mr Walsh to Mr Quezada and Mr Brügelmann saying that Mr Said was told that it would be taken in. In the email Mr Walsh said that credit approval had not yet been obtained because of the absence of full trade details but once those details were available they would be sent to PWM CRM to determine the necessary margin. Mr Walsh in his evidence said he did not know why it was necessary to do that but he thought that PWM could determine trade level margining. It must have been Mr Quezada who raised this but Mr Said understood the position perfectly well. In an email from him to Mr Walsh he enclosed the term sheet for the Forward Volatility Agreement stating that the notional size of the underlying straddle equated to a P&L exposure of €1 million per one percentage point move in the forward volatility curve and that "your margin guys may want to know that".

580. It is thus plain that, in this particular instance, DBAG accepted the Forward Volatility Agreement as a Structured Option on the basis of applying trade level margining. That of course DBAG was entitled to do. DBAG was entitled to decline to take in any Structured Option under the FXPBA but if it decided to do so it could impose such terms as Mr Said was prepared to agree. If a trade was not capable of being margined in ARCS VaR, for whatever reason, it was open to DBAG to say that the only basis upon which the trade would be accepted would be if SHI would accept trade level margining. There would then of course be an issue as to how the trade level margin would be added into the VaR figure for the rest of the portfolio but, assuming that could be achieved, and however cumbersome it might be, it should not have been beyond the wit of man to achieve it. There was no reason why that should not have been agreed between them. What, if anything, happened to the trade level margining that was imposed here, is unclear, since it would ordinarily feature in Sentry which did not have any connection to GEM. As appears from Mr Said's Timeline, he anticipated that *Structured Options* would have to be dealt with separately from the automated systems, in terms of MTM and margin and no doubt that was the basis upon which the original discussion took place about DBAG not being swamped with such one offs. It was for DBAG to work out how to aggregate VaR on the portfolio with trade level margin on individual trades which had been the subject of acceptance by DBAG on that basis.

581. There were then further exchanges between Ms Greenberg, Mr Lay and Mr Said, with the former obtaining further information for margining purposes but it remains unclear whether any trade margin figure was ever notified to Mr Said, what figure was calculated and how it was supposed to tie in and be implemented alongside the portfolio VaR.

582. Mr Said kept up the pressure with a further email to Mr Quezada asking him to call him in order to discuss, now that the trade had been booked, how this was going to work in future. He said he needed to know what DBAG could provide and whether the service level had changed. It may be that it was this which caused Mr Quezada to enquire of Mr Avery as to the list of products which ARCS VaR could handle. A list was sent to him on 30th November, so that, subject to identification of any particular trade alongside the names used by DBAG, Mr Quezada was then in a position to

appreciate what could and what could not be the subject of DBAG's VaR system. As already mentioned, different banks tended to use different names for some of the products.

583. In December 2007 Mr Said concluded OCT26, the first Double Knock-out Option also referred to as a Window Double Knock-Out. This did not appear in the list of trade types sent to Mr Quezada on 30th November as a trade which could be valued in ARCS VaR. Mr Walsh confirmed to GS, with whom the trade was done, that it would be taken in when GS questioned whether or not it was within the terms of the Counterparty Agreement. Mr Walsh assumed in evidence that he must have obtained approval from Mr Quezada or Mr Giery since this was a new type of option so far as he was concerned. There is a record of a telephone conversation between Mr Walsh and Mr Said on 2nd January in which Mr Said referred to a conversation which he had with Mr Walsh in which Mr Said had expressed surprise that DBAG's system could not handle the trade and had been told by Mr Walsh that he would book it. Mr Said pointed out in the January conversation that he could not see it anywhere and usually, even if it was not valued, it was visible as being booked. Mr Walsh confirmed that it had been booked, saying in evidence that he must have checked in RMS, as the trade did not show in GEM Web Reporting. There is no record in any of the 2012 Reports, nor in the manual spreadsheets sent to Mr Said of this trade at any stage. In the telephone conversation Mr Walsh said that he could "manually get this one for you" and on being told that the Window Barrier should knock out on the 4th and that it became a simple option at that point, Mr Walsh said that he would "get you a mark on it" as it was just a vanilla transaction. It was not of course just a vanilla transaction and there is no suggestion that Mr Walsh ever did give Mr Said a mark on it, unless by that he meant the cash settlement figure on knock-out. The absence of entries on the GEM Web Reporting system was evident to Mr Said.

584. Towards the end of 2007, when asking DBAG for details of OCT4 and OCT12, Mr Said referred to them as being "offline". When Mr Said was putting together his 2007 year end P&L, he sent emails to Mr Chapin of CS and Mr Geisker of the DBAG sales desk requesting details of the terms of OCT11 and OCT12 with regard to dates, premium paid and accruals received, referring to them as "offline deals not readily available [from] any system". Mr Said obviously knew, at December 2007, that GEM web reporting did not include the details of the trades. Had he thought that GEM included them at all, he would have asked Mr Walsh for details. As he said in his Timeline in October 2008, he knew that "*Structured Options*" was basically a catch-all of all options that the automated deal capture and MTM systems of DBAG could not handle and which were subject to case-by-case approval by DBAG.

585. As SHI accepted, in its closing submissions, when he referred to "an offline deal" he meant that the trade details were not available to him from any of the DBAG systems.

586. There are emails on 8th January 2008 recording that Mr Said called Mr Walsh, asking if DBAG could take in a Double Digital option and explaining that on the expiry date both of the two currency pairs had to be above agreed barriers to result in a fixed cash flow. Mr Walsh said he was unsure whether there was a product type for this in RMS and asked Mr Giery whether it could be taken in. Mr Giery told him to speak to middle office to see if it could be booked. Mr Walsh asked a member of the middle office team in London FXPB, who told him that the product type was a "Threefactor Discrete Double No Touch" option which had been booked in London in the past for

another client. On Mr Walsh forwarding this to Mr Giery, the latter asked if the trade was captured by VaR for that client and Mr Walsh then asked Mr Avery if VaR could capture the risk. He was told that VaR could not cover the product and there was no suitable proxy. Mr Giery then told Mr Walsh to ask how London had dealt with the matter for the London client and the answer came back that these types of trade were taken in if the client was buying (and therefore paying premium) or selling by closing out an open position. As SHI was buying the option and the maximum loss was the premium which would be paid two days after the trade date, Mr Giery authorised the acceptance of it. There were, in all, five Dual Currency Range Digital options concluded by Mr Said (OCTs 30, 37, 39, 50 and 51), none of which were properly recorded in RMS, GEM and Ethos, let alone in ARCS VaR. As was evident to Mr Said, they were not on the GEM Web Reporting nor in the manual P&L spreadsheets sent to him.

587. Against this background Mr Said entered into his first EDTs on 19th February 2008 with CS. It was Mr Chapin who introduced him to the concept of TPFs, TARFs or TARNs as they were referred to by various entities. He actively marketed the idea to Mr Said who then approached Mr Geisker and Mr Bergad of DBAG asking whether DBAG could price transactions of this kind. He saw them as similar to the Pivot Accruals of October 2007 but with a target knock-out feature which in practice made for wider ranges between the high and low strikes. This was the essential basis upon which Mr Said put the matter to Mr Walsh on 19th February seeking DBAG's consent and saying that the cap on the maximum profit made the deals cheaper. Mr Said explained further, when Mr Walsh suggested that the only real risk was the premium which he was paying, that there was more risk than that because it was a Pivot Accrual and he was "short of some options here". In other words he recognised that the TPFs involved the selling of options which meant that he could lose money on them. He said that it was a very broad range trade but if there was a massive market move that did not revert, he would lose money unless he hedged, which he would do. There was less risk than the Pivot Accruals because the knock-out assumed that the maturity was shorter. Mr Walsh asked for the trade details as he needed to clear this with "business" meaning Mr Quezada or Mr Giery.

588. The same day Mr Walsh sent Mr Quezada and Mr Giery indicative terms which had been produced by DBAG's sales desk, rather than CS, saying that the details might differ slightly but that Mr Said wanted to know if DBAG could take in the trades. Mr Walsh told Mr Quezada that Mr Said had done one of these trades back in October as well (referring no doubt to the Pivot Accruals). The indicative details set out the pivot, the high and low strike prices, the daily fixing, the target profit, the capped knock-out and the one year duration with 256 fixings. Mr Quezada's response was to say that, if it had been taken in before, Mr Walsh could go ahead but he should check with Graham Avery if VaR could capture the risk. Mr Walsh then asked Mr Avery that question, stating that it was an FX Resurrecting Fader option, as if the trade was identical to OCTs 17 and 19, without referring to the target profit knock-out feature. Mr Walsh had no recall of getting any reply from Mr Avery and there was no document evidencing a response. Mr Walsh thought that he must have proceeded on the basis of Mr Quezada's go ahead, even though he had no answer back from Mr Avery since, if he had received a response saying that the trades could not be captured by VaR, he would have referred the matter to Mr Quezada and Mr Giery once more.

It seems unlikely that Mr Walsh did get any response from Mr Avery, because of the terms of later responses to questions asked.

589. Mr Walsh proceeded to book these trades, telling Ms Ng that he would book this trade (which was basically the same as one he did a while ago but had some "weird shit") in the way he thought it should be booked and then sign off on it. When asked by her what kind of an option it was, he said that all that mattered was that the exercise/expiry was agreed and it did not matter how he booked it. Although in evidence Mr Walsh said this was an exaggeration, it is plain that he thought that it was the cash settlements which were crucial, rather than the details of the trade itself. In evidence he said he did not think he could book the knock-out elements of the TPFs on a Resurrecting Fader booking which was the form that he adopted for these TPFs and which was inappropriate for a number of reasons. It seems that, generally speaking, when Mr Walsh booked pivot TPFs he booked them as four Resurrecting Fader Options and when he booked non-pivot TPFs he booked them as two Resurrecting Fader Options. Being booked in this way meant that, insofar as they fed through to ARCS VaR on GEM, they did so incorrectly. Some did not feed through at all, because, it was said at the time, of the huge number of fixings.

590. Although in 2007 one OCT was apparently the subject of agreement to trade level margining by CRM or PWM Credit, there is no evidence of any real thought being given to acceptance of the EDTs on terms that trade level margining be applied by either of those two departments without reference to the Trade Desk. DBAG would have been entitled to accept the Structured Options on terms requiring trade level margining if it chose to do so, or to refuse otherwise to take them in at all. Presumably, Mr Quezada considered that CRM or PWM Credit would have no familiarity with these complex types of option and that the best source of margining was Mr Hutchings/Mr Geisker's Trade Desk which was familiar with them because it sold and traded them. All efforts were therefore directed to achieving trade level margining by reference to the Trade Desk in the course of 2008 when it was clear that GEM and ARCS VaR could not cope. As appears elsewhere, from Mr Said's Timeline, he always expected Structured Options to be dealt with outside DBAG's MTM system, because he knew it could not handle them.

591. By 25th February, problems with the booking had surfaced and Mr Manrique, who was part of the FX Options Operations Team in New Jersey, asked for copies of the term sheets for the trades and, on receiving them from Mr Walsh, entitled "Pivot Target Accrual Forward", spoke to Mr Chin and other traders at DBAG and ascertained that TPFs could only be booked using a DB Analytics security trade type which would enable the individual making the booking to upload the details of the trade into RMS from an Excel spreadsheet. Once uploaded, RMS could generate a text file and the trader could attach a free-form file providing details describing the trade and explaining the pay out formula (a Generic Sales Ticket). The trades, he understood, required monitoring because the cash flows were "path dependent" and accrued on the fixing dates. Without access to the tools used by the traders to monitor the ongoing life-cycle of TPFs, daily cash flows would have to be tracked manually to determine whether the trade had knocked out and whether payments needed to be made. Although DBAG's FX traders and the Trade Management Group had access to DB Analytics Securities, in 2008 FXPB client services did not. Mr Manrique could see from Ethos that Mr Walsh had booked the transactions into RMS as Resurrecting

Fader options as opposed to the method which he had ascertained from Mr Chin to be correct. His immediate reaction was to tell Mr Walsh that he believed that he should speak to SHI and claim the cancellation of those TPFs and he should not accept any more TPFs if they could not be properly booked. He forwarded the term sheets to Ms Ogilvie, to whom he was accountable and she sent them on to Mr Kim, the manger of the FXPB Operations Team. In her email, she referred to a conversation which she had had with Mr Kim, enclosed the term sheets and stated that they represented TPFs which required a GST to be booked because Ethos could not fully support the product type. If the trades were booked incorrectly, the correct confirmations could not be sent out to the client or the Counterparty. Mr Kim said he did not follow up on this email and told the Court that his concern was purely from an operational perspective, as was that of Ms Ogilvie and Mr Manrique. Ms Ogilvie's concern was that she could not create confirmations which was her responsibility, because the information in Ethos/RMS would not be adequate for it and the trade required a GST. Mr Kim said he was not aware until sometime later that the TPFs had been booked as Resurrecting Faders which meant that Mr Walsh had booked four records in respect of each trade, as had been done for the Pivot Accruals/Fade-in Forwards.

592. On 28th February in an email Mr Said told Mr Walsh that he had done a third Pivot Target Accrual the previous day which was the same as the first two but with a different currency pair. He said that these had to be kept out of the live MTM module because the system could not handle it and was giving silly numbers. He attached a copy of the trade terms for EDT 3. Two days later he entered into EDT 4 which he explained was really no more than an increase on the previous deal that needed to be treated separately for booking purposes. In an instant messaging chat with Ms Ng, Mr Walsh said that he was booking Pivot Accruals. He did not think that DBAG could take them in but he still booked them because he did not want to say no to Mr Said. He told her that Mr Manrique was telling him that DBAG was having trouble confirming with the Counterparty because RMS could not handle the options type. He told Ms Ng that he was telling Mr Manrique to sign off on it but the reason that they had trouble issuing confirmations was because all the details of the trade could not be fed into RMS because there was not an appropriate field for them. He was having trouble booking them and kept changing things but the notional was US$768 million, as calculated by him. Mr Walsh did not apparently seek Mr Quezada's approval on the basis that he had approved EDTs 1 and 2.

593. It seems that, by 10th March, Mr Walsh had not booked EDT 4 in any way. He confessed in a Bloomberg chat with Ms Ng that he got scared every time he saw Klaus calling and on being pressed by her to book the trade, said that he might do it that afternoon. What he did in fact was to contact the FXPB middle office in London once again by email, attaching the terms of trade of EDT 1 and EDT 3 and asking for advice, explaining that he had been told that a GST might be needed for booking. The response was to say that he should not be taking them in and that the only way properly to book the trades would be through a spreadsheet to which FXPB should not have access and for which it did not have the infrastructure. A "fudge" booking was a possibility but the author of the email said that he did not have time to look at the term sheet and find the best fix for the moment. Mr Walsh replied by saying that the trades had already been taken in and that the same trade type had been taken in in the previous year. He asked if there could be an attempt to fudge a booking the next day.

594. On 11th March in a Bloomberg chat with Ms Wu, his immediate superior, Mr Walsh said that he had been told by Mr Manrique that the four TPFs had to be cancelled because they could not be taken in. She said that Mr Said would have a fit and Mr Walsh recognised that it would be a huge problem since he would not accept it but Ms Ogilvie had discussed the trades with Mr Kim and it looked as though they had to be cancelled. Nonetheless, Mr Walsh said that it was not Mr Kim's call and he was not too worried and he would be talking to Mr Quezada the next day: "The day [I] go to Steve to ask if we can take in a trade … that will never happen". Mr Manrique recognised that cancellation was a matter for the front desk and not for the Operations Department and over the course of the next month appears to have repeatedly asked Mr Walsh to speak to Mr Quezada, obtaining assurances from Mr Walsh that he would do so.

595. On 27th March, Mr Byrne (the equivalent of Mr Kim in London) asked Mr Manrique why EDTs 1 and 2 were in the system with the note "should be cancelled" and was told that these were TPFs which had been booked incorrectly, that the situation had been escalated to Mr Walsh with advice that they could not be taken in and that he had referred the matter to the front desk but no response had emerged. Mr Byrne's response was strongly to advise against FXPB taking on any trade that needed to be booked as a DBA Security Type with which Mr Manrique agreed. Mr Byrne chased for an update on this on 31st March and Mr Manrique emailed Mr Walsh asking when they would be cancelled, stating that they should be removed by the end of the week.

596. Mr Walsh was still having difficulty in talking to Mr Quezada about the matter though he told Ms Ng on 31st March that he was about to do so and she offered words of comfort that Mr Quezada would speak to Mr Said with him. From a later chat it appears that Mr Walsh could not bring himself to talk to Mr Quezada about it and so he was thinking of quitting that day because of the SHI issues. Despite further chasing by Mr Manrique on 4th April, saying that the EDTs needed to be cleared away on Monday 7th, by 4.30 pm that day Mr Walsh had still not spoken to Mr Quezada and was expressing the desire to Ms Ng to speak to Mr Said to find out if SHI could hold the trades directly with the Counterparty or whether he would have to cancel them. He hoped to be able to "bullshit" Mr Said by telling him that CS would not agree to the confirmations. He emailed Mr Said asking him to call, which he duly did. In the telephone conversation Mr Walsh asked if the trades could be concluded directly with CS or whether they had to be put through the Prime Brokerage system and Mr Said told him that he had no other way of trading them because he had no documentation set up with CS and everything he did had to go through the FXPBA. Mr Walsh said that there were problems with confirmation details and if it was possible to move the trades to CS those problems could be avoided. Mr Said then said that, touch wood, the first TPF would probably be gone within ten days and as the trades were all exactly the same, the documentation should be clear. Once the knock-out event occurred, the deal was finished and off the books so that all that would be left would be the unwind. If there was any trouble with the documentation, Mr Said offered to assist.

597. Following that conversation, Mr Walsh again had a Bloomberg chat with Ms Ng in which he repeated Mr Said's comment that one of the trades was about to knock-out (one which he had not booked) which meant that he could then simply book the cash flow, although he could not do so for a week or more. Ms Ng told him to call Mr

Quezada before the situation got worse to which he responded that he had checked with Mr Quezada on the trade date in respect of all of the trades, or at least he thought he had. She told him to call him up, tell him that he approved the trades but they could not be booked and ask him what to do. He referred then to a Bloomberg chat which he had with Mr Manrique earlier in the day when the latter had said there were two options. Either Mr Walsh got someone from the front office to book it or the deal could not be taken in. In that conversation he had told Mr Manrique of his hope that Mr Said might do the trade directly with CS but Mr Said's comments had now ruled out that solution.

598. In consequence Mr Walsh then called Mr Quezada who, he knew, would have to sign off on any solution. What appears to have been agreed with Mr Quezada was that the Trade Desk should be asked to book the EDTs whilst, in the interim, Mr Quezada himself would sign off on the confirmations produced by the counterparty, which would solve the confirmation issue for Mr Manrique and Ms Ogilvie.

599. When EDT 3 knocked-out on 16th April, Mr Walsh booked a cash flow but Mr Manrique then said that there had to be a booked transaction to which such a cash flow could attach. Mr Walsh then gave the RMS numbers for the bookings as Resurrecting Faders thinking that, because this was the end of the trade, all issues relating to the original booking were no longer of any importance. FXPB in London however did not agree. Both EDT 3 and EDT 4 had knocked out but London was questioning why the trades still existed in the knock-out queue since they were incapable of being booked, save by DB Analytics. Although Mr Manrique suggested that the problem had been resolved by knock-out, that there were notes within RMS booking which allowed for a proper audit trail and the confirmations were being sent for the business manager to sign off, London wanted to know whether FXPB was going to accept TPFs in the future and how it was going to book them when the risk could not be captured by bookings as Resurrecting Faders. Mr Walsh's response was to say that the Counterparty confirmations would be signed off by business to clear outstanding unconfirmed trades and in the future each trade would be examined and signed off by business (Mr Quezada/Mr Giery) on a one off basis before acceptance.

600. In relation to the direct trades, EDT 05 and EDT 06, Mr Walsh asked Mr Geisker to book the trades directly to SHI's account, giving a Counterparty code. Mr Chin, rather than Mr Geisker, carried out the booking with DB Analytics, so that it appeared in RMS but, for reasons given elsewhere, this did not feed downstream. On these direct trades DBAG, like other banks selling the product to SHI, provided spreadsheets showing the accruing profits and losses on the fixing dates.As the DBAG systems could not, for the most part, cope with OCTs, so also they could not cope with EDTs. The trade details of TPFs could not be captured by the use of the Resurrecting Fader proxy and Mr Said knew from the outset (see the email dated 28th February 2008) that the system could not handle the TPFs and gave silly numbers for their MTM. Mr Walsh's evidence was that Mr Said wanted the trades removed or the MTM zeroed out so that his overall MTM figure was not distorted by the inclusion of such silly numbers. Mr Said specifically asked him to remove from the manual spreadsheets the MTM values of the EDTs booked as Resurrecting Faders in RMS and also wanted him to ensure that MTM values for those transactions did not appear in the report showing MTMs for individual trades on GEM Web Reporting itself. Mr Walsh had no control over the latter, in so far as the booking of a trade as a

Resurrecting Fader, whether in four component legs or otherwise, would give rise to whatever figures the programmes produced. If a trade was not booked into GEM, then of course no figures would appear. Mr Walsh did not have a precise recollection as to whether Mr Said wanted him to remove all references to the transaction from the Web reports and manual spreadsheets or whether he simply wanted him to ensure that the MTM valuations would appear as zero. His best recollection was that Mr Said requested one or the other in their conversations and that he did both from time to time. Because of the absence of appropriate fields in which to record the details of the TPFs and Pivot TPFs, any proxy booking as a Resurrecting Fader was obviously inadequate and, to the extent that a trade was booked as a Resurrecting Fader, common sense suggests that it would be likely to generate some MTM or margin figure. The only way to avoid that potential issue of production of silly numbers was not to book the trade at all until knock out and cash settlement. That appeared to be what Mr Said wanted when he requested removal of the trade or zeroing out of the false MTMs.

602. There were ongoing issues with the ARCS VaR feed into GEM and on 18th April Mr Said complained again about the revaluation rate as well as complaining that faders had appeared again in the Open P&L reports. On 15th and 22nd April Mr Said concluded EDT 5 and EDT 6 with DBAG and a similar transaction (EDT 7) on 24th April with CS. The direct trades with DBAG were booked into RMS by the Trade Desk using DB Analytics and GSTs but this did not feed through to ARCS VaR or GEM at all. In consequence the existence of these direct trades (six in all) never featured in GEM Web Reporting at all, although DBAG's Trade Desk sent Mr Said accrual sheets on each fixing date for them. On 28th April Mr Said wanted to conclude a Pivot TPF with MS and this gave rise to a Bloomberg chat between Ms Greenberg and Ms Wu, the latter of whom opened the conversation by saying she had spoken to Options (by which she presumably meant Mr Manrique) who said that this was a TPF and that it should not be taken in because it could not be booked without access to GSTs and DB Analytics which FXPB did not have. Unless the Trade Desk was prepared to book it, it could not be taken in but she had been told that a trade of this kind had been taken in by DBAG in the past. She thought that Mr Walsh just took it in without asking anybody but Options said that it was booked incorrectly and was a mess. Ms Wu and Ms Greenberg agreed that if it was a TPF, it would not be taken in. Internal emails within MS showed that DBAG was saying that the trade was too exotic for the Operations people to handle and reliance was being placed by MS on the fact that Mr Said had told them that he had entered into such transactions with other banks in the past and with the DBAG Trade Desk. Further discussion within DBAG on 29th April suggests that Ms Greenberg was talking to Mr Quezada or Mr Giery about it and Mr Walsh told Ms Wu that they had been taken in as one-offs in the past though they could not be properly booked in RMS and Options Operations was displeased about that. Mr Walsh said that Mr Quezada had approved them in the past even though Options had told them to cancel the trades. Mr Walsh said that Mr Said had sent him the CS TPF (EDT 7) the previous Friday and asked if he should say that it could not be taken in either but the decision was taken to await the result of Ms Greenberg's discussions with Business. On the same day Mr Walsh emailed Mr Avery asking if ARCS VaR could margin/value the CS TPF executed on 24th April (EDT 7). There is no record of an email response but in a further Bloomberg chat, Mr Walsh stated that day that Mr Avery had said that the options were being valued and margined on the existing bookings (which were as Resurrecting Faders). Mr Walsh,

in that chat, said that the only details that could not be booked were the knock-out levels which he thought would have the effect of reducing the risk. Discussions continued between Ms Greenberg, Ms Wu and Mr Walsh with reference to the need for Mr Kim, Mr Quezada and Mr Giery to make a decision as to whether the MS options would be taken in. Ms Greenberg commented that Mr Quezada did not know how to say no to Mr Said because TPFs had been taken in in the past. Further conversation between Mr Walsh and Ms Ng revealed that the trade could not be properly booked anywhere by FXPB and that the Trade Desk would have to book it which it was not thought it would ever be prepared to do. MS were told by Mr Walsh that DBAG would be unable to take the trade because it was not covered in the Counterparty Agreement but the evidence shows that the real reason was the perceived inability properly to book the trade. Mr Walsh said he would have sent this email on instructions from someone else and it appears that this was Mr Kim's stance while Mr Quezada took a different view. It was unclear how it was that the MS trade was declined but the CS trade was accepted and Mr Walsh had no recollection of the reasons for that, though it may have reflected either disagreement or a compromise between Mr Quezada and Mr Kim. At all events Mr Walsh was asked to go down to Wall Street to ask for the assistance of Mr Chin to book the CS trade and to be trained in doing it himself. That never happened because the Trade Desk refused to help in booking the trade for FXPB in circumstances where it had quoted for the business with Mr Said but he had gone elsewhere with it to another bank. The Trade Desk did not want to assist DBAG's competitors in doing business with SHI. The difficulties were then touched on during part of the conversation on 2nd May between (inter alia) Mr Quezada, Mr Giery, Mr Spokoyny and others to which reference is made in the previous section of this judgment. This all led to the 5th May telephone conversation between Mr Quezada, Mr Said and Mr Walsh, the details of which are set out in the section of this judgment dealing with Mr Said's trading and his evidence relating thereto. In short, Mr Said told Mr Quezada and Mr Walsh that he was not concerned about getting MTMs on the TPFs and agreed to DBAG taking them in without being able to report that information. He told them there was nothing to do on the trades from an administrative point of view save on knock-out or maturity whilst margin issues were a matter for DBAG and, if it was ever concerned about that, SHI would over-collateralise. It was following that call that, on 6th May, Mr Walsh, at Mr Quezada's instigation, sought confirmation from Mr Avery that EDT 1 (an indirect CS TPF) and EDT 6 (a direct trade with DBAG) were both being margined. The response was that neither was being valued in the system, the first because of the number of fixings and the second because it was booked on a generic sales ticket and was not valued by RMS or any of the downstream systems. Neither Mr Quezada nor Mr Walsh informed Mr Said of Mr Avery's response but since Mr Said regarded margining as a matter for DBAG, and accepted that he was getting inaccurate MTM figures upon which he placed no reliance, there was no reason for them to do so. Mr Quezada however might have been expected to inform others who were considering the question of the adequacy of the VaR calculation at the time for Mr Said's trades, in particular Mr Giery who sat next to him in the office and had been involved in those discussions (see the section of this judgment relating to The VaR Parameters).

610. On 15th May Mr Said emailed Mr Quezada setting out his understanding that the latter was more comfortable with direct trades with DBAG and asking if he could do such a trade. Mr Said was obviously conscious of DBAG's booking, valuing and margining difficulties when making this request. Mr Quezada told Mr Said to go ahead, stating that it would give him "the fire power" that he needed to have the Trade

Desk open up the DB Analytics system to the PB team. Mr Quezada emailed Mr Hutchings of the Trade Desk referring to the Direct Trade and stating that Mr Said had said he needed to be able to conduct such trades with other banks through FXPBA and if FXPBA could not oblige, he would not trade with DBAG at all. Mr Said also put pressure on the desk, telling Mr Quezada that he had made it clear that unless the PB desk got a pricing tool, direct trades with DBAG would stop. He continued to apply pressure, according to emails of 21st May and 3rd June, and then concluded another TPF (EDT 11) with DBAG on 4th June. These efforts to gain access to DB Analytics came to nothing because, it appears, the Trade Desk maintained its stance that, if it were to assist the PB desk by providing the pricing tool and/or training a member of FXPB in its use, the effect would be to improve the position of its competitors vis-à-vis itself. Although Mr Quezada appears to have met with Mr Hutchings, although Mr Geisker made some suggestions for solving the "[K]laus problems" and although there was a suggestion of interim solutions pending a "longer term [RMS] solution", nothing came of this. It was not until about 17th October 2008 after most or all of the margin calls had been made that indirect EDTs were booked as such in RMS using the DB Analytics system.On 21st May Mr Said asked if he could conclude a TPF with GS and subsequently sent an email to Mr Walsh saying that he had received Mr Quezada's approval. GS was informed by Mr Walsh that such trades were accepted as *Structured Options* on a one-off basis. This 21st May trade with GS was only booked by Mr Walsh on knock-out on 23rd June. From hereon this appears to have become the pattern of action or inaction by Mr Walsh. Trade confirmations would be received from Mr Said and the Counterparty and he would print off copies which would then sit on his desk but he would not book the trades in DBAG's systems, unless there was some particular trigger to do so such as a Counterparty requiring confirmation of a trade. On knock-out, Mr Walsh would book the trade in his standard manner for Resurrecting Faders with a cash settlement. This kept the silly numbers out of the MTMs that Mr Said was receiving, which was what Mr Said wanted.On 28th May Mr Walsh provided Mr Quezada with a list of the exotic trade types that Mr Said had executed, including Correlation Swaps, Resurrecting Faders, Gated Range Accruals, Pivot Target Accruals, Dual Binary Options and Double No Touch Options. Mr Quezada asked him to check with Graham Avery to see if ARCS VaR captured all those trade types in order to frame a request for the use of DB Analytics in relation to those which could not be captured. Mr Walsh replied by saying that there were two trade types that could not be completely valued in accordance with the way they were booked because not all the details could be entered, whilst the others could be valued and margined by ARCS VaR. The two in question were the Gated Range Accrual and the Pivot Target Accrual. Whilst Mr Quezada and Mr Walsh hoped to resolve the booking and margining issue by use of DB Analytics, London FXPB returned to the issue on finding that EDT 02 had not been processed. It appears that CS had not produced the Counterparty confirmation. This led to FXPB in London taking the matter up with Mr Kim by asking him if he was aware of these TPF trades and asking how FXPB could agree to take them in. Mr Byrne in London commented: "This trade type is one of the most structured types of business we are currently supporting on the franchise side, and there is no way PB can accurately book or monitor this trade type. Apparently the business is signing off on these when we receive CS confirmation, although this does not alter the fact that the trade is not accurately captured in RMS."At about the same time Mr Cook of IT responded to Mr Walsh's email of 21st May in which he asked how to obtain access to DB Analytics in circumstances where

FXPB had previously been fudging the booking of some complex options. Mr Walsh asked what had to be done in order to capture the risks and margin the trades. On 5th June the reply was received telling him that the trade types he was talking about were complex risk trades which were generally booked and managed by the Complex Risk Group and were booked externally through RMS in Excel and uploaded as free text entries into RMS. Questions of who would book the deals, who would manage the risk, who would provide valuations (which were generally done manually) and how margin would be done outside of RMS all arose. There was therefore a business process to be gone through as between PB and FX business managers. Mr Quezada's response was to state in an email to Mr Cook, Mr Walsh, Mr Hutchings and Mr Geisker that FXPB wanted to have the ability to book the trades in the same way as the Trade Desk and that initially use could be made of the latter's expertise with risk management effected by the Complex Risk Team on that desk. He said that valuations were not critical to the client and manual valuations would be sufficient. He understood that ARCS VaR could capture many of the structures but, if not, margin would have to be captured manually. He wanted to know who could arrange FXPB's set up to have access to DB Analytics. Mr Kim, following receipt of Mr Byrne's email, asked who had agreed to take the trades in, whereupon Mr Walsh told him that Mr Quezada had signed off on these trades after discussing them with SHI. He said that he and Mr Quezada were working on a way to book the trades in the future and Mr Quezada was aware of the risk/valuation problems but there was no choice but to leave the trades booked as they were because they did not yet have access to the necessary RMS functions for booking the trade types. Mr Kim's response was to say that he needed to approve new trades, not Mr Quezada, and that he needed to explain to FX management why the trade had been taken in and to ask for the trade details to be sent to him. Mr Walsh then said he would send over the details but the trades were those which had been discussed in April and booked in February. Whilst saying that he would speak to Mr Quezada to explain that Mr Kim did not want to take the trades in, he asked him to speak directly to Mr Quezada as well. Mr Walsh then sent details of EDT 1 and EDT 2 alone to Mr Kim and none of the other eight that had by this stage been executed and three of which remained unbooked. FX Operations in London had picked up on EDT 09 with GS because of contact with them by the latter and there then followed email exchanges between London and Mr Kim about the continued acceptance of such trades and the need to "push back" and not accept them in the future, whilst trying to decide what was to be done with those which had already been accepted. It was agreed that all future trades should be handled in New Jersey as opposed to London in order to avoid confusion.

619. Mr Kim's evidence was that, as at 4th June, EDT 09 with GS, concluded on 21st to 23rd May, had not yet been booked and he was told by Mr Beels, his equivalent in London, that the only way to book it was with DB Analytics to which FXPB had no access. He had ascertained from Ms Ogilvie or Mr Manrique that drafting confirmations for these TPFs would take 3-4 hours each. He was concerned about booking and about matching and settlement. He intended to speak to Mr Quezada but at the end of the day the issue of approving the trades was a matter for the business side, namely Mr Quezada. Operations would have to manage the result of any decision taken. His evidence was that he did not want to take these trades in at all and contemporaneous records of conversations of others suggested that he was furious at Mr Walsh and Mr Quezada's decision, which effectively by-passed him. As recorded in an email, Mr Kim was told by Mr Walsh that each one of these trades was approved by Mr Quezada before execution. Mr Kim's evidence was that after 4th

June he spoke with Mr Quezada in perhaps three different conversations in which he was told that SHI wanted to do the transactions, that FXPB had to take them in because the client wanted it, the Sales Desk did them and SHI was saying that if DBAG could trade them directly, SHI should be able to do so through FXPB. Mr Quezada said he was seeking to obtain access to DB Analytics and GST. He also assured him that SHI was aware that DBAG could not book these trades properly and that there were valuation and margining issues which went with that. Mr Kim's response was to say that the numbers had to be limited whilst waiting for the DB Analytics solution, because the operations team could not handle many of these transactions which took a great deal of time on a manual basis. There was a discussion about charging US$1,200-1,500 per transaction for this reason, a figure which was agreed with SHI and subsequently charged. The transcript of a telephone call between Mr Kim and Mr Quezada on 4th June is consistent with Mr Kim's evidence with reference to the pressure being exerted by Mr Said on the Trade Desk in telling that desk that if they wanted to sell him TPFs, they had to allow him to "trade away", through FXPB, with other banks. He said that Mr Said had agreed to do whatever he could to minimise any of the difficulties and play within any constraints DBAG wanted to put upon him apart from telling him that he could not do the trades at all. If DBAG could not figure out a way to do the trades through FXPB, he would shut down the franchise and move all the business. The effect of what Mr Quezada was saying was that DBAG had little choice but to accept the business. Margin and risk was not much of an issue because SHI was over-collateralised and was willing to put up whatever additional margin was needed. "Some of [those] pivot things" did not get marked on VaR. Mr Quezada said he would produce something on paper and asked Mr Kim to tell him in response if he did not feel comfortable with it and tell him what else could be done to alleviate his concerns. Mr Kim's concern, as expressed, was the pressure he was receiving from London. On 6th June Mr Quezada sent an email to Mr Hutchings and Mr Geisker of the Trade Desk and to Mr Kim and Mr Walsh. The email commenced with Mr Quezada saying that he needed "to put a full court press on this" (a basketball reference to an aggressive defensive tactic in which the members of the team cover their opponents over the full court). The email continued:"Note that Sebastian Holdings is on VaR and all their positions

> are valued and risk managed for margin purposes out of [ARCS] [V]aR."

He then incorporated the 30th November list of the trades that ARCS VaR could cover and then set out three points. In the first he asked how the Trade Desk currently margined the trades done by SHI with it, or for similar hedge fund clients. He spoke of the need to sit down with Credit to determine consistent/proper haircuts. The second point was to ask how valuations were being handled for SHI whilst the third point said that "[f]or starters" access was needed to "the book" from the PB side, by which was meant DB Analytics, as used by the Trade Desk.

623. On 12th June Mr Walsh emailed Mr Said and told him that, as he knew, DBAG was working on finding a way to book the fader options and wished to work with the Trade Desk and Dave Geisker to achieve that. He asked if Mr Said would mind the Trade Desk being told the financial details of the trades done through FXPB. Mr Said said he had no objection. Mr Quezada referred to this as a good first step in an email to Mr Walsh saying that the capture of risk and margin was the next step.

624. The provision of this consent made no difference and at no stage thereafter, despite whatever efforts were made, did the Trade Desk render assistance in booking the TPFs. There does not appear to have been any great sense of urgency about progressing this matter and Mr Kim's evidence was that he anticipated it might take six months to gain access to DB Analytics which is why he wanted a limit on the volume of trades accepted. He told the Court that as long as it was no more than five trades in a week it would be acceptable. He simply wanted to limit the number of TPFs taken on so as not to put a strain on the Options confirmation team in doing the business manually, taking term sheets, matching them, issuing confirmations and settling the trades. As far as he was concerned, it was a matter for Mr Quezada to deal with the downstream points of valuation and margining, about which he had given him assurances. Mr Walsh appeared resigned to the position and booked EDT 09 on knockout on 25th June 2008 (it had been traded on 21st May 2008) a practice that he largely then adopted for other EDTs.

625. In an email of 21st July sent by Mr Said to Mr Walsh on his return from holiday, Mr Said told Mr Walsh that one Fader with spurious P&L kept appearing. Mr Walsh said that he had just booked more Pivot Accruals which would probably appear on the web P&L, so he was sending his usual manual spreadsheet, with them zeroed out. Some EDTs he did book – others he did not until knock out.

626. On 22nd July Mr Walsh and Mr Said held a recorded telephone conversation about the fact that spurious MTM numbers for the trades were appearing in the Web Reports which were 'never even remotely right'. Mr Said was told that DBAG's margining for TPFs was based on those numbers, which Mr Said recognised as "chaotic". He said that more collateral could always be provided. Details of this conversation appear elsewhere in this judgment. Mr Said continued to trade EDTs seeking DBAG's consent to do so but knowing that no solution had been found to the booking issue and that many bookings were not being made on GEM (nor appeared on the manual spreadsheets) until knock out, as compared with the Accrual Spreadsheets that he received on each fixture date. The first loss-making EDT was concluded on 22nd July (EDT 20). From 23rd July onwards Mr Said entered into twenty-one EDTs of which four knocked out (with aggregate profit of US$14 million). The total net losses on these twenty-one EDTs were of the order of US$560 million.

627. Mr Kim's evidence was that he was not aware thereafter that Mr Walsh was not booking trades but thought they were being booked under a proxy. Mr Walsh notified him of three TPFs which were concluded in June and he raised no objection. He said that he did not give his approval but it was not needed as a result of his discussions with Mr Quezada. On 16th September however Mr Manrique asked Mr Kim to sign off on the use of Counterparty term sheets for generating Confirmations as a form of GST in respect of ten TPFs which were concluded between April and August, five of which had already knocked-out. At that stage, if not before, it must have been obvious to Mr Kim that these TPFs had not been booked in the system contemporaneously. The exact numbers of unbooked trades would of course not be known to anyone except Mr Walsh who kept a pile of confirmations on his desk until October. Once they were booked in RMS, they would be open to sight by anyone with access to the system and, as part of his role, would have been picked up by Mr Manrique if not his superiors in Operations.

628. Mr Manrique's evidence was that he understood there to be a conflict between Business on the one hand which wanted to take the TPFs in (Mr Quezada) and Operations on the other (Mr Kim) which did not. He did not recall how that had been resolved but from June to October he saw a number of TPFs when they knocked-out and were booked the same day. He assumed that there had been resolution as the deals kept coming through and, because there were not large numbers involved, he did not think much of it. It was odd to have settlements appearing on the days when trades were booked with an earlier date specified as the date of the deal. It was obvious then to him that the deals had not been booked earlier. Until a trade was booked he knew nothing of its existence, whereas if it was booked inaccurately he would see it and might take action. If a Counterparty sent a confirmation, he would raise the matter with Mr Walsh and a trade would then be booked but otherwise, he could see that trades were being booked on cash settlement but had no knowledge of how many were in the pipeline until October.

629. Between 20th June and 6th October thirty EDTs were concluded by Mr Said, of which two were direct trades with DBAG. Eleven EDTs were booked between 20th June and 10th October on the date of knock-out. Within the same dates, Mr Manrique was informed of nine new EDTs by Counterparties. On 8th September Mr Walsh forwarded the confirmation of EDT 33 to Mr Quezada, saying it was "the one done today". The same day, before meeting Mr Said, Mr Quezada received an accrual sheet from Mr Geisker telling him of EDT 31 concluded with DBAG which was then outstanding.

630. On October 7th/8th/9th, Mr Walsh booked nine EDTs for the first time. There were only two individuals who were likely to have been aware of the number of unbooked trades at that date, namely Mr Walsh and Mr Said. It would have been obvious to Mr Said from the GEM Web Report and from the manual spreadsheets that there were unbooked EDTs since he had his own trading records and would immediately have seen the absence of the EDTs in DBAG's reports. This was of no concern to him because he was receiving accrual spreadsheets from each of the Counterparties on the indirect EDTs and from DBAG on the direct EDTs. He did not look to the MTM or margin calculations as a risk management tool. He specifically agreed to the absence of reporting of the former and implicitly to the latter, which he regarded in any event as a matter for DBAG, not himself.

631. At DBAG however, Mr Manrique was aware of the general practice which Mr Walsh was adopting when trades were booked on settlement with an earlier trade date. Mr Kim was certainly aware of the position with regard to a number of those trades in September and Mr Quezada, if he ever looked at any of the reports, would have realised that any new EDTs approved by him or known to him were not appearing when they should. It was Mr Said's evidence on deposition that he obtained prior approval for every Structured Option from Mr Walsh or Mr Quezada before concluding them. When Mr Walsh took time off in July and his colleague Elizabeth Ngo took over his duties, he told her that Mr Said might trade EDTs and that, as there was no way currently to book them, she should leave them on his desk for him. She printed them out and kept them in a pile for his return.

632. Mr Walsh's evidence was that both Mr Kim and Mr Quezada knew that he was not booking the trades as he was receiving them. They certainly knew that he could not book them properly and that the Resurrecting Fader was an inadequate proxy. He

said that Mr Quezada and Mr Kim both knew that trades were continuing to be executed but that there was no way to book the trades. Certainly by September or October he was confident that they knew this though he could not recall any specific conversation in which he told them that this was what was happening. He said however that he did not seek approval from Mr Quezada or Mr Kim before taking in any trades after late June but Mr Said copied Mr Quezada in on emails sent to Mr Walsh in September about EDTs that he was proposing to do or had just done.

633. Mr Walsh said that he did not know if Mr Quezada was correct in his deposition when he said that he was unaware of inaccurate bookings or failures to book as at September, that he assumed that all trades had been booked, that he was unaware that some trades were not valued or margined and assumed that all the numbers discussed by Mr Spokoyny with Mr Said at a meeting on 8th September at which he was present embraced all trades.

634. In my judgment it is clear that Mr Quezada knew that every EDT was either inaccurately booked or not booked at all and was aware that every one of them was neither valued nor margined correctly, if at all. My conclusions as to the 8th September meeting are to be found elsewhere in this judgment.

635. The evidence shows that the GEM system was capable of dealing only with swaps, forwards, cash trades, vanilla options and single barrier options, as Mr Giery's statement said. The definition of "Structured Option" in the FXPBA tallies with this, inasmuch as it is expressed negatively by reference to options which are not put or call options without special features or single barrier options. Mr Said appreciated this as his October 2008 Timeline reveals. He refers there to "several non-standard Structured Options (defined in the PB agreement) as basically a catch-all of options that the automated deal capture and MTM system of DB could not handle." So it was that, towards the end of 2007, when asking DBAG for details of OCT4 and OCT12, he referred to them as being "offline". As SHI submitted, in its closing submissions, when he referred to "an offline deal" he meant that the trade details were not readily available to him from any of the DBAG systems. SHI accepts that not only was it likely that Mr Walsh told Mr Said that the Gated Range Accrual concluded in June 2007 would not be reported properly (as Mr Giery instructed Mr Walsh to tell him) but that Mr Said got used to the fact in 2007 that various types of OCTs would not appear in GEM at all.

636. SHI points to the Fade-In Forwards (or Resurrecting Fader call options) which constitute OCTs 16-19 and their appearance in GEM Web Reporting. The transactions with CS which constitute OCTs 16 and 18 appeared for one day in the Open P&L report on GEM but only for that day. OCTs 17 and 19, which were the direct transactions with DBAG, did not appear at all.

637. In SHI's closing submissions a table appears with the following explanation.

> "418. The following table summarises the degree to which each category of OCTs seems to have appeared in (1) the Open P&L report on Web Reporting and (2) the manual P&L spreadsheets sent to Mr Said, and whether MTM valuations were included. Where "partial" appears in the final column, that indicates that MTM values did generally appear in

spreadsheets whose options section was based on the MTS Sebastian account, but not those based on the P&L Reporting account.

419. Of course, DBAG admits that those MTMs that were reported for OCTs other than Knock-Out Currency Options were not accurate.

Trade type	**Open P&L reports**		**Manual spreadsheets**	
	appears	**MTM**	**appears**	**MTM**
Knock-Out Currency Opt	regular	yes	regular	yes
Knock-Out Timing Opt	sporadic	yes	regular	yes
Digital Currency Opt	regular	yes	regular	partial
Correlation Swap	never	—	never	—
Fade-In Forward	sporadic	yes	never	—
Fw Setting Currency Opt	regular	yes	regular	yes
Double Knockout Opt	never	—	never	—
Dual Currency Range Digital Opt	never	—	never	—

…"

638. Mr Said could not have failed to notice the absence of reference in the GEM web reports to some of his Structured Options, whether absent in their entirety or only sporadically included. He knew from the outset that, whether they appeared or not, DBAG's MTM system could not handle them.

639. As appears earlier in this section of the judgment, as soon as Mr Said commenced trading EDTs, he asked that the figures for them be kept out of the live MTM module because they gave silly numbers and he was concerned that they might have the effect of distorting the figures for his other trades. Again he would have known that the EDTs, as with the OCTs (other than the Knock-Out Currency Options), were too complex for the GEM system to handle or for reporting of their MTM.

640. As appears from conversations between himself and Mr Walsh, the TPFs which were booked as Resurrecting Faders, as the nearest proxy, would appear occasionally in the Open P&L report within GEM Web Reporting. The 2012 Reports suggest that between 20th February and the margin calls, only on eleven days was there any reference to any TPF. On the Trade Details (Outstanding Trades) Reports on the GEM Web Reporting system however, they appeared somewhat more extensively. The direct TPFs concluded with DBAG did not appear at all, being booked, as it would appear, in RMS but with no downstream feed.

641. Mr Said, according to his email to Mr Walsh of 5th March, listed the Open P&L account as one of "main importance" to him, not including in his list the Trade Details (Outstanding Trades) Report on the web reporting system. He therefore saw that they were generally absent but complained to Mr Walsh when they "popped up", with obviously wrong MTM, requesting Mr Walsh to remove them, which of course Mr Walsh could not do. All he could do was to abstain from booking TPFs until knock-

out and, where they were booked, make a manual alteration to the spreadsheets which he compiled and sent to Mr Said by email in the circumstances outlined above.

642. According to Deloitte, the source of the data for the manual spreadsheets compiled by Mr Walsh varied (as the evidence of Mr Giery and Mr Walsh suggested). Between August 2007 and October 2007 the data which represented the starting point for the spreadsheets came from the same account whose details were available to Mr Said through Web Reporting, save for one date when it appears to have been based on the P&L Reporting Account which was the internal account created with NOP MTMs. Between November 2007 and February 2008 four of the eight spreadsheet reports were based on the account viewable through Web Reporting system and four on the P&L Reporting Account for the corresponding dates. Between May 2008 and August 2008 the spreadsheets were based on the P&L Reporting Account for the relevant date. On eight particular days between August 2007 and August 2008 however, there were multiple versions of the same spreadsheet, some of which were based on the Web Reporting system and some on the P&L Reporting Account.

643. Again, according to Deloitte, the trades included in the P&L Reporting Account were a subset of those included in the Web Reporting accounts. Five OCTs (two Digital options, two Fade-in Forwards (Resurrecting Faders) and one Knock-Out Timing option) were in the Web Reporting system but not in the P&L Reporting Account. So far as EDTs are concerned, whilst it should be borne in mind that nine TPFs were booked between October 7th and 9th, there is only one TPF booked as a Resurrecting Fader option which appears in the Web Reporting system but does not appear in the P&L Reporting Account. Each TPF was booked with a set of two or four trade entries constituting the single transaction and given a single structure ID. A new version of each trade entry was generally created every working day to reflect the daily fixing schedule.

644. Although there are different date ranges for twenty-five TPFs, as between the Web Reporting system and the P&L Reporting Account, sixty-eight of those reflect entries in the P&L Reporting Account in respect of the period after 13th October, when the first margin call was made.

645. There are numerous instances of the P&L Reporting Account containing multiple versions of the same trade entry. 129,231 out of 207,135 entries are duplicative and are likely therefore to reflect the creation of entries for each fixing day. The manual spreadsheets compiled by Mr Walsh did not contain such multiple entries. It would appear that they were edited out, as one might expect.

646. The spreadsheets were produced at various different times during the course of a working day, whereas the figures in the GEM Web Reporting system and the figures in the P&L Reporting Account contained information as at the close of business each day. Some differences are therefore to be expected between the spreadsheet figures and those appearing on DBAG's systems. The discrepancies between the GEM Web Reporting system, whether the Open P&L Account or the Trade Details (Outstanding Trades) Account and the P&L Reporting Account were unexplained but Deloitte did not consider that the fact that the P&L Reporting Account operated by reference to NOP methodology explained the difference.

647. The end of day MTM figures shown in the Trade Detail (Outstanding Trades) Report were fed into GEM from ARCS VaR. When this report is now run for historical dates, it displays either zero or N/A for MTM figures in respect of a number of positions held in the FXPB account. Deloitte's investigations with DBAG have led to the conclusion that where there was no valuation feed to GEM, "N/A" was displayed: where there was a timing issue with the valuation feed to GEM (because of a delay causing the valuation to be received in respect of a particular trade version) the valuation showed as "zero". Both these types of entry were therefore the product of the feed of valuations from ARCS VaR to GEM, not of any changes made to the underlying structured data held in GEM. The History of Collateral Summary report available in GEM Web Reporting shows the daily end of day Available CMV Amount but this shows as zero as a result of a system wide coding change which affected the historical reports for all clients margined on a VaR basis. The date of that change is unknown. In the Collateral Summary Report, however, the latest Current Credit Exposure appears, which is a calculation of the open MTM valuation of all positions in the account, which feeds from ARCS VaR and displays as the "Available CMV Amount". Those end of day CCE calculations fed from ARCS VaR are retained in the GEM database and have been disclosed whereas the zero figures in the Historical Report are not recorded in the GEM database but are generated within the Report at the point when the Historical Report is run.

648. There are still unexplained anomalies in the figures produced by the 2012 Reports and the historical record of what was supposedly shown on the four 2007-2008 Web Reporting accounts which showed MTM and margin. At the end of the day I do not think that matters, in the light of the critical evidence. Taken overall, there is no doubt that the DBAG systems were not designed to cope with the Structured Options and could not do so. That Mr Said knew and understood, although he would not have understood the reasons for the faders "popping up" with spurious MTM numbers sporadically from time to time, nor why figures differed between accounts, if he noticed that they did. He did appreciate that the trade details of the EDTs and most of the OCTs could not be captured and that any MTM or margining was therefore inevitably askew. Mr Said knew that he was not getting accurate reports on the EDTs or their MTMs but his only concern was to ensure that they did not distort the MTM figures in respect of his other trades. It was the accrual spreadsheets, which he got from Counterparty banks on the indirect TPFs and from DBAG on the direct TPFs, on which he relied in assessing his position and risk in respect of the EDTs. As appears hereafter, he told Mr Walsh that he wanted the EDTs removed or the MTM zeroed out of the figures supplied to him by DBAG whether by way of web reporting or manual spreadsheet, which could only achieved by not booking them at all and removing them manually from the spreadsheets if they were booked. He did not look to MTM figures for risk management of his EDTs because he regarded them as accrual trades. Margin was a matter for DBAG to sort out for its own protection and he did not regard the GEM system as a risk management tool.

<u>14. Mr Said's Evidence in Affidavits, on Deposition and in his Timeline</u>

649. As I have already indicated, neither party called Mr Said to give evidence. At the time of the relevant events he was, of course, SHI's agent, employed by one of Mr Vik's companies in order to get the advantage of a medical health package but engaged by SHI without any written contract to trade FX on its behalf. Under the

terms of his engagement he was to be remunerated by the receipt of 10% of the net annual profits of SHI resulting from his trading and during the first year he received an annual salary of some US$360,000, which was to be set off against his entitlement to net profits, if earned. He remained on Mr Vik's company's payroll until about June 2009, having told Mr Vik that he would work for him for free in an attempt to recoup the losses suffered as a result of his trading in 2008. Mr Said parted company with Mr Vik after swearing three affidavits in the New York action, the last of which was sworn on 21st May 2009 and is relied on by SHI under the Civil Evidence Act.

650. Each party relies upon different elements of Mr Said's deposition in New York which took place on nine different dates. The first three sessions took place on January 30th, January 31st and February 1st 2012. The fourth and fifth occasions took place on 7th and 10th September 2012 and the sixth on March 11th 2013. On all these occasions Mr Said was questioned by attorneys for SHI. On the seventh, eighth and ninth occasions in March and April 2013 he was questioned by attorneys for DBAG and on that last day he was re-examined by SHI's lawyers. Mr Said was not wholly consistent in these depositions.

651. Whilst there is, of course, no property in a witness, if either party was to call Mr Said, the natural expectation would be that it would be SHI as he was SHI's agent and SHI blames DBAG for the losses caused by Mr Said's trading. SHI however does not treat Mr Said as a witness of truth in relation to the trades which Mr Vik authorised him to conduct. DBAG contends that Mr Said did not tell the truth about his relationships with DBAG personnel on the vexed subject of the EDTs and in particular about his state of knowledge as to DBAG's failure to book, value and margin those trades.

652. I have read the whole of Mr Said's depositions in order to evaluate the parts relied on by each party and to determine what can and cannot be relied on as accurate. I have found that the surest guide to the accuracy of that testimony is, as might well be expected, the content of the contemporary documents, including in particular the emails passing between Mr Said, Mr Vik and DBAG personnel, transcripts of telephone conversations recorded by DBAG and the immediate reactions of those involved when issues came to a head in October 2008. Additionally, there are Bloomberg chats which throw light on the contemporary events. When these matters are considered in the light of the motivation which can readily be ascribed to those involved, I have not found it difficult to determine where the truth lies in what Mr Said has said on the critical issues between the parties.

653. One factor stands out. When, in October 2008, DBAG made substantial margin calls of SHI, Mr Said did not blame DBAG in any respect for the losses sustained in his trading, nor suggest that DBAG had hidden anything from him in its accounting, valuing and margining, nor that the margin calls were inappropriate. It is clear that he had substantial discussions with Mr Vik in October and that the margin calls made between 13th and 17th October were all paid. On more than one occasion Mr Said said that there was no-one to blame for the losses incurred other than himself and the one in one hundred years market conditions he had encountered. In the middle of that week Mr Vik started to ask questions about DBAG's prior margining, but there was not a hint of any suggestion from him that Mr Said's trades were unauthorised, that there had been an agreed limit of US$35 million for SHI's liability, or that Mr Said had been left in ignorance about his trading positions and would have acted entirely

differently if DBAG had provided him with the MTM and margin information of which complaint is now made. By that time, in fact by sometime in the preceding week, if not earlier, he knew what Mr Said knew about DBAG's failures to value margin and report thereon.

654. Moreover Mr Said drafted a "Timeline of Dealings with Prime Brokerage", running to five pages, covering the position from September 2006 to October 2008, which he said he produced some time in October 2008 for the benefit of SHI's lawyers and which therefore might be expected to put the best face on his and SHI's position. The contemporaneous documents are reflected more closely in that Timeline than in his affidavits in the New York proceedings. When asked in his depositions by SHI's lawyers how it was that, in his depositions he was saying that he had told Mr Vik about the different types of Structured Options that he conducted before he did them, whereas in paragraph 23 of his third affidavit he had maintained the opposite, he said that, in his affidavit, he had "[m]ade a mistake … [d]idn't read it carefully enough. … It's just not correct. I don't have a good … I think the military answer would be no excuse." At the time of swearing those affidavits in April and May 2009, Mr Said was working with SHI's lawyers and he explained in his deposition that he did not personally draft the affidavits and did not remember reviewing any emails or other documents in conjunction with them at all. What Mr Said was there saying was that he was effectively acting under orders when swearing the affidavits ("the military answer") and that the affidavits were drafted for him, doubtless by SHI's lawyers.

655. It is suggested by SHI that Mr Said's third affidavit is accurate and that, where contradicted by him in his depositions, Mr Said is not to be believed. It is suggested that, following his affidavits, DBAG's lawyer made contact with Mr Said, suggested that SHI was depicting him as a "rogue trader" and asked him if he was prepared to meet him. Mr Said refused to do that and subsequently instructed his own lawyer for the purpose of the depositions. I cannot see how this provides any sort of an explanation for the change in stance adopted by Mr Said in his depositions, as compared to the affidavit, nor any explanation for the differences between his affidavits and the earlier Timeline, which was originally claimed to be a privileged document but which was the subject of an order for disclosure by the New York court.

656. Mr Said still operates in the FX market. At the time of his affidavits, he still had good reason to support Mr Vik/SHI and signed his name to affidavits drafted in support of SHI's case in New York. He no doubt wished to help Mr Vik and SHI to recoup some of the losses suffered from his trading and, whilst it should not be the case, it is the fact that often people are more prepared to sign affidavits drafted for them with less regard for the truth than they are to make untrue statements in face-to-face questioning. When, in the context of a video-taped face-to-face deposition, witnesses are referred to, or have read, documents which tell a different story from that set out in a statement in writing, they are, naturally, more reluctant to uphold a position contradicted by those documents or not reflective of reality.

657. Mr Said, at the time of the depositions, still had reason to support SHI and Mr Vik in seeking recovery from DBAG and casting blame upon it for his trading losses and failures to read the market. He may however also now be more highly motivated to protect his own reputation in the FX market, having severed his connection with Mr Vik. It is true therefore that he might be considered more reluctant now to agree that he had acted in breach of any authority given to him but, at the time of his affidavits,

the point was not being put in that way in the New York proceedings. Now however SHI criticises him not simply for a wrong market judgment in the extreme conditions of October 2008 but for exceeding the trading authority given to him.

658. Mr Said's natural motivation would be to seek to justify himself and to seek to cast blame on others if he could do so. The only possible target is DBAG. It is clear that he is not going to be sued by SHI, Mr Vik or by DBAG because he is not good for the sums in issue in this action. He therefore had no particular reason at the time of the depositions to take DBAG's part in the dispute and, as far as he was able, he did support SHI's case. He changed his stance (from that in his affidavit) on Mr Vik's knowledge and understanding of the Structured Options in the light of the documents which showed discussion between them on the subject.

659. In coming to the views that I have, I have therefore had close regard to the contemporary documents and actions of the persons involved, the commercial probabilities in the light of their relevant FX and business knowledge and the experience and personalities of those involved as shown by the contemporaneous reactions of others to them at the time.

660. Mr Said had experience of the FX market over a period of twenty years and was knowledgeable about how it worked. He was self-confident, decisive and forceful. He knew what he wanted to do and bent others to his will. He had been Global Head of Foreign Exchange and Money Markets at CS for five years from 2001 to 2006, having previously worked at JP Morgan, rising to Global Head of Foreign Exchange, Short Term Rates Trading and Precious Metals between 1999 and 2001. He knew how banks operated and knew how to put pressure on the employees of DBAG, including in particular Mr Quezada and Mr Walsh in the FXPB department. It is plain from Bloomberg chats that he felt able to exert leverage on them by threatening to withdraw SHI's business or putting them in bad odour with Mr Vik, an important billionaire customer of DBAG. As appears hereafter, he was able to persuade them to take on trades that they were reluctant to accept. He was also a good negotiator and was prepared to gild the lily when talking to others and seeking to persuade them to adopt a course of action more amenable to himself. As any trader would, he kept his own records of trades and had his own pricing tool for vanilla transactions. He could see market movements in spot trades, forwards and volatility. He could check his own records against those of DBAG's web reporting system at any given time and was able to point out errors in DBAG's MTM calculations on both vanilla and exotic trades, when they did appear. He could see where EDTs were not booked even if he had been charged the fee for matching trade confirmations.

661. Mr Vik was a highly experienced businessman who traded in FX himself, essentially in directional trades, taking a longer term view of investment in the FX market. He was astute in financial affairs and, whilst not a man for descending into intricate detail, exhibited a ready grasp of the essentials of any trade proposition, including in particular the risk/reward equation. Described as "savvy", he could readily understand the nature of varied financial transactions of considerable complexity with a keen eye for the numbers. Mr Brügelmann at DBS held Mr Vik in awe because of his extraordinary faculty for retaining details of his trading positions in his head and his ability to conduct his business on a blackberry, without detailed records in front of him. Mr Said valued Mr Vik's opinions and judgment in the context of FX transactions, though Mr Said, with his years of experience, knew much more about

the different products and how they worked in the FX market. If Mr Said explained a trade to Mr Vik he had no doubt, and I have no doubt, that Mr Vik would readily understand the essential components of it. Mr Said was not a man who was slow coming forward and readily expressed his market views in Bloomberg chats and the nature of his trading activity and underlying trading philosophy.

662. Mr Said was described by some witnesses as a bully. It was clear from the contemporaneous exchanges between Mr Walsh and others, whether by email, telephone or instant messaging, that as a 23-25 year old, Mr Walsh found Mr Said overbearing and could not, given their relative positions, say no to him. He took guidance from Mr Quezada, on the FXPB Product Sales Desk, but Mr Quezada was likewise incapable of resisting Mr Said's blandishments and his threats about taking the business elsewhere if DBAG would not accept the trades that he wanted to carry out. As appears from the contemporaneous documents, there were a number of personnel at DBAG who wished to refuse to accept the EDTs and/or OCTs that Mr Said wished to trade through FXPB because of the difficulties that were involved in booking, valuing and margining the trades but their objections were overborne by Mr Said's threats to take the business elsewhere and in particular the loss of business that would accrue from his direct trades with DBAG's Execution Desk in the person of Mr Geisker.

663. Whilst personnel in FXPB in London objected to these trades being taken in and Steven Kim, the Global Head of FX Prime Brokerage Operations in New Jersey and Mr Manrique in the FX Options Operations Team under Mr Kim also took the same view, the decision in the end rested with Ms Liau's department and in particular Mr Quezada on the Business side (as opposed to the Operations side) of FXPB. If the decision was taken to take the trades in, the Operations department, having made known its difficulty in coping with them, in terms of booking, valuing or margining, had to go along with that and Mr Walsh, the most junior of the employees, was left to deal with Mr Said on the basis of the instructions given to him by Mr Quezada and by Mr Said. It was essentially Mr Walsh and Mr Quezada with whom Mr Said dealt at DBAG.

664. Mr Said, as is plain from the contemporary documents and the telephone conversations, kept his own records of trading. Like any other trader he knew what his positions in the market were. With his own calculator he could assess his MTMs on vanilla trades, for spot transactions, forwards and vanilla options, drawing on published market sources such as Bloomberg. The spot rate, the forward rate and the volatility rate were all there to be accessed. It is clear that he was able to tell DBAG when their assessments of MTM were wrong on such trades, which he did from time to time and with some vehemence.

665. It is clear from all the evidence that Mr Said began trading for SHI with essentially vanilla trades. For the first couple of months at the end of 2006 he sought Mr Vik's approval before conducting any individual trades. By February 2007, confidence had grown between the two and Mr Said no longer needed to seek Mr Vik's prior approval. He then began to branch out into non-vanilla trades in the shape of OCTs and between February 2007 and July 2008 he traded in fifty-three OCTs and forty-one EDTs (as they have subsequently been classified). This still represented a relatively small proportion (11.7%) of his total trading in terms of numbers of trades. Mr Said expressed his underlying trading philosophy for these non-vanilla trades on a

number of occasions, in email, Bloomberg chat and telephone conversations. Whilst there was a measure of volatility in the movement of currencies against one another, he saw the market as being essentially directionless in 2007/2008, particularly during the summer months, when he described the market as going "into hibernation", an anomalous expression for the summer months. He maintained that the only way to make any real money in such periods was to "short volatility" – in other words to enter into trades which amounted to a bet that currencies would not move against each other beyond certain limits, whilst they might move within them. He described these as "range bets" or "range trades". He was betting against increases in volatility beyond the specified range in the individual transactions. He considered some currencies to be mean reverting and although they might move out of the ranges specified from time to time, they would in the ordinary way come back within the limits of those ranges and under the terms of the trades he would make profits. If therefore a trader was prepared to ride out the storm of temporary volatility and the losses incurred when currencies did move beyond the ranges, profits were there to be made because they would come back in, but a trader had to be prepared to hold onto the trades and treat them as accrual trades with the profits building up and offsetting the occasional loss.

666. Mr Said thus perceived EDTs and other similar OCTs as good range bets. They were zero cost options with no money to be paid up front and, where pivots were involved with a knock out feature, the latter had the effect of limiting the total profit made but, in those circumstances enabling the trader to obtain a wider range within which the currency could move with greater or lesser degrees of profit, without touching the upper and lower strike prices where losses would begin to accrue. Such trades were not to be unwound because they were "buy and hold" trades and the unwinding of them would be prohibitively expensive. At almost all stages they would be likely to be out of the money on a mark to market basis, right from the moment of the trade being done. He regarded his position at SHI as giving him an advantage over banks or hedge funds because he did not have to respond to MTM movements in the way that they did.

667. It is clear that he fully understood how pivot TPFs worked and saw them as accrual trades. He told Mr Vik that "you have to watch them like a hawk" and if they moved towards the range, they had to be hedged with either directional TPFs or with other pivot trades with a wider range (i.e. a higher or lower strike which would enable profits to continue to be made as the market moved further away from the pivot on the earlier trade and beyond the strike set in that trade).

668. He knew in broad terms, because he said so, that the MTMs of TPFs were essentially negative at the outset and were generally negative throughout the duration of the TPF until knockout. He knew also that the MTM related to the spot rate, the forward rate, and implied volatility – information on all of which was available to him on Bloomberg. He also knew that losses could be substantial if the spot rate moved beyond the range and stayed there for any length of time. It is self-evident that any competent trader would know that the notional on a TPF, whilst expressed on the basis of one fixing, depended upon the number of fixings for the trade, whether weekly or daily. This is plain from any trade confirmation and the manner in which profits and losses accrued. Mr Said's deposition evidence and the email exchanges show that he was well aware that profit was limited by the knock out feature to the

"target" figure in the TPF, whereas losses, as with any sale of an option, were indefinite and theoretically without limit up to the total notional. It is clear that he knew the risks he was running in entering into these trades but considered that the substantial losses which ultimately occurred were extremely unlikely to eventuate. He referred to that possibility as involving "the world [going] to hell in a hand basket". He therefore regarded the risk of losses of the magnitude which were ultimately suffered as so unlikely that it could be effectively discounted. He was proved wrong by the events of the autumn of 2008 which he described as a "perfect storm" in which he was caught up.

669. The Timeline was originally drafted by Mr Said for the benefit of SHI's counsel and therefore was undoubtedly intended to help SHI's case, but it is also to some extent self-serving on Mr Said's part. Nonetheless a number of features appear clearly in the Timeline which contradict the case which SHI now makes:

i) Throughout 2007 Mr Said described his trading as successful with the build up of a positive profit figure which increased the margin amount available and the size of positions that could be taken. Mr Said considered the position heavily over-collateralised although, when Mr Vik withdrew US$30 million in cash from the account on 9th October 2007, available margin reduced once more. Overall profit for the fourteen months' trading in 2006 and 2007 was, he said, about US$45 million so there was excess margin left in the account from built up profit even after that withdrawal of cash. He regarded the profit earned by his trading as increasing the margin available to him.

ii) In 2007 Mr Said said he did several non-standard Structured Options, as defined in the FXPBA. He described the term Structured Options as "basically a catch-all of options" that the automated deal capture and MTM system of DBAG could not handle and which was subject to case by case approval by DBAG as Prime Broker. These were, after brief explanation, he said, accepted for give-up by DBAG. Mr Said said that he could not recall whether they had any major margin implications but he thought not because the margin situation was extremely benign throughout 2007 (and really until October 2008).

iii) In 2008 Mr Said said he did more Structured Options and in February 2008 was shown by CS the Pivot Accrual structures. He found two which had very favourable risk reward ratios (a very high probability of knocking out early in most market scenarios given the short average life) and explained the transactions to DBAG, saying that they did not really involve exchange of cash flows until unwind, knock out or maturity. DBAG thought about it for a day or so and then said they were happy to accept these structures for give up and gave their approval for these Structured Options under the FXPBA.

iv) Over the course of the year Mr Said said he did a meaningful number of these on a rolling basis and the market for much of the year was as he expected it to be – full of sharp moves, sometimes somewhat random, with plenty of volatility but ultimately no massive powerful trend. The portfolio performed very well despite the Bear Sterns crisis in March and the last big dollar weakening with the result that in early October realised profit on the option portfolio amounted to about US$65 million, having been around US$82

million in August but deteriorating since because of the weakening of the NOK.

v) The Timeline continued:

"DB as PB accepted all the trades as I did them and processed the knockouts and payments as they occurred. I did not receive mark to market on these structures form [sic] them however and I did not notice an appreciable impact of the options on the required margin calculations. The options also either did not show up at all in the online P+L or were there, but with non-sensical P+L numbers. There were some discussions with DB about their ability to handle these – I wanted to make sure they were in a position to support them so I initiated the conversation with Rafael Quezada. DB's position I recall (from memory of phone calls) as follows:

- we can support these structures

- we want to support these structures

- we should be able to mark them to market

- But only our trading desk can and they don't like doing it for deals not done with them.

- They asked me quite directly to do some of these deals with the DB desk (which has not distinguished itself in terms of pricing whenever I gave them a chance) to "create some goodwill so we can work with the trading desk on the other structures. DB actually improved their pricing and I did several transactions with them.

That seemed to settle any residual issues DB might have had with booking or handling these options.

In terms of margin impact – it is not clear to me exactly how much INITIAL margin one of these structures should attract. But it seems form [sic] following the margin daily that DB may not have attributed any. In terms of variation margin – many of the options knocked out quickly and benignly without ever developing much mark to marked [sic] value – but some definitely did (I recall the very first euro Norwegian Krona option went right to the top of its ban and stayed there for a while before – as had been my view, retracing and knocking out with good profit. Again – from memory, I do not recall an impact on the margin calculation – and looking at it now, there should have been given the option must have a decent size MTM loss for a while which should have meaningfully decreased the margin capacity. It is true that there was built-up profit in the account which would have meaningfully

INCREASED the margin capacity (see above). DB pointed this out on a call to me. However, much as he did in 2007, Alex did in the summer (I believe in July) withdraw 66mm$ from the account (a move I suggested to him given the cash was lying idle) which would have been substantially all the built up profit. Therefore in terms of margin capacity, we should have been back to the 35mm$ we started with (or in the general neighbourhood).

The portfolio of these options was actually very similar through-out much of 2008 – primarily eur/chf, $cad and eur nok with some currencies like aud/nzd eur/stg, eur$, $ yen stg/chf and $/brl added on occasion.

Throughout 2008 there were no margin calls form [sic] DB nor was MTM from the options represented in the P+L."

vi) It is relatively clear from this summary that although Mr Said refers to a settlement of any residual issues DB might have had with "booking or handling these options" following his discussion with Mr Quezada, there is a gap in his logic as to how this could be the case since only the Trade Desk was able to mark the transaction to market and it did not like doing it for indirect trades given up to DBAG as Prime Broker. Mr Said stated that although it was not clear exactly how much initial margin these options should attract, he appreciated, from following the margin daily, that DBAG might not have attributed any at all. He did not also recall any impact on the margin calculation at all when there should have been variation margin by reference to changing MTM. He said that there were no margin calls "nor was MTM from the options represented in the P&L" (by which he meant the reports of MTM).

vii) Mr Said then referred to DBAG's request in August of 2008 for a meeting to discuss margin in New York. He appreciated that the original terms were "simply too generous". Discussions culminated in a confirmation on October 6th that new margin terms would only raise the required margin from US$21 million to US$40 million that day. In discussing this Mr Said said that "during our meeting on September 8th in NY they did reference the structures and said they were having some issues incorporating them into the margin calculation but would get to it shortly". It is thus apparent that Mr Said knew that the Structured Options did not yet appear in the margin calculations.

viii) The Said Timeline continued:

"The portfolio of options (still) did alright through September and early October (all but three accruing positive every day) with the exception of the 4 $ brl structures (really part of one trade but spread over time). $ brl had started to move up steadily and in the first week of October the move suddenly accelerated. I was aware that we were looking at negative accruals and what had to be a decent MTM loss (I believe I wrote to Alex about these options and the strategy given the illiquidity of the market). DB did not, to my knowledge react

to any of this, nor was any negative MTM incorporated in the margin calculation.

What happened next, I believe in early October (week of Oct 6th I think) was that Morgan Stanley, which had dealt with three of the four structures in question, apparently approached DB about separately margining these. Suddenly I got several calls form [sic] DB now asking about these options and did I have a MTM on them or could I get it from the counterparts. I think I told them I was pretty busy managing our risk in difficult markets and I wanted them to get the mtms – as they had initially said they could and would. This went on throughout the week of Oct 6 while I was discussing with Alex how to proceed on these options which were clearly showing a meaningful loss – but it was also not clear to me that cutting them out here was necessarily the right approach. Brl weakened steadily throughout the week, but we did not receive any margin calls from DB."

Again it is clear from this that Mr Said appreciated that MTM on these Structured Options was not incorporated into the margin calculation and that it was only the approach from MS seeking separate margin from DBAG that led to the latter asking Mr Said for MTM or asking him to get it from the counterparty banks, though the matter was left on the basis that DBAG would get those figures from the counterparty banks themselves. During this week Mr Said was discussing matters with Mr Vik (as the emails show).

ix) Mr Said went on in the Timeline to refer to the margin calls saying that it appeared to him that it was only then that DB "had pieced together a picture of what they thought the MTM exposure was on all these structures". He then referred to the market as being in "full blown crisis mode – extreme stress" and "a perfect storm" that "hit most of our positions". He referred to DBAG's first margin call as wrong because the bank clearly did not have the right MTM numbers, (including some positive exposures which made no sense) and the figures were too low given the market moves. He then referred to the collapse of currency markets that week and the multiplication of margin calls from DBAG where he said that the numbers they based their calls on were "extremely spurious – some accurate, some way off".

670. Against the background of that Timeline drafted for SHI's lawyers' benefit, the affidavit of 21st May sworn by Mr Said in the New York proceedings falls to be considered. Paragraphs 8 and 9 of that affidavit read as follows:

"8. The structure of the collateral was also discussed. I explained to the Bank (and I understand that Mr Vik did as well) and the Bank understood that my trading had to be separate and isolated from other Sebastian Holdings' assets and that Sebastian Holdings was only willing to expose a specific sum for my trading. The Bank recommended and agreed that this would be accomplished by Sebastian Holdings, in connection with the opening of the New York FX PB Account,

> pledging as collateral the equivalent sum of $35,000,000 in a newly opened separate account of Sebastian Holdings with the Bank in Geneva, Switzerland and that the Bank in Switzerland would issue a guarantee against such account, in such amount to the New York FX PB Account to support the FX trading in New York. This would also create a system of checks and balances for Sebastian Holdings as, for instance, Thomas Brugelmann could monitor the risk in the New York FX PB Account from the balance in the pledged account.
>
> 9. All of the trades I did in the New York FX PB Account were based on the $35,000,000 pledged by Sebastian Holdings in the Geneva account in Switzerland and the guarantee issued by the Bank in Switzerland to the New York FX PB Account. I understood at all times, as did the Bank, that my trading was limited to the specific amount of collateral and no more. Indeed, on two separate occasions, Sebastian Holdings transferred funds out of my account as such funds were not used to support my trading. There was never any discussion or agreement that any of Sebastian Holdings other accounts or assets would be available as collateral for my FX trading. In fact, in October 2008, Rafael Quezada of the Bank requested that I ask Sebastian Holdings to increase the pledge. From earlier communication with Mr Vik, I did not think that Sebastian Holdings would consider increasing the pledge and I never made such request of Mr Vik."

671. The affidavit continued:

> "15. Throughout my FX trading, I had continuing discussions with the Bank about its obligation to provide accurate reporting, either as part of the Bank's website to which I alone, not Mr. Vik, had access, or the daily reports that Bank personnel, including Matt Walsh, would periodically send only to me by e-mail. Several things should be noted: first, I often checked the "available" collateral on the Bank's website and found that I never got close to the limits. At no time before October 2008 did the Bank inform me that the Bank had failed to include any trades in the collateral calculations. At no time did I ever agree that the Bank had no duty to provide accurate reports. To the contrary, I was constantly assured, particularly by Quezada, that the Bank had a "good system" and that the Bank was capable of providing accurate reporting. Quezada and others at the Bank understood the Bank's obligations to provide accurate reporting and that such reporting was critical to monitor risk.
>
> 16. Indeed, I always made it clear to Quezada that the Bank should only "take in" the structured accrued pivot trades, which I started doing in 2008, if they could handle them and accurately value and put them into collateral calculations.

Quezada assured me that the Bank was able and happy to accept them and every trade was pre-approved and accepted by the Bank. Indeed, Quezada even asked me to do my best to do a few of these trades with the Bank rather than the other counterparties, which I agreed to do for him on a few occasions. The Bank was clearly eager for me to engage in the pivot trades and the Bank was able to value the pivot trades.

17. I never agreed to conduct pivot trades without their value being reported on the Bank's website. As the Bank well knew I did not have any authority to do so and reporting exposures was a prime obligation of the Bank as it well knew.

18. The Bank was required to include all trades including the pivot trades, in their reporting and all trades, including the pivot trades, were supported only by the $35,000,000 in the pledged account of Sebastian Holdings in Geneva and the corresponding guarantee from the Bank in Geneva to the New York FX PB Account.

19. As this was my understanding as well as that of the Bank, I continued such trades in 2008. I did not notice any appreciable impact on the pledged collateral amount for these trades. The structures either did not show up on the website or sometimes were there but with nonsensical numbers which I pointed out to the Bank on several occasions in my efforts to make sure the reporting was correct. In all events, I engaged in such trades relying on the Bank's obligations to Sebastian Holdings as its prime broker and pursuant to the New York FX PB Agreement.

20. For example, I sent an e-mail to Matt Walsh alerting him that the numbers in the live mtm module relating to two earlier pivot trades did not seem accurate to me and I thought that these inaccurate numbers should be excluded from the real-time reporting system until they were corrected so as not to render all real-time information erroneous. This e-mail related only to those two trades and only about the real-time reporting. It was not an instruction to exclude pivot trades from being valued in the Bank's system. Communications like this were to make sure that, among other things, trades were properly matched and documented and correct information was being used. I again continued to rely on the Bank's assurances that they could value the trades and correctly report their calculations.

21. Never once during the many months of my pivot trades did the Bank ever suggest to me, nor to my knowledge, Mr. Vik, that the trades were in excess of the collateral limitation ($35,000,000) or that there was "inadequate security."

22. While in late August 2008 the Bank, in New York, did ask me, not Mr. Vik, to have discussions take place concerning

what eventually resulted in their unilateral change of collateral calculation methodology, never once was I advised by Michael Spokoyny (or anyone else at the Bank) that he was aware of any deficiencies in collateral or what the Bank has come to now allege were "hundreds of millions of dollars of losses."

23. To the contrary, when the Bank and I (not Mr Vik) did meet, pivot trades were raised and I was assured by Spokoyny, as I had been in the past that the Bank was accurately valuing these trades and including them in their collateral calculations. All we discussed and eventually received was the Spokoyny e-mail of October 6, 2008 unilaterally requesting that the methodology for calculating collateral requirements was to be modified with the result that the required collateral in the account of October 6, 2008 was to be increased by $5,000,000 ($35,000,000) to $40,000,000. Because my collateral was limited to $35,000,000, and Sebastian Holdings was not interested in increasing the pledge, this required me to reduce my trading positions. No mention was made of pivot trades or the fact that by that time the Bank may have known about losses amounting to hundreds of millions of dollars, all of which was unknown and unavailable to me and of course to Mr. Vik with whom, prior to mid-October 2008 I did not discuss my pivot trades.

24. I believe that it is only when the Bank thought it was going to receive a request from a counterparty (I believe Morgan Stanley) in October 2008 to post collateral for individual trades because of "mtm" (that is, mark to market calculations) done by such counterparty, that the Bank finally realized that it had to disclose to Sebastian Holdings what the Bank alone knew all along: that the losses had been and were becoming staggering and that the Bank had failed to comply with its calculation and reporting requirements to Sebastian Holdings under the New York FX PB Agreement and the prime brokerage relationship.

25. Even then, the Bank, recognizing and well aware of the $35,000,000 collateral limitation requested it be increased by only $5,000,000 to $40,000,000. The Bank, knowing I (and of course Mr. Vik) had no access to mark to market calculations, was the only party which could accurately calculate and report collateral requirements and it failed to do so.

26. Indeed, when I received the first purported "margin call" from the Bank on October 13, 2008 it was erroneous and the Bank knew that it was erroneous; understated by hundreds of millions of dollars. Had the Bank reported accurately, I would never have entered into the trades and I would have liquidated any trades on an earlier and more timely basis and Sebastian Holdings would have suffered substantially lesser, if any, losses and the wrongful margin calls would not have been satisfied.

> 27. My trading was supported only by the $35,000,000 guarantee issued by the Bank in Switzerland to the New York FX PB Account and neither the Bank nor any other party provided any other financing to support my trading activities. I did not have any authority to borrow from the Bank nor have I ever done any trades with the Bank on "margin"."

672. The difference between the Timeline on the one hand and Mr Said's affidavit on the other in relation to his knowledge about the absence of MTM and margining of the Pivot Accrual trades is self evident. The affidavit makes out that DBAG knew throughout that it was not charging appropriate levels of collateral in respect of these trades whereas he and Mr Vik were completely ignorant of the position. The affidavit makes out that although he had continuing discussions with DBAG about reporting, he never agreed to conduct pivot trades without MTM reporting on DBAG's GEM website, that he occasionally pointed out nonsensical numbers on the website to the bank in an effort to ensure the reporting was correct and that he relied upon DBAG accurately reporting MTM and margining accordingly.

673. What emerges from the contemporaneous exchanges between Mr Said and DBAG personnel in 2008 to which I refer elsewhere is an entirely different picture. Recognised in part by Mr Said in his depositions, the picture which emerges is an awareness on Mr Said's part that DBAG could not book, value or margin the EDTs properly (nor many of the OCTs) because its systems were not capable of handling them.

    i) Mr Said knew from the GEM website and from the manual spreadsheets supplied to him that the EDTs were not being booked accurately, that where they were being booked they were being booked as "Resurrecting Faders", an inadequate proxy or placeholder for the transactions in question and that in the later stages they were not being booked at all until cash settlement.

    ii) Moreover Mr Said had gone to some lengths to tell Mr Quezada and Mr Walsh, in an effort to persuade them to accept the trades as Structured Options under the FXPBA, that DBAG did not have to do anything on the trade – they did not have to keep track of it or provide MTM and that the only time they had to get involved was when the trades knocked out or matured and cash settlements fell to be made.

    iii) He regarded margining as a problem for DBAG to work out for itself but inevitably, as an experienced trader, knew that if DBAG could not value the trades on an MTM basis, it could not margin them either.

    iv) He knew that the MTMs on EDTs which were booked as Resurrecting Faders were "spurious by tens of millions" on the website and asked for the MTMs to be "zeroed out" or removed from the reports and the manual spreadsheets which Mr Walsh sent him which otherwise showed a comprehensive list of his vanilla trades and the applicable MTM valuations. He also appreciated that margining on the basis of the valuations on the website would lead to numbers which were "chaotic".

674. The reality therefore was that, in consequence in particular of telephone calls on 5th May and 22nd July 2008, Mr Said procured the agreement of DBAG to accept trades, the details of which could not be booked on GEM and which could not be valued or margined correctly, if at all. He was more than content to go along with that in order to use the prime brokerage to contract the EDTs and OCTs he desired. He told DBAG personnel that MTM was of no consequence to him because he regarded these as accrual trades or "buy and hold trades" and it was the cash accruals of unrealised profits and losses to which he had regard. As appears from his exchanges with individuals at counterparty banks and Mr Vik he knew that he was getting a "free ride" on margin because of DBAG's inability to value the trades for a period of some 6-12 months and throughout the relevant period he was doing his best to keep the margin requirements down and was not in the slightest dependent upon either DBAG's MTM valuations or its notification of margin requirements in conducting his own risk management.

675. Moreover, on odd occasions he obtained an MTM value from counterparty banks and any comparison of those with DBAG's MTM figures or margining would inevitably have showed the inadequacy of DBAG's figures (compare his comments made in the Timeline). The key point is that, as discussed directly between DBAG personnel and Mr Said, he knew, because he was told as much, that the FXPB department did not have access and never obtained access to the MTM tools used by the DBAG Complex Options Trade Desk, namely DB Analytics, for valuing the EDTs. He at one stage offered to help FXPB to gain access to DB Analytics by offering to do direct trades with the DBAG Trade Desk and suggesting that it should make the DB Analytics tool available to FXPB, failing which he would do no further trades with it. This all came to nothing, as he knew, since the Trade Desk was not, for whatever reason, prepared to make that system available to FXPB (whose personnel would have to be trained in the use of it). The reason for this was almost certainly the reluctance of the Trade Desk to assist FXPB in facilitating Mr Said's trading such EDTs with other banks rather than the problem of preserving confidentiality, since Mr Said was content for details of his other trading to be disclosed to DBAG's Trade Desk.

676. SHI, in its submissions, accepted that during the whole of 2007 and the first half of 2008 Mr Said knew that DBAG was not able to produce accurate MTM valuations for some OCTs and all his EDTs. The position remained the same throughout the rest of the period of Mr Said's trading. There was nothing which could have altered his understanding on this point. Nor could he have, at any time, understood that the EDTs were being properly margined since such margining depended, so far as concerned variation margin, on DBAG's systems producing valid MTM figures. This appears at least in part from his evidence on deposition. Elsewhere I set out the more significant exchanges between DBAG personnel and Mr Said which make his state of knowledge and agreement to the absence of proper booking, valuing and margining, clear, to the extent that he was not prepared to admit it on deposition.

677. In this part of the judgment I mention only in passing the resiling by Mr Said in his depositions from what he said in paragraph 8 of his third affidavit about SHI's structure being established to separate and isolate his trading from other SHI assets and his comments about any limitation on his ability to trade by reference to the provision of the sum of US$35 million alone as capital. That too is dealt with

elsewhere in this judgment. My focus here is on the issue of SHI's booking, valuing and margining of the EDTs and OCTs.

678. Mr Said's evidence on deposition was that all the EDTs or OCTs (which were given numbers for the purpose of this action) were the subject of prior approval by DBAG in the persons of Mr Quezada or Mr Walsh and SHI does not contend otherwise.

679. Mr Said's deposition evidence contained a number of inconsistencies. In questioning by SHI's attorney he started by saying that he had to run the Structured Options by DBAG to make sure that DBAG could accept the trades by booking them and managing them and that he would speak to Mr Walsh or Mr Quezada to obtain their agreement. He said he did not recall DBAG ever saying that they could not do these structured trades and in the end they were booked and executed as at first conceived. He said that in April 2008 he had emailed Mr Walsh to say that the FXPB system was throwing out numbers that were spurious by tens of millions in respect of the Pivot Accruals. He told Mr Walsh to exclude them from the MTM figures. He said in the deposition that he was not concerned over the current MTM of the Pivot Accruals (or faders as Mr Walsh called them) because they would accrue profit and loss over time anyway. He therefore told him to keep them out of the MTM figures in order to ensure that the other figures were straight. He said that he never told DBAG that the faders did not need to be valued or that accurate reporting of them was not necessary.

680. He said that obviously DBAG were not able to effect the MTM. That was always portrayed to him as an ongoing issue that would be solved but not that they could not do it. He then said that he was given an assurance by Mr Spokoyny at the meeting on September 8th when discussing VaR.

681. He said that in mid-May he knew that FXPB could not model the TPFs and that only DBAG's Trade Desk could. He said that Mr Quezada wanted to be able to use that pricing model and had asked him to help put pressure on the Trade Desk to allow him access. This fix for the Pivot Accruals was always just round the corner. The MTM on the TPFs was therefore excluded from the website until they fixed the matter. Mr Said said in deposition that it never occurred to him that DBAG would not value the trades so far as its own risk went. When he sent an email to Mr Walsh saying that the numbers in the live MTM module relating to two pivot trades were not accurate and told him to exclude them from the system until they were correct this was not a general instruction to exclude pivot trades. He said he had no recall of discussing any incorrect booking of such items with Mr Walsh or Mr Quezada. The only initial question was whether they could take it and after a while they said they could.

682. He went on to say that he did not believe that Mr Quezada had ever said that they had not booked them but were going to find a way. He was merely saying that it was not simple and they would have to work out how to do it. If the bank could not accommodate the trades it had to say no. When discussing such options with Mr Quezada, the latter had told him that one off (non-standard) trades would not be a problem but that he should not swamp DBAG with them. He did not think that any trades were ever definitively declined but he was not 100% certain of that.

683. He had no recollection of being told by Mr Walsh that DBAG booked TPFs as Resurrecting Faders because there was no other way of booking them. Mr Walsh may however have told him that DBAG's FXPB systems could only report trade details for

single barrier and vanilla options in addition to swaps, forwards and cash trades. He said he had no recall of being told that the Gated Range Accrual trade in June 2007 could not be reported properly by Mr Walsh though he recalled that there were certainly ongoing issues for reporting the structured trades on GEM which did not lend itself to them. GEM was not however in his mind a risk reporting tool at all so he did not look to it for that. He said he did not believe GEM included VaR reporting. It was only after the margin calls began that he actually learnt that DBAG had not captured the trades or valued them. He was surprised, he said, that DBAG did not have MTM information and had to use a valuation for the MS trades that came from MS, which he was told by Mr Quezada. He was asked then to call CS and get their valuation for trades with them.

684. He said there was no discussion in May 2008 as to whether the TPFs were being margined, nor at any time at all. He said he had no recall of being told that they were not being valued in the system. If a new trade could not be valued then he would not, he said, be able to engage in it. He said he would have been greatly surprised to hear at the end of May that they were still checking to see if the trades were captured in VaR. He conducted many more of those trades after the end of May and he would not have done one single further trade if he had been told that it had not been booked, valued or margined. It was only in October that he was told that trades had not been booked and he recalled going through all the trades that had been done with Mr Walsh at his request on October 7th. He did not think that Mr Walsh told him then that some had not been booked. He said he was never told that the trades had not been margined correctly.

685. He also said that he was always under the impression that DBAG's VaR model could calculate MTM and margin. A sophisticated system was required to value MTMs on complex options and he relied on DBAG for all options. He was capable of calculating the MTM on spot transactions on his own calculator but the more complex and dynamic the positions the more crucial it was to have proper accurate MTM.

686. He said that in September 2008 he did not have the necessary MTM information from DBAG to be able to monitor the TPFs and see how VaR was affected. He never learnt whether DBAG had captured risk and margin. Inconsistently with his earlier statement in the depositions he said that in September 2008 at his meeting with Mr Spokoyny, the latter told him that they had not perfected booking but were getting there. Something along those lines had been said which was quite comforting. He considered margin a matter for negotiation and when in September DBAG came forward with a proposal to amend the existing margin methodology, he thought he would see if he could get away with less than was being sought.

687. Later in the depositions, however, he said that he knew all along that DBAG was not booking the TPFs "optimally" and that the MTMs were not reflected properly but he was always being assured that this was work in progress and that "we were getting there". It was only in October he said that it dawned on him that DBAG did not have a handle at all on the trades, being ignorant of what they had, what the values were and how to deal with the trades. DBAG had received a margin call from MS and was struggling to reconcile the numbers. Mr Walsh asked him if he could get valuations from the counterparty banks and it was at about this time, perhaps a little earlier, that he realised that DBAG was unable to value the TPFs which meant that they had probably not charged margin on them. He had never given the margin situation much

thought prior to that and it was never a problem. Because Mr Walsh asked for MTM information from counterparty banks, he deduced that Mr Walsh did not have it.

688. When asked questions by DBAG's New York lawyers, he said that the first inkling that he got of real numbers was when the MS figures came through in respect of the collateral they were seeking on his trades from DBAG (October 3rd-October 6th 2008). He said that on and off he got MTM figures from CS but did not receive regular MTM figures from all the counterparties. He thought that they had the ability to provide those figures if he had asked for them. Every day or week each counterparty sent a report of the accrued profit and loss and he got detailed position reports from DBAG which included MTM information save on the Pivot Trades. He knew he was not getting MTM information on the Pivot Trades from DBAG at all.

689. He was then questioned about some of the exchanges to which I make reference elsewhere. He said that on 28th February 2008 he told Mr Walsh to keep the TPF MTMs out of the calculations because they were nonsense. The live MTM module could not handle it and was giving silly numbers. He understood that DBAG had issues with booking the TPFs but he would have been disinterested in the problems. It would be up to DBAG to say if they could not do the trades. It was up to them to figure out how they were to be booked. He understood that the TPFs were not the subject of MTM at the time of his conversation with Mr Quezada on 5th May 2008, but he personally looked at them as accrual trades. DBAG had an issue of margining from their own standpoint and he told Mr Quezada that if there was concern SHI would over-collateralise. In those circumstances Mr Quezada responded by talking about hard coding the margin. In answer to further questions he said he could not say whether Mr Quezada had ever told him that he had got the pricing tool from the Trade Desk.

690. He was referred to a telephone conversation with Mr Walsh on 22nd July 2008 when he had told Mr Walsh that the web MTM was total garbage. He told Mr Walsh that DBAG was margining the trades wrong, albeit not by a ton, but usually in SHI's favour. He said that if DBAG was margining the trades based on the spurious fader numbers it was really chaotic and that if there ever was an issue of the faders not being margined correctly, SHI would just send more margin. He then said he did not recall any discussion of the problem at all at the September meeting with Mr Spokoyny and Mr Quezada.

691. On being asked about his exchanges with Mr Vik on 25th and 26th August, he said he had told Mr Vik that DBAG were getting there on margin and catching up on the levels of volatility in the market. On 26th August in a Bloomberg chat he had said that he thought that DBAG had finally figured out a way to actually margin all his pivot trades and were trying to break the news to him that the freebies were over. He said he was not sure that he knew that his pivot trades were not being margined but certainly had the impression that DBAG was taking too little margin overall. By October 9th or perhaps a little earlier than that he thought he must have realised that DBAG had not done MTM or margining on the TPFs at all and had discussed in principle with Mr Vik the free ride they had been getting for the previous six months from the perspective of MTM and collateral.

692. At one point in his depositions, Mr Said said that he had been left with the impression that the problems that DBAG had encountered with booking, valuing and margining

had been fixed. He could however point to nothing to justify such an impression and all the evidence points the other way.

693. What emerges from his deposition, when regard is had to the contemporary documents, is that, when faced with the transcripts of telephone conversations or emails, Mr Said could not gainsay their contents but still sought, so far as he could, to hold to the line that SHI has adopted in this action, namely that he did not fully understand that DBAG was incapable of margining the TPFs in accordance with its systems and methodology because it could neither accurately record the trade details in its system nor value the trades accordingly. That position is not sustainable in the light of his Timeline and the contemporary documents.

694. Mr Said did not suggest at any time that he used the GEM web reporting for risk management purposes. He accepted that he was uninterested in the MTM of the TPFs because he regarded them as accrual trades. Had he been interested in the MTM, he could have sought such figures from the counterparty banks or DBAG's Trade Desk but he did not do so because he did not regard this as a relevant factor in his decision making. He considered margining to be an issue for DBAG to resolve for its own purposes and his objective, both in the original negotiation in 2006 and in August/September 2008 was to procure the lowest level of margin that he could.

695. It is plain that, if Mr Said was following the reported margin daily, he must have realised that DBAG was not attributing any initial margin at all to the TPFs. It is SHI's case that he was following the margin in the Collateral Summary Report. He knew that the MTM from the Structured Options was not represented on GEM and that when the Faders appeared in it, the numbers were spurious. He knew also that variation margin (which was based on MTM) had to be wrong because Mr Walsh had told him that margining was based on the MTM figures produced on the GEM website, to which he had access.

696. When then Mr Said said in the Timeline that "it seems from following the margin daily that DBAG may not have attributed any initial margin" and that, from memory, he did not recall an impact on the margin calculation from MTM movements (which there should obviously have been as a result of changes in variation margin), this is not simply an ex post facto realisation.

697. In the Timeline he referred to the request in August 2008 for the meeting to discuss margin, which took place on 8th September 2008. He said he was unclear what DBAG had in mind but, as it turned out, the topic was the original terms that he had negotiated, which DBAG now felt were too generous. He asked for a proposal which resulted in DBAG putting forward a change in the VaR multiple and a liquidity add-on. The discussion culminated, as he described it, in new margin terms of 2.5 x VaR and a liquidity add-on "which would have raised my required margin on oct 6th form [sic] 21mm$ to 40mm$!". The relevant paragraph in the Timeline concludes with the reference to the meeting of 8th September where reference was made to the TPFs and the difficulty in incorporating them into the margin calculation which they "would get to shortly". The terms of the paragraph, including the exclamation mark following the reference to the new proposal, show that Mr Said had been expecting to receive a much higher margin proposal because he thought that DBAG had at last found a way of margining the EDTs, whether by use of the Trade Desk DB Analytics tool or otherwise, only to discover that they still had not. Once again, that point emerges

more clearly when the terms of Mr Said's recorded conversations with others are brought into the picture.

698. It is therefore clear from his deposition that on 5th May 2008 Mr Said accepted that DBAG was unable to make daily reports of MTM on the EDTS and to book them properly because he knew that the FXPB systems were incapable of accurately recording their terms. He knew that efforts were being made to find some alternative way of achieving this but that this had not occurred by September 8th and no-one had told him afterwards of any change in the situation. The impact of this on someone who was following the margin on the website, as against the particular trades done and the state of the market, would be apparent, as Mr Said recognised in his Timeline. As a trader he might well be expected to do this.

699. Mr Said could see the impact or lack of impact of market movement on the margin shown on GEM as well as the inaccurate numbers for MTM spilled out by the system when it produced any numbers at all for the faders, which he zeroed out or asked Mr Walsh to zero out on manual calculations, as appears elsewhere.

700. As to his discussions with Mr Vik, Mr Said said that he described every form of structured option that he traded under the FXPBA with Mr Vik in some form or fashion. Mr Said stated that his affidavit was wrong when it said that he did not discuss the pivot trades with Mr Vik as could be seen from the email reports that he sent. He said that the pivot trades were raised on numerous occasions because of the need to explain the P&L figures, particularly in June 2008. Mr Said recalled several conversations where he explained that the high profits gained in 2008 were due to the pivot trades which had knocked out rapidly, although there was still a lot of risk outstanding in others which was still extant. He said that his affidavit was not correct on this and on other points and "the military answer would be no excuse" by which he meant that he had effectively signed the affidavit under orders.

701. Mr Said, in his deposition, said that he had been brought in by Mr Vik to bring broader product breadth than Mr Vik's own FX trading which was essentially directional with spot and forward trades. He said that he kept Mr Vik informed as he did new products that he had not done before. These were discussed. He specifically recalled discussing the first simple exotic which was a Knock-out on the NOK. He told Mr Vik what his view was and how it worked. There were fairly frequent exchanges of thoughts and ideas and he appreciated Mr Vik's views.

702. He recalled a lot of discussion before the Gated Range Accrual trade in June 2007. He said he would discuss exotic options with Mr Vik, certainly the first time he did them and would do so directly in the office when he was there. He said that Mr Vik had no difficulty in understanding them. Anything new would be discussed with an explanation of the basic payoff characteristics and the risk but if he had done a Structured Option two or three times he would not refer that back to Mr Vik on further occasions. He discussed the risk of the TPFs with Mr Vik before doing his first trade in February 2008 after Mr Chapin of CS had approached him. He recalled speaking to Mr Vik whilst in the car driving down to Newport. He thought that the type of trade was so interesting that he sat down with Mr Vik and explained to him how it worked. It was later, in an email, that he referred to the unlimited risk involved in such TPFs "if the world goes to hell in a hand basket" but he considered that it would require such enormous moves for this to happen, given the way he structured

the trades, that it was unlikely. Mr Said said that he and Mr Vik discussed the TPFs on numerous occasions and he explained them by using examples. He particularly discussed the issue of accruals on these trades and the P&L which arose there from.

703. He discussed the risk characteristic of what he described as accrual trades, range trades, range bets or TPFs saying that they were known by a variety of different names in different banks. He said he tried to use words which explained the general nature of the transactions when talking to Mr Vik who was always interested in the risk characteristics although not the detail.

704. His weekly reports referred Mr Vik to his open positions and to his MTM with the exception of the "range trades" or "range bets" where there was no MTM and where he recorded only realised profit or loss. On occasions he referred to TPFs that might knock out soon and that had good accrued unrealised profits but he never included the accrued figures in the overall P&L numbers he reported prior to knockout.

705. Mr Said's evidence about his discussions with Mr Vik on the subject of EDTs was in direct conflict with that of Mr Vik, whose evidence on this, as on many matters, I was unable to accept. The contemporary documents bore out what Mr Said had to say on this topic.

15. Mr Said's Agreement to the Non Reporting of the EDTs, MTMs and Margin calculations which included them

706. The TPFs which constituted EDT 1 and EDT 2 were concluded with Mr Chapin of CS on 19th February 2008 but, prior to doing so, Mr Said spoke with Mr Walsh on the telephone (of which there is a transcript) explaining that these trades were variations on the Pivot Accrual trades of the previous year. These had been booked as Resurrecting Fader options – OCTs 16-19. The difference, as explained by Mr Said, was that TPFs had a cap on the maximum profit and, although there was a risk of loss, Mr Said said that only a massive move in the market which did not revert could cause that and he would hedge against that in any event. He said that these TPFs had less risk than the 2007 Pivot Accruals because of the knock out feature which meant that the trade would have shorter maturity and therefore less chance to move away from the pivot outside the range. In fact the Pivot Accruals, which were combinations of Resurrecting Fader options, had a different payoff formula and, because of his view of the unlikelihood of substantial losses occurring, in his telephone conversation with Mr Walsh, Mr Said downplayed the risk element. What was clear from the evidence of Mr Walsh and from the exchanges between him, Mr Quezada and Mr Said, was that not only was Mr Walsh scared of Mr Said but that he had limited understanding of the complexities of the TPFs and of the risks involved and had to have their basic structure explained to him in October 2008. Similarly Mr Quezada appears to have had a limited understanding though I am more dubious about this. Mr Said however fully understood the trades and was prepared to gloss over the potentially huge downside, of which he was well aware, in requesting DBAG to approve the EDTs.

707. Mr Walsh encountered difficulty in booking these trades, as he told Ms Ng. He booked them as "Resurrecting Faders" as he had for the previous Pivot Accrual trades, with the result that the GEM system, where it did produce figures, produced MTM figures for a different type of transaction. Mr Said executed EDT 3 on 27th February 2008 and the following day he sent Mr Walsh an email telling him that

DBAG's GEM system could not handle the TPFs and was producing "silly numbers". He told Mr Walsh to "keep these out of the live MTM module". This was an ongoing theme in his conversations with Mr Walsh. Mr Said appreciated that the GEM system could not cope with the trade details of these TPFs and knew that if the appropriate details of the transaction could not be fed into DBAG's system, the numbers produced for an MTM valuation could not be accurate. He was concerned about the potentially distorting effect of those numbers on figures for other trades. He must therefore have appreciated the potential impact on valuation of the portfolio as a whole and the calculation of the portfolio margin in consequence. That appears from his Timeline to which I have referred in some detail in section 14 of this judgment.

708. As mentioned earlier, a problem had previously arisen with the reporting of vanilla FX positions, starting in July/August 2007. Mr Said told DBAG that the live MTM values on the GEM system were inaccurate, which he could tell from published sources. It was discovered that this was due to system-wide issues involving a "feed issue" between ARCS VaR and GEM (resulting in delay in the time between a trade being booked and its valuation appearing) and a lack of correspondence in the Reval rate which showed in GEM and that used by ARCS VaR to calculate the MTM. This problem led to the establishment of the "dummy" reporting account to which Mr Walsh, but not Mr Said, had access. This account used NOP margining as opposed to VaR margining and Mr Walsh would print off a spreadsheet from it which he would send to Mr Said electronically at the end of the day containing MTM values for the vanilla trades. This system of "manual" spreadsheets started on 1st August and continued on effectively a daily basis until 5th November 2007, by which time the problem seemed to have been solved though it recurred from time to time thereafter. In consequence other manual spreadsheets were sent on 27th November 2007, 7th February, 19th, 20th and 22nd February 2008 and between 12th May and 27th August 2008, with one further spreadsheet on 19th September 2008. These spreadsheets were supplied when Mr Said again identified problems with the valuation of straightforward FX positions.

709. The problem with the EDTs was distinct and incapable of solution in the ARCS VaR and GEM systems. In consequence, Mr Said did not want them to appear in GEM at all and whenever they did so as "Resurrecting Faders" he instructed Mr Walsh to remove them or zero them out which Mr Walsh could not and did not do. On the manual spreadsheets sent by Mr Walsh in consequence of the problem with straightforward FX transactions identified above, where the EDTs appear, they do so as FX Resurrecting Fader Opt, with their trade date and expiry date but with a Current Market Value (MTM) of zero. They either did not appear or their MTM was zeroed out by Mr Walsh. Mr Said wanted the website and manual spreadsheet to exclude the EDTs from MTM valuation and said so as can be seen from his emails of 28th February, 12th May, 3rd July, 21st July and 22nd July 2008. The spreadsheets of 27th August and 19th September 2008 continued to show the EDTs with zero MTM. What appears from all the exchanges is that Mr Said castigated DBAG for its inability to solve the problems relating to MTM valuation of straightforward trades, since he could get the figures right himself with published information and the use of his desk calculator. He did not however at any stage criticise DBAG or complain at the absence of MTM figures for the EDTs. On the contrary, he required their absence rather than the inclusion of "silly numbers" for them which served only to confuse and might have the effect of distorting the overall position on the other trades for

which appropriate MTM figures were (subject to the recurrence of the defect for straightforward trades referred to above) ordinarily available.

710. There are two key telephone conversations to which reference must be made, namely those of 5th May 2008 and 22nd July 2008, which illustrate clearly the basis upon which the EDTs were accepted by DBAG, with Mr Said stating in terms that there was nothing for FXPB to do save to cash settle the trades on knock out or maturity. He expressly accepted the inability of DBAG to value the trades. He expressed the view that margining was a matter for DBAG to work out for itself but that in any event SHI was over-collateralised and would always produce further margin if required.

711. By the time of the 5th May telephone conversation Mr Said, who had been referring to various OCT trades conducted from as far back as June 2007 as "offline trades", was well aware of DBAG's issues in booking and valuing any options which were not vanilla options. SHI at one point suggested that they were referred to in this way because they could not be booked online by him in the TRM system for Straight Through Processing (STP). However, Mr Said's understanding of the booking and valuation problems was reflected to some extent in the Timeline to which I have already referred. He appreciated that Structured Options were the subject of special acceptance under the FXPBA and understood the inability of the system to cope with them. On 15th April 2008, by way of example, Mr Said emailed Mr Walsh, referring to a Dual Currency Range Digital Option (OCT39) saying "I realize they are also offline trades and not in the daily p+l". By this time Mr Said was referring to TPFs as "fader options" or "faders" in his dealings with DBAG and on 18th April he referred to "the faders" being back in GEM web reporting. It was on 5th May that Mr Walsh told Mr Quezada that Mr Said referred to these trades as "fader options".

712. Prior to this phone call, as appears earlier in this judgment, DBAG personnel had been having considerable discussions between themselves as to what was to be done with these trades which the systems could not handle. There was pressure from FXPB personnel in London and from the operations personnel in New Jersey, including Mr Kim and Mr Manrique, to cancel these FXPB bookings because of the inability of the system to handle them. What they appear to have envisaged as a possibility (although it was probably unrealistic) is that the deals would be rebooked as direct trades between SHI and the Counterparty bank, by agreement between them. However SHI had no ISDA agreements with such banks and would have had to negotiate and put up collateral to each of the banks concerned as opposed to using the current FXPB arrangements which enabled Mr Said to trade, using DBAG's credit and only putting up margin to DBAG. Mr Said dismissed out of hand any suggestion made by Mr Walsh that he should conduct trades directly with other banks under new arrangements with them, rather than through the FXPB arrangements he currently had.

713. Equally, prior to this call on 5th May, Mr Said had sought to conclude further TPF trades with MS and CS at the end of April. By this time it had been ascertained by DBAG FXPB personnel (essentially Mr Walsh and Mr Quezada) that ARCS VaR could not capture the MTM or risk on the EDTs and that the only way that DBAG could book these trades was by using the DB Analytics tool that was used by the FX Trading Execution Desk for complex options. FXPB did not have access to this tool because of the Chinese wall between FXPB and the Trade Desk. So it was that Mr

Quezada and Mr Walsh spoke to Mr Said on the telephone on 5th May, the transcript of which is available, to discuss what was to be done. Mr Said was told of the position with regard to the DB Analytics tool and of the problems created for valuing the trades, monitoring the risk and margining them.

15(a) The 5th May 2008 telephone call between Messrs Quezada, Walsh and Said

714. This telephone call is critical and, although Mr Quezada was at times inexact and confusing in what he said in the call, and was wrong in what he said about the VaR model, the following points emerge:

i) TPFs could not be booked properly in the FXPB systems, though Mr Quezada understood that they could be booked by the DBAG Trade Desk using their system of spreadsheets (DB Analytics). There was difficulty in obtaining the assistance of the Trade Desk in booking because of the need for the Chinese wall between FXPB and the Sales/Trade Desk since the latter should not be aware of trades done by the customer with parties other than DBAG. This was a cause for concern.

ii) Mr Said's immediate response was to say that he understood and accepted that the TPFs would not be PnL'd, by which he meant that he understood and agreed that DBAG would not be able to value the TPFs on a daily basis nor report MTM figures to him. SHI accepts that Mr Said expressly agreed to this. Mr Said explained that he understood that the TPFs were too complex for their MTM values to appear and that he regarded them as accrual trades anyway. that he was not interested in the MTM value in any event.

iii) Mr Said then said that the only issue that DBAG could have would be an issue related to margining. He thus showed that he understood clearly, as was obvious, that a lack of proper MTM valuation would impact upon the margin calculation. A little later he stated that he understood that DBAG would "want to look at that" but that if DBAG was ever concerned about the issue, SHI would over-collateralise.

iv) Mr Quezada's response was to say that margining was an issue and that he and Mr Walsh needed to ensure that the right things were being done "on our side", because these TPFs were novel to them.

v) Mr Said then insisted that there was nothing whatsoever for DBAG to do on the trade "from an admin point of view" leaving margining/VaR on one side. DBAG did not have to keep track of the trade as the counterparty did that and there were no payments for exchanges of currencies with the result that the only time the prime broker got involved was on knock out or maturity. "So in terms of you, Matt, and the rest of the gang doing the right thing on a daily basis, I still take issue with that a little because there are no things to do on a daily basis."

vi) At this point Mr Quezada repeated that the systems used by FXPB to book trades did not cover these trades, as opposed to the Trade Desk with its "accrual spreadsheets and DB Analytics and other tools that they use". In consequence none of the trades fitted on the FXPB "side of the world" so they

were "sitting on these trades". Although FXPB knew that the trades were fully offset with the counterparty which gave comfort and that VaR could handle the trades, booking them was a difficulty without the assistance of a quant on the trade side. On that front he was getting no co-operation so that, if he were to take in any more TPFs, he would just be sitting on the trades assuming they were all off-set and everything was fine "and then in 2009 we're all sitting and saying "what happened?"" (a remarkably prescient observation, which could not have escaped Mr Said.)

vii) Mr Said said he did not understand the issue about offsetting trades with a counterparty because there were trade confirmations from both SHI and the counterparty so that DBAG would be able to match them. He understood that DBAG would not know on any given day what the trade was worth on an MTM basis unless the VaR model calculated it and picked up on the point that Mr Quezada had said that it did.

viii) Mr Quezada's response was to say that his "guys" were telling him that it did but that the TPFs would not fit into their books.

ix) Mr Said then enquired as to how it worked on a direct trade with the DBAG Trade Desk.

x) The response of Mr Quezada was that in those circumstances the Trade Desk would manage TPFs outside the system on their own spreadsheets with a hard coded margin supplied by DBAG and separate valuation statements being sent for the TPFs on a trade level – i.e. for individual Transactions.

xi) Mr Said responded that this was not what occurred and that the DBAG Trade Desk did exactly what other counterparty banks did, which was simply to send daily accrual sheets and that he was not receiving MTM valuations for each trade from anyone.

xii) Mr Walsh was asked what was lacking in the booking of the trades and said that there was not a "set trade type" that captured the details of the TPF for booking purposes, which was the same whether the trade was done with the DBAG Trade Desk or with a counterparty. FXPB did not have the "spreadsheets and stuff" that Sales would use to book the trades so the trades could not be incorporated.

xiii) Mr Said said that although he would not be doing TPFs all the time and at that particular time would probably not be doing a new one, it depended on the state of the market. This was an excellent form of trade for his style of trading and he said it was something that he needed to have the ability to do.

xiv) Mr Quezada was responsive to this in an imprecise way but suggested that if a new instrument came across FXPB's desk which "Trading" (the Trade Desk) traded and valued, he might get access to the tools they used but sometimes they responded that they did not "price" these instruments – by which he must have meant that the Trade Desk said that they did not give MTM values.

xv) Mr Said responded that he was happy to assist FXPB in gaining access to "the spreadsheet so you can do it" and to threaten the Trade desk that if they would not assist in this way then he would do all his TPF trades in a private banking account with CS and never offer DBAG another deal of that kind.

xvi) Mr Quezada's response was to say that he liked that approach but would let Mr Said know if it became necessary to use it.

715. In an instant message chat, whilst the 5th May call was actually taking place, Mr Walsh noted that "Klaus is convincing … I gotta give it to him". It is plain that Mr Said was not only persuasive but exerted leverage in order to obtain DBAG's consent to take in the EDTs on the basis discussed.

716. An interesting insight is gained into Mr Said's view of this conversation by an internal email sent by Mr Chapin of CS which shows that Mr Said had been in touch with him about "a potential booking issue with the TRP trades we have been doing". Mr Said had said he was having issues with DBAG accepting them but thought he had the leverage to get them to do it. Just the same, he was exploring with CS whether, because Mr Vik had a private bank account with it, CS might be prepared to book Mr Said's trades to that account with posting of collateral. An alternative would be to trade direct with ISDA documentation. This was a "what if" conversation, in case DBAG refused to take in the EDTs.

717. As appears from a conversation between Mr Quezada and Mr Walsh, immediately following the 5th May call, in the absence of Mr Said, Mr Quezada was told by the latter that the TPFs which had been booked in RMS were feeding through to GEM so that margin was being captured albeit for the wrong trade type (Resurrecting Faders). He thought that the effect was that there would be over-collateralisation but was not 100% comfortable about that. He said that the two trades with the RMS IDs (identification numbers) showed up "sporadic[ally]" on the website report but that Mr Said did not use those reports to check on those options and removed them himself in his assessment of the position. He thought these were not the direct TPFs but the indirect ones. Mr Quezada then asked him expressly to check with Mr Avery to confirm that the risk on those two identified trades was being captured and if it was, then pressure could be applied to the Trade Desk on the basis that, unless it assisted, Mr Said would not conclude any further TPFs with them. Mr Walsh then said that the direct trades were not showing up in the web reports or anywhere because they were booked under the Trade Desk sales ticket (GST) which did not feed into the system. He did not think or was not sure that they were being margined and needed to check that with Mr Avery as well as the ones which he had booked in with the RMS numbers.

718. On 6th May, Mr Walsh passed on to Mr Quezada a message from Mr Avery which stated that neither the indirect TPF nor the direct TPF were being valued. The indirect trade was not being valued as a Resurrecting Fader due to the number of fixings (258), although under a new hardware system, the limit on the number of fixings which could be taken into account might be capable of removal. The direct trade which did have another RMS identification number was booked by way of a generic sales ticket (GST) which he explained as a freeform ticket and was therefore not valued by RMS or downstream systems at all. Mr Avery suggested that the risk in these structures was normally covered by other trades but it looked as though a DBA

Security trade had been booked to cover that risk (a hedge from DBAG's internal perspective since there was no counterparty other than SHI). Mr Avery said that these hedge trades were basically on DB Analytics spreadsheets which were loaded into RMS but again were not sent to downstream systems. The unequivocal message being conveyed to Mr Walsh (in response to his question as to whether either of the identified trades was being margined) and which he passed on to Mr Quezada was that no valuation and no margining was taking place on direct or indirect TPFs at this point, regardless of the form of booking. It mattered not whether the booking fed to GEM as indirect trades booked as Resurrecting Faders by Mr Walsh (as ARCS VaR could not value them) or whether, as a direct trade, it was merely booked in RMS on the basis of a generic sales ticket, which did not feed to GEM or ARCS VaR at all.

719. Thereafter efforts were made by Mr Quezada and Mr Said to obtain co-operation from the Trade Desk in order to access its DB Analytics pricing tool, under threat of loss of Mr Said's business, but without success. On finding that the conclusion of a trade on 4th June with a further threat achieved nothing, Mr Said in fact did no more business with Mr Geisker until 4th September, though whether this was for commercial reasons or as part of the ploy to apply pressure is unknown.

15(b) The 22nd July telephone conversation between Messrs Walsh and Said

720. Following the email of 21st July referred to in section 13 referring to the fader with the spurious P&L, Mr Said and Mr Walsh had a telephone conversation. The conversation opened with Mr Said telling Mr Walsh that the MTM valuation on a vanilla China option that he had was total garbage on the GEM web P&L, although it was correctly set out on the manual spreadsheet which Mr Walsh was regularly forwarding to Mr Said at that date. Mr Said then stated that "all these faders pop up" in the web P&L so it was not very usable. He could correct for the faders by manually taking them out, which was "a pain" but the web was effectively useless if the spot positions were wrong.

i) Mr Walsh explained that the reason for the wrong figures was connected with the manner in which the account was margined using VaR, value at risk. It was not as easy as redirecting a feed.

ii) Mr Walsh said that the P&L sent on the manual spreadsheet was more accurate than the web P&L but it was the web P&L which was being used to margin Mr Said's trades.

iii) Mr Said immediately responded to say that this meant that his trades were being wrongly margined and added that it was in his favour but not by a ton. He said it did not matter because he had a lot of excess collateral. Nonetheless he recognised that, in principle, the trades were being wrongly margined.

iv) He then specifically said that if the trades were being margined "based on those spurious fader numbers", it was "really chaotic", with which Mr Walsh agreed.

v) Mr Said then said there was no reason for DBAG's credit department to be concerned because there was so much money sitting on account and, if there were ever an issue of incorrect margining of the faders, more collateral would

be sent. (In fact Mr Vik had just withdrawn about US$75 million from the account, as Mr Said knew.)

vi) Mr Walsh accepted this and said that he could continue to send the manual spreadsheets which he obtained from another account which had been created for Mr Said but was an internal account, to which Mr Said could not gain access. Mr Walsh had to download it to Excel and send it on (referring to the Dummy P&L Reporting account).

721. As stated by Mr Said in his deposition, he appreciated that the MTM valuation of the EDTs produced “silly numbers”, “spurious” figures that were “never even remotely right” (to quote words used by him in emails or telephone calls). He said in deposition that “the P&L system … was throwing off numbers that weren’t a little bit wrong. They were spurious by tens of millions of dollars and they were random. And they were throwing off the entire P&L.” In consequence, he regularly instructed Mr Walsh, whenever the MTM figures for EDTs crept into the GEM Web Reports, to remove them or zero them out. This appears from his emails of 28th February, 12th May, 3rd July, 21st July and 22nd July 2008. Mr Walsh could not do this and no-one appeared to have any idea why the figures sporadically appeared and disappeared. All that Mr Walsh could do was to zero out MTM figures on the manual spreadsheets which he produced, based largely on the P&L Reporting Account, which sometimes included references to Resurrecting Faders, but never a comprehensive list, and resort to booking the EDTs only at knock out, for cash settlement, so that no MTM figures could appear in respect of those trades throughout their duration.

722. Mr Said confirmed in his deposition that he knew that there were ongoing issues with reporting the Structured Options on GEM Web Reporting because “that reporting tool … did not lend itself to it.” He knew it did not report positions correctly but, so far as he was concerned, “It wasn’t a risk reporting tool anyway” and he did not look to it for that purpose. Mr Said knew that the valuation issue for the EDTs was not susceptible of any easy solution because, as he recognised in his Timeline, the systems were simply not apt to capture the details of such complex trades. The only solution which had been put forward was the use of the DB Analytics pricing tool which was available only to the Trade Desk and which he knew was not being made available to FXPB, despite his own and Mr Quezada’s efforts to obtain access for FXPB.

723. If the MTM numbers were so far wrong Mr Said knew that margining which was based on them was going to be wildly wrong too, or “chaotic” as he put it. From the terms of his later conversation with Mr Walsh on 6th October following his agreement to the new VaR parameters it appears that Mr Said did not pay much attention to the Collateral Summary Report on GEM at all. He asked Mr Walsh to explain the figures as they appeared on screen. As the MTM figure was about US$33.675 million (negative) Mr Said would have known this was hopelessly wrong in the light of the MS margin demands, although he confirmed to Mr Walsh that it sounded about right. If Mr Walsh had any real understanding at the time, he would have appreciated how far wrong this was also. The Open P&L Report was at the time showing a negative valuation of approximately US$50 million for non EDT transactions.

724. It was, as appears from section 13, not only the EDTs which gave rise to these problems but also many of the OCTs. This appears from the Timeline, from Mr Said's use of expressions such as "offline trades" or "offline booking" and from his discussions, in some cases, about hard-coded margins.

725. It is clear that Mr Said had no interest in the MTM values of the EDTs because he regarded them as accrual trades and he knew that MTM figures would be largely negative throughout the duration of the transaction. When discussing MS' MTM values for three TPFs on 9th October, Mr Said said that there had "been big numbers" before and, on the same date, in an email he told Mr Vik that he was "always aware" of MTM when he was trading, though he largely ignored it. He occasionally got MTM figures from counterparty banks (for example on 24th March 2008, 6th August 2008, 12th August 2008 and from MS between 3rd and 9th October 2008) and if he had wanted further figures, he could have sought and obtained them.

726. The email traffic and recorded telephone conversations show that Mr Said knew that the EDTs were susceptible to vicious MTM swings and that they were heavily exposed to volatility and movement in the spot rate. He knew that they were "pretty big positions on a vega and gam[m]a basis" and that if volatility increased and spot moved away from the pivot after inception, the trades would show a substantial MTM loss very quickly. He understood that any position which attempted to "short volatility", as these did, would show loss on any significant movement in the market. On receiving the accrual spreadsheets from the counterparty banks in respect of each fixing date, Mr Said would be able to see exactly how the market was moving, what profits and losses were accruing and the general direction of the trades vis-à-vis the strike barriers. With knowledge of the spot rate, the forward rate and implied volatility, all of which information was available on Bloomberg, it would be clear to an experienced trader such as Mr Said when MTMs were negative, although the exact figures would not be known.

727. As set out in the following section of this judgment, Mr Said's emails to Mr Vik show his awareness of the risk involved in the EDTs and there is documentary evidence of both Mr Geisker and Ms Hashimoto of MS recommending him at different times not to conclude more pivot TPFs. His USD/BRL positions were particularly troublesome but he could see from the daily accrual spreadsheets that his other trades were moving in the wrong direction from August onwards. He still entered into eleven further EDTs in September, some of which he saw as hedges because the ranges were wider than those which were already moving in the wrong direction. In discussions with Ms Hashimoto in mid- and late September, the extent of his worry and sleeplessness over the issues is revealed. Mr Said knew the risks that he was running. His emails of 18th and 19th September to Mr Vik illustrate the point.

728. It is doubtful if he understood the absolute size of the MTMs in question, as appears from internal comments at CS at the beginning and the end of September and his perceived reaction to the provision by MS of his MTM position on 3rd October 2008.

729. The inability of the systems to cope with MTM was merely a symptom of the inability of the systems to capture all the trade details of the EDTs as bookings. Mr Said was well aware of this as his Timeline shows. Mr Said knew of the distinguishing features of the EDTs on the one hand and the Fade-in Forwards concluded in October 2007 - as OCT16 - OCT19 – on the other. He knew that both types of trade appeared in

GEM, when they did appear, as Resurrecting Fader options and that the EDTs appeared under the same nomenclature in Mr Walsh's manual spreadsheets despite their different characteristics. In conversations between Mr Said and Mr Walsh the EDTs were always referred to as "Faders" or "Fader Options". Mr Said knew that this trade type was inadequate, both because of his conversations with Mr Quezada and Mr Walsh and because of the spurious MTM numbers that were generated on GEM. The absence of EDTs that he had concluded, both on GEM and on the manual spreadsheets, was obvious to him as any comparison with his own records and the accrual spreadsheets sent to him by counterparty banks revealed. He co-operated in efforts to obtain the assistance of the Trade Desk in order to effect booking as a DB Analytics Security Trade Type with access to the pricing tool but he knew that the attempts to gain access had not succeeded.

730. DBAG pointed to a particular spreadsheet of 11th August 2008 as a clear manifestation of the issues which Mr Said must have understood. As at that date, SHI had executed twenty-five TPFs of which fourteen had knocked out. Of the eleven which were outstanding, only three appeared on the spreadsheet, each shown with zeroed out MTM and delta values. Each TPF was booked by multiple entries as Resurrecting Fader Options but two of the TPFs were booked with eight entries whilst the other TPF was booked as four entries. The notional quantities were incorrect and the pivot level of each was not recorded.

731. When Mr Said complained that TPFs appeared in GEM, popping up sporadically, it is clear that not only did he want these removed or zeroed out but that he knew that others were not appearing within the system.

732. When, on 7th October, Mr Walsh asked Mr Said if he could tell him how many outstanding Fader options remained, Mr Said expressed no surprise and went through all the outstanding TPFs with him individually, to ensure that he did have a record of them.

733. It follows inexorably from Mr Said's knowledge that the EDTs could not be valued within the system or booked properly in it and from his continued trading of them that he knew, accepted and agreed that DBAG would not provide him with accurate MTM figures for the EDTs or accurate margin calculations which encompassed them. Without accurate MTM figures, variation margin could not be calculated and the position was made clear to Mr Said, if it was not clear before, in the 22nd July telephone conversation with Mr Walsh. He knew that the EDTs sporadically appeared in the GEM Web Report with MTM figures which were, on his deposition evidence, wrong by tens of millions and that margining was based on that. Though he hastened to assure Mr Walsh that he did not think the figures were much in his favour, by the time the market started moving against him from late August onwards, he must have appreciated that DBAG's margin figures were seriously inadequate for the portfolio.

734. Mr Said had been told by Mr Giery on 31st July 2007 that both VaR and individual trade P&L were calculated in a separate risk engine (ARCS VaR) from the reporting engine (GEM), a point that was repeated in email exchanges on 1st and 2nd August 2008. (It was indeed the feed from ARCS VaR to GEM that had created the separate valuation problems for the vanilla trades.)

735. Although in the 5th May 2008 telephone conversation, Mr Quezada was unclear about what the ARCS VaR model could do, Mr Said knew that DBAG was ignorant of the MTM unless its VaR model calculated it. In the 22nd July telephone call with Mr Walsh, he was told expressly that the MTMs on the web P&L were those which were used to margin his trades and he at once remarked that this was "chaotic".

736. Mr Said's appreciation of the difficulties in margining also goes back to the OCTs, as appears from the approach of DBAG to the Correlation Swaps and the discussions with Mr Said about the Forward Volatility Agreement. Knowing that Structured Options fell outside the scope of DBAG's systems, Mr Said must have been surprised that DBAG did not seek to agree trade level margining or hard coding of some kind as a condition of accepting other OCTs and the EDTs. Variation margin was always going to be a problem if MTM could not be calculated as Mr Said knew it could not. As the market moved, Mr Said knew that the margin calculations on GEM were not reflecting that movement (see the Timeline). If he had stopped to think about it, his sample portfolio in October 2006 with five large FX Spot Positions had generated a Margin Requirement of US$28 million which meant that the substantial open positions, including what he regarded as high risk EDTs in the volatile market in the late summer and autumn of 2008, had, of necessity, to be generating a much higher margin figure if the whole portfolio was being valued. Throughout the period when the market was moving, from mid-August onwards, the margin figure on GEM remained essentially static, whilst Mr Said, recognising that implied volatility was high, was attempting to short it by further TPFs. As appears from his Timeline, Mr Said appreciated that the EDTs were attracting no initial margin or variation margin in the overall VaR portfolio figures provided on GEM.

737. There is a series of documented references to Mr Said's understanding that he was getting a "free ride" in respect of margin on the EDTs.

i) In a Bloomberg chat on 30th July with Mr Feldmann at MS, Mr Said said that MS would never extend the same leverage terms to him that he had with DBAG. Mr Feldman responded by saying he could only imagine the terms he was getting on margining the Pivot trades. Mr Said responded with a winking emoticon.

ii) In his telephone call with Mr Geisker of the DBAG Trade Desk of 26th August, Mr Said referred to the meeting he was due to have on September 8th with Mr Quezada in the following terms:

> "[I] think they have finally figured out a way to actually margin all my Pivot trades and are trying to break the news to me that the freebies are over."

The words used are significant, including the words "actually" and "finally". What they show is that Mr Said had known for a long time that DBAG did not have a way of margining his pivot trades and that he was therefore getting a free ride in respect of collateral on them. A freebie is a freebie and that is what Mr Said knew he had been getting.

iii) There are later references in exchanges to the same effect. It seems that Mr Said may have used the expression free ride at his meeting on 8th September

with Mr Quezada and Mr Spokoyny and there is no doubt that he used similar expressions in emails and telephone calls with Mr Vik, Mr Quezada and Mr Walsh; e.g. on 9th October 2008:

- "For the past year [DBAG] gave us a "free ride"… the money we made on almost no capital was just a freebie".

- "We got a sort of free ride for the past 6 months from a mark to market point of … from a collateral point of view".

- "your systems' deficiencies gave us a bit of a freebie in terms of margin."

iv) Mr Said was aware throughout this period that DBAG's margin calculations on the portfolio as a whole either did not include TPFs at all or did so inadequately.

738. He could not have thought anything else in the light of the inability of the system to capture the trade details in bookings and therefore to produce MTM figures.

15(c) The 8th September meeting between Messrs Quezada, Spokoyny and Said

739. It is common ground that Mr Said met with Mr Spokoyny and Mr Quezada on 8th September to discuss the risk in SHI's portfolio and whether the existing 200% VaR formulation was sufficient, in the light of the various stress tests that Mr Spokoyny had carried out on the portfolio as it appeared in GEM with a limited number of TPFs booked as Resurrecting Faders but most extant TPFs not appearing at all.

740. Prior to that meeting Mr Quezada sent Mr Geisker of the Sales Desk an email referring to the meeting scheduled for 2pm that day where Mr Spokoyny was to propose changes to the VaR formulation. The email continued: "We know he does structured options [both] direct and indirect that require [additional] work in order to book and trade." Mr Quezada then asked Mr Geisker whether he and Mr Spokoyny could meet with him for fifteen to twenty minutes prior to their meeting with Mr Said. The purpose of this was "to [discuss] the structured options and also to give you a preview of our discussion so that you are prepared for your 3pm", which was a reference to Mr Geisker's separate scheduled 3pm meeting with Mr Said (where pricing was to be discussed). Mr Quezada received that morning from Mr Walsh a trade confirmation of EDT 33 and, from Mr Geisker, an accrual spreadsheet showing EDT 31 (a direct EDT). Mr Quezada and Mr Said both knew at this point that TPFs could not be properly booked, valued or margined. Mr Quezada's evidence on deposition to the contrary effect is not to be accepted, being wholly inconsistent with the documents and the whole of the prior history.

741. Although neither Mr Geisker nor Mr Spokoyny had any recollection of this pre-meeting taking place, the fact remains that this email was sent by Mr Quezada to both of them and the purpose of discussing Structured Options with Mr Geisker must have been in order to give some sort of update to Mr Said at the meeting about obtaining the assistance of the Trade Desk and the use of DB Analytics. Whether or not the pre-meeting took place, the only update that could be given was that the problem had not been resolved.

742. Whether Mr Spokoyny did not appreciate the significance of the email and its reference to Structured Options which required additional work for booking and trading, the subject could scarcely have been avoided as between Mr Quezada and Mr Said at the meeting, although Mr Said, who was keen to keep margin figures down, would not necessarily have wanted to dwell on the subject. Mr Spokoyny's statement referred to Mr Said asking Mr Quezada about progress in booking his trades but said that his own recollection was that there was no detailed discussion of this and he saw it as a matter for the Operations team. He said that he did not pick up that there was any valuation or margining problem which affected his own role in assessing the adequacy of the VaR formulation to be applied, which is surprising. Mr Said however, in whatever terms the matter was discussed between him and Mr Quezada, did understand that there was still a booking, valuing and margining issue.

743. It is clear from Mr Said's Timeline, put together in October 2008, that Mr Said knew that there were still difficulties in incorporating the TPFs into the margin calculation. The Timeline refers to this by saying "during our meeting on September 8th in New York they did reference the structures and said they were having some issues incorporating them into the margin calculation but would get to it shortly." It is clear therefore that in this document, which was prepared for the benefit of SHI's lawyers and, no doubt, was putting the best face on it that Mr Said could for the purpose of making a case, he was not saying that he was given any assurance that the figures produced by DBAG were comprehensive in terms of margin calculation. Whatever was said, he was aware that there were still issues for DBAG in calculating and reporting margin to him in respect of the TPFs and that the problems had not been resolved. No progress had yet been made.

744. In an email of 7th October 2008 from Mr Spokoyny to Mr Halfmann, following Mr Said's agreement the previous day to new VaR terms, Mr Spokoyny referred to Mr Said, at the meeting of 8th September, admitting that "he had a free ride all this time". Because he was told that the booking problems had not yet been resolved, he must have known that the free ride was not yet over. Contrary to SHI's submission, he was not given any assurance at that meeting and could not have been given any such assurance, whether by Mr Quezada or Mr Spokoyny. As appears from section 13 of this judgment, Mr Quezada knew only too well that neither direct nor indirect TPFs had been booked properly and that they could not be captured by ARCS VaR. He knew that no helpful response had been received from the Trade Desk about the use of DB Analytics and, whether or not he met with Mr Geisker prior to his meeting with Mr Said, that position remained unchanged. He could have given no assurance about the resolution of the booking problem and Mr Spokoyny, on his evidence, knew little about it so that any comments on the subject may have passed him by. In a later part of his deposition, having earlier referred to some assurance being given by Mr Spokoyny, Mr Said said that Mr Spokoyny had told him that they had not effected bookings but were getting there. In the Timeline Mr Said accepts that he was told that DBAG was having some issues incorporating the Structured Options into the margin calculation but would get to it shortly.

745. I conclude that Mr Said's Timeline correctly states the position. Mr Quezada, Mr Spokoyny and Mr Said knew that there remained an unsolved booking problem but of the three only Mr Said would have had any idea of the extent of the problem in terms of the number of EDTs that he had concluded, but he appeared to have a limited idea

as to the true MTM position of his trades if the comments in internal MS emails in September are to be believed. He seemed to think that it was sufficient, however, for him to keep his VaR "somewhere this side of the GNP of a small nation." It seems that Mr Quezada was not copied into any emails concerning the conclusion of TPFs by Mr Said after 20th June 2008 until 8th September and twenty-six EDTs were concluded by Mr Said thereafter. In fact, all the loss making TPFs which were concluded by Mr Said were entered into after his 22nd July 2008 telephone call with Mr Walsh. Mr Spokoyny had only noticed the limited number of Resurrecting Faders which appeared in GEM which he took as offsetting one another because of the manner in which they were booked with four or eight different entries. Neither Mr Quezada nor Mr Spokoyny was therefore likely to appreciate the extent of the outstanding volume of EDTs, nor the seriousness of the MTM or margin position in the light of the way in which the market was moving, but the history of their involvement, including the 2nd May telephone call, the email from Mr Quezada to Mr Geisker and Mr Spokoyny's later email of 7th October, together with Mr Said's Timeline satisfy me that they knew there was an outstanding problem, about which neither has since been candid. Furthermore, Mr Quezada and Mr Kim must have been aware, at least in general terms, of Mr Walsh's approach and Mr Manrique knew that he was essentially not booking EDTs until knock-out. He asked Mr Kim to sign off on ten EDT Counterparty term sheets on 16th and 18th September which had not been booked contemporaneously, making it clear that FXPB did not have access to GSTs and thus to DB Analytics. I conclude that the booking problems were more widely known than the bank personnel have been prepared to admit, although the significance of the trades themselves would not have been apparent to those concerned.

746. On 30th September Mr Quezada and Mr Spokoyny spoke further with Mr Said in a telephone call seeking to agree an amendment to the margin terms. Mr Quezada initially proposed that the initial margin terms should be amended from 2 x 5 day VaR to 3 x 10 VaR plus liquidity add-on. The current figure was said to be US$21.8 million and the changed parameters would move the figure up to US$50 million. Mr Said recognised that there should be more margin because he considered that DBAG "are probably always a little on the low side" but said that there was no risk because the account had Mr Vik behind it. Nonetheless, even at this late stage, knowing the state of the market and that his EDTs were not included in the margin calculation, Mr Said still resisted the increase sought, saying that it was too high and, effectively, that he could get a better offer from another bank than the 150% increase that the new margin parameter reflected. Mr Spokoyny then gave Mr Said a rough estimate of the amount of margin that would be required if margin terms were amended to 2.5 x 10 day VaR and Mr Said indicated that he would be content with margin terms that doubled the existing collateral requirement. He asked Mr Spokoyny to carry out backtesting over the previous two years on his account to ascertain what amendment to the margin parameter would be required to increase the current level by 75-100%. He observed that if it took a further two years for DBAG to revert to him, he was not in any way concerned. Mr Said said that he would discuss the margin position with Mr Vik and that one of his big advantages was that he did not have, as a rule, to cut positions simply for margin reasons. Given the sleepless nights that he was suffering, as reported to Ms Hashimoto, about the EDTs and his knowledge of the extent to which the BRL positions, in particular, had moved outside their ranges, Mr Said could not have thought that any solution had yet been achieved in relation to DBAG's

booking problems. He knew that he had not been told that any such solution had been reached.

747. On 6th October Mr Spokoyny emailed Mr Said to inform him he had received approval within DBAG to amend the margin terms to 2.5 x 10 day VaR + liquidity add-on which would have the effect of increasing Mr Said's current collateral requirement from approximately US$21 million to US$40 million. Mr Said promptly accepted. Knowing that DBAG had still not found a way of booking the EDTs so that they were reflected in MTM and margining, Mr Said knew that the agreed new parameters for VaR margining were inadequate to cover the risks on his portfolio, particularly in circumstances where he had just recently received details of MS' margin demand for US$103 million, based on MTM alone, which neither Mr Spokoyny nor Mr Quezada then knew.

748. That very day, he had spoken to others of the "absolutely awful" MTM on the BRL positions "because of where vols are".

749. Mr Said's relevant exchanges with Mr Vik in October are set out in section 16. Mr Said's knowledge that he had not been margined on the EDTs appears clearly from his "free ride" email to Mr Vik on 9th October 2008 in which he pointed out that the profit on the EDTs was made on "almost no capital" and that he was able to do that essentially for free, but that this was now at an end because DBAG, having given SHI "a free ride on these things because they could not value them properly in their system" had now "woken up". The same point is confirmed by Mr Said's telephone conversation with Mr Walsh and Mr Quezada where he referred to getting a free ride for the past six months (as opposed to the year that he had mentioned to Mr Vik) "from a mark to market … from a collateral point of view". The terms of the conversations between Mr Walsh, Mr Quezada and Mr Said make it clear that they all understood that the EDTs had not been taken into account in the margin calculations because ARCS VaR could not capture the risk, with Mr Said saying that he did not realise the full extent of the freebies that the deficiencies in DBAG's systems had given him. He knew that he had had a free ride for six months to a year. He knew that the MTM figures were large because of the market movements since mid-August and he knew by October, if not before, that "hundreds of millions" of dollars would be involved in unwinding the trades on an MTM basis. He therefore knew that, if DBAG had been able to calculate margin in accordance with the contract, those figures would have been very substantial but he may not have realised quite how substantial.

750. At no point, at any stage, did he blame DBAG for not reporting accurate MTMs on the EDTs or accurate margin calculations which incorporated the EDTs because he knew that non-reporting of these matters was the agreed basis upon which DBAG took in the EDTs in consequence of the systems' inability to capture the trade details and risk. The most that he ever said in a call to Mr Quezada on 9th October in the evening, was that "with a more standard system where these things are fully collateralised, fully margined, the positions would have been smaller … If these had all been valued, I may have screamed and yelled at you for costing me the opportunity, but I wouldn't have had so many positions on". Even this was said in the context of saying that more margin would be put up and SHI would manage the crisis with the ball in their court, not DBAG's. On his own evidence, Mr Said did not regard the GEM Web Reporting system as a risk management tool and therefore did

not rely upon figures or the absence of figures in it as a basis for making trading decisions. He had always sought to minimise collateral and take advantage of the free ride so long as it lasted and realised that he could have no complaint when it came to an end.

751. As he was to say in a letter of apology to Mr Vik's wife, there was no-one to blame for the losses but himself. He had misjudged the market and the once in a century turn of events of the autumn of 2008 had caught him in the middle of a perfect storm.

752. To the extent that there are statements in Mr Said's affidavit, in paragraphs 15, 16, 23 and 24, that Mr Said did not agree to the absence of reporting by DBAG of accurate MTMs on the EDTs or accurate margining which included them, I reject them in the light of the contemporaneous documents and Mr Said's own Timeline. To the extent that there was any suggestion that he used such reports to monitor his risk and that he always insisted that DBAG should only take the EDTs if they could book them accurately, value them and margin them, that evidence was false. Nor was Mr Said ever given any assurance that DBAG was booking them accurately, valuing them or margining them.

753. Mr Said always regarded margin as a matter for DBAG, not a matter with which he should be concerned, as appears from his conversations with Mr Quezada and Mr Walsh on 5th May and 22nd July and from his general approach to margin, including the original negotiation of it, and the renegotiation on September 8th and thereafter, when he sought to minimise the margin requirement to the greatest extent he could (and as he and Mr Vik subsequently did on October 16th 2008). Margin, for him, was DBAG's concern, because it was a requirement for security on its part against obligations owed to it by SHI. The less security sought and provided, the better from SHI's standpoint.

754. Mr Said not only therefore agreed to DBAG not reporting MTM figures to him but recognised that the inevitable consequence of that, together with his observation of the margin figures as they appeared on the web, was that he would not be receiving reports from DBAG of margin which truly reflected the contractual basis upon which DBAG was entitled to demand margin.

755. What he probably did not appreciate and what no-one at DBAG appreciated, was the extent of the "free ride" that he was getting. To calculate the MTM figures for the TPFs was a complicated exercise, only capable of being effected by computer models, unless a price was sought to unwind the transaction. The portfolio margin likewise could only be done, and was ultimately done, only with computer programmes which were specifically designed for the TPFs by the experts engaged by DBAG and SHI. As the market moved sharply outside the ranges of the TPFs and looked as though it was going to stay there, the impact on MTM and margin must have become increasingly apparent to anyone who understood how the TPFs worked as Mr Said did. He knew that, from the moment they were first concluded, they tended to lose value on an MTM basis and that, at all stages until knock out they were likely to be negative from an MTM viewpoint. Once, however, market movements occurred which put them outside the ranges, with little prospect of return, as occurred in the autumn of 2008, there came a point where Mr Said must have realised just how inaccurate any margin figure on the web was, a point which was brought home to him on Friday October 3rd when MS reported MTM margin figures to him on three

USD/BRL TPFs, which on Monday 6th were reported as US$103 million. That may have been the figure for October 3rd, but if it was not, it must have been a figure of that order. Previous comments by other banks' representatives in Bloomberg chats suggest that he was not fully alive to the size of this figure until he was hit with it.

756. Nonetheless, regardless of the extent of the free ride he was receiving, he knew he was getting a free ride. In agreeing to DBAG taking in the TPFs without reporting on the MTM figures, he was, of necessity, agreeing that there would be no reporting to him of margin figures which reflected DBAG's contractual entitlement. Whatever DBAG's obligations might previously have been, as a matter of implication of terms into the FXPBA, Mr Said agreed that DBAG did not need to report MTM figures for the EDTs or accurate margin calculations or even process the EDTs until knock-out and settlement.

757. The contemporary documents and Mr Said's Timeline which he created shortly after the events in question present a history of events which is at odds with Mr Said's third affidavit in the New York action and, to a significant extent, with his evidence on deposition, although, during the course of the latter, he made concessions in the light of documents that were put to him.

758. I find that:

i) In order to persuade DBAG, in the persons of Mr Quezada and Mr Walsh, to accept the EDTs as Structured Options, he told them in terms that they did not have to produce MTM figures for these trades and that he did not rely on those figures for his risk management purposes.

ii) He knew that FXPB was unable to book the EDTs as such because DBAG's GEM system could not cope with the trade details of such complex trades.

iii) The sporadic appearance of Resurrecting Faders in GEM and on the manual spreadsheets as placeholders for EDTs gave rise to such nonsense figures for MTM that he asked for them to be removed or zeroed out.

iv) He knew that the MTM figures which appeared on GEM for the EDTs were inaccurate and that they, together with the MTM of the other trades in the portfolio, were the basis for calculating variation margin on the portfolio as a whole.

v) He therefore knew that the variation margin was chaotic, based as it was upon the spurious MTM numbers on GEM.

vi) His observation of the margin figures revealed to him that no Initial Margin was being charged on the EDTs either.

vii) He told Mr Quezada and Mr Walsh that there was nothing for DBAG, as Prime Broker, to do in relation to these EDTs (margining aside) save to settle them on knock out or maturity.

viii) He knew that he had been taken at his word since his observations of the GEM website and the manual spreadsheets produced by Mr Walsh showed that a large number of EDTs were not being booked until knock out.

ix) He regarded margining as a matter for DBAG alone and he did not use GEM (nor the margin figures in it) as a risk management tool.

x) He was at all times desirous of minimising margin and obtaining the maximum leverage against it.

xi) He knew that SHI was getting a free ride on margin, as the market moved against it in the period of 6 months or so prior to October 2008.

759. As set out in the section dealing with the New York law of contract, a waiver occurs where a contracting party dispenses with the performance of something that it has a right to exact or could have demanded or insisted upon if it chose to do so. There is no need for any consideration for it to be effective but there must be a voluntary and intentional abandonment of a known right which would otherwise have been enforceable. A waiver can be found in either an express agreement or by such conduct or failure to act as to evidence an intent not to claim.

760. Here, whatever terms fell to be implied into the FXPBA in relation to the booking, valuing and margining of the EDTs and more specifically to the reporting of MTM and margin calculations, Mr Said agreed that DBAG need not perform, knowing that it was unable to do so. I have found a more limited implied term than any for which SHI contended, but Mr Said expressly agreed that DBAG need not produce MTM figures on the EDTs and by doing so waived the reporting of margin which was dependent thereon, as he fully understood. He understood also that DBAG's systems could not capture the trade details of the EDTs and therefore that that they could not be properly booked in DBAG's systems and agreed that they need not be. He waived any requirement for that and for reporting any trade details, agreeing that a cash settlement booking was sufficient. The matters to which he agreed, which I have set out earlier, constitute a waiver not only of the implied term I have accepted but would also constitute a waiver of all the implied terms alleged in relation to booking, recording, valuing and margining the EDTs and reporting thereon.

761. There was good and valid consideration inasmuch as this was the basis upon which DBAG accepted or continued to accept EDTs in circumstances where it was entitled to decline them as Structured Options under the FXPBA. Mr Said also continued to commit DBAG to counterparty EDT transactions on this basis, thereby incurring liabilities on its behalf in accordance with the arrangements made. Equally, DBAG acted to its detriment in taking in the EDTs in reliance upon Mr Said's assurances that he understood the booking difficulties and did not require reporting of MTM or margin or booking until settlement. Both Mr Said and DBAG proceeded on the basis that DBAG was not booking the EDTs accurately, valuing them accurately or including them in its margin calculation.

762. Whether this agreement takes effect as a variation of contract or as a waiver is neither here nor there. The no oral modification provisions of the FXPBA and FX ISDA would not present any barrier to the enforceability of any variation of the FXPBA

because the conduct of the parties is consistent only with such variation which did not remain executory. Nor does the Clause impact on a genuine waiver, as occurred here.

763. If this issue falls to be decided according to English law, the position is identical, inasmuch as there was plainly an agreement to vary the parties' rights with good and valid consideration or a waiver by Mr Said of whatever contractual rights arose in relation to the accurate booking, accurate valuing and accurate margining of the EDTs and the reporting thereof.

764. I have dealt with Mr Said's authority at an earlier stage in this judgment and the terms of the Said Letter of Authority conclude this issue against SHI, as Justice Kapnick found in the New York action, as upheld by the Appellate Division. Mr Said had SHI's authority to conclude arrangements and to waive arrangements relating to the FXPBA, the FX ISDA and the CSA, including reporting and margin requirements.

765. Quite apart from the agreement of Mr Said to the lack of reporting, Mr Said's evidence also creates another insurmountable impediment to any claim that SHI might have in relation to any failure by DBAG in the respects alleged. Mr Said did not rely upon the accuracy of DBAG's booking, valuation, margining or reporting in making his decisions to execute EDTs. He did so on the basis of his own trading decisions and market judgments and sought approval from DBAG knowing that DBAG could not properly book, value or margin them. It was Mr Said's decisions which gave rise to the trading losses, not DBAG's failure to provide MTM or margin reporting. Although Mr Vik might well have taken action, as Mr Said said in his deposition evidence, to require Mr Said to reduce positions if he had known that the MTM requirement had risen to a figure of US$150 million - US$200 million, DBAG was under no duty to protect SHI from the consequences of Mr Said's trading decisions.

766. The reality of this matter, as was obvious to Mr Vik when he first became aware of the large loss-making positions on the EDTs concluded by Mr Said, is that SHI must bear responsibility for the acts of its agent, Mr Said, who was responsible for concluding the EDTs which gave rise to the losses, all of them post-5th July 2008, having persuaded DBAG to take them in as Structured Options under the FXPBA on the basis that I have previously set out.

16. The History of Mr Said's FX trading and Mr Vik's knowledge thereof

767. Mr Said commenced trading under the FXPBA with spot trades and vanilla options, looking to Mr Vik for express approval but from early 2007 he began to trade in OCTs. His first venture into these exotic options occurred on 8th February 2007 with two Knock-out Call Options concluded with Citibank and CS. If there had been an agreed restriction on his trading to vanilla options, he therefore went outside the scope of his authority within a couple of months or so of the FXPBA and the Said Letter of Authority. Furthermore, DBAG's forensic accountant calculated that Mr Said's trading took him briefly over the US$35 million margin level on 18th January 2007 so that this also constituted a breach of authority on SHI's case. Mr Said therefore was acting blatantly in breach within a short time of his alleged agreement with Mr Vik and Mr Vik's alleged agreements with Mr Meidal.

768. The course of Mr Said's trading also exemplifies the same blatant disregard for the alleged Said Contract during the course of 2007 because he continued to trade in non-

vanilla trades – OCTs – throughout. He commenced trading in EDTs in February 2008 and continued with them until the margin calls. Yet he told Mr Vik of trades he was conducting in email reports which could have left Mr Vik in doubt about the nature of the trading he was conducting. These factors alone militate against Mr Vik's evidence and SHI's case on the alleged oral agreements, which I have already found were not made.

769. Mr Vik himself commenced trading FX more actively through DBS in 2007. Mr Brügelmann executed trades for him as he did with SHI's trading in other asset classes, on Mr Vik's instructions. He furnished daily reports of these activities. He did not furnish daily reports on Mr Said's trading and when, on 25th April 2007, he suggested different types of information which could be supplied on a monthly basis in respect of that trading, Mr Vik did not take him up on this. When asked on 28th June 2007 whether he wanted a record of Mr Said's positions, he declined, saying, "no need", doubtless on the basis of the weekly reporting he was getting direct from Mr Said. Although there was a subsequent suggestion that Mr Brügelmann might provide further reports, in practice the only time Mr Brügelmann did provide any information was on the occasions when he met with Mr Vik (three times in 2007 and three times in 2008) or if Mr Vik specifically asked for it, which was very rare.

770. Mr Vik's evidence was in direct conflict with that of Mr Said in his deposition in relation to the information Mr Said gave him and the discussions they had, as set out in the previous sections of this judgment. Mr Vik's evidence was that he almost never spoke to Mr Said on the telephone and that even when he was in Greenwich he did not see Mr Said every day. Though he worked in the same office annex, they were on different floors. There were no discussions of the kind to which Mr Said had referred in his New York deposition. There were no discussions of new types of trade before Mr Said embarked upon them. Mr Vik had however no satisfactory answers to give in respect of the email reports made by Mr Said which spoke for themselves.

771. I have come to the clear conclusion that Mr Vik understood the nature of OCTs and EDTs that were reported to him by email, that he understood that they were not vanilla trades and that he also understood that the TPFs, which gave rise to substantial profit, could also give rise to substantial loss albeit that losses of the scale which ultimately eventuated were unanticipated.

772. On 25th April 2007 Mr Said emailed Mr Vik about OCT4 which he described as a NOK range bet, referred to elsewhere as an Extinguishing Timer option. In an email he explained the nature of the transaction he wanted to do and asked if Mr Vik would like to "do some on your own position also". As explained, a premium of €1 million was to be paid with a prospect of a €5 million payout on the maturity of the option in two months' time (forty business days). If the NOK was in the range of 8.05-8.21 on any business day, one fortieth of €5 million accrued as profit. If the NOK left that range the option knocked out and the premium was lost but profits gained were retained which meant that, provided the NOK stayed within the range for nine business days, a profit would be earned. If it stayed within the range for the whole period, US$5 million profit resulted. The email said that Mr Said was happy to explain further. Mr Vik responded to say that he did not wish to purchase such an option himself but raised no objection to Mr Said doing so. In cross-examination he said he had no recall of reading this at the time and it was of no interest to him. In his deposition he said that he had read it. He said he did not notice that this was a trade

that should not be done because it was not vanilla and he did not ask for the further explanation offered.

773. Later that day Mr Said said that he had bought the option and that he really thought that Mr Vik should consider this for himself. There followed a string of emails marking the progress of this option including one on 8th May saying that the premium would be fully recovered the next day and a report when it was US$600,000 in profit (to which Mr Vik responded "keep it going"). There was discussion about the hedging effect that this had in relation to SHI's directional trades and Mr Vik asked about the knock out point on the low side. The final result on this trade was a profit of US$4.7 million and Mr Vik congratulated Mr Said on making almost all the money possible.

774. In his deposition Mr Vik had said that the trade was not for him because he did not do Structured Options or things like that. It is clear that he appreciated the non-vanilla nature of this transaction and approved of it being concluded in advance of that taking place.

775. OCTs 9 and 10 consisted of Correlation Swaps which Mr Said explained once again in some detail in an email of 25th June 2007, in which he also referred to a EUR/NOK range trade which had knocked out at US$4.9 million profit. Mr Said asked if Mr Vik had any questions about the Correlation Swap but Mr Vik did not take him up on it. In cross-examination he said he did not understand the trade and it was not plain to him that it was not a vanilla trade. This could not have been true and indeed, if he had not understood it, it would have been all the more plain that it was not vanilla. In fact I have no doubt that Mr Vik did understand the explanation given. Though not authorised in advance it is plain that Mr Vik gave his approval to it. In cross-examination Mr Vik accepted that he knew that Mr Said was going to conclude the Correlation Swap, saw a description of it and even after Mr Said later reported that it had lost money, he never raised any objection. Mr Vik accepted that he would have read with care Mr Said's emails in September 2007, about the trades which led to profits and losses.

776. On 2nd July Mr Said emailed Mr Vik saying that he was trying to do a type of range trade similar to OCT4 (in this case a Gated Accrual) but DBAG had problems incorporating range trades into the P&L on their system (i.e. the MTM valuation). Mr Vik said he left that to Mr Said to resolve with the bank but raised no objection to the trade, saying in cross-examination that he saw no problem with it at the time and even less so when in the witness box.

777. Further emails in 2007 set out other OCTs conducted by Mr Said including a reverse knock-out, a NOK e-timer and a forward volatility agreement. By the end of 2007 Mr Said had executed twenty-three OCTs with a number of different Counterparties. His regular weekly reports to Mr Vik included a headline figure showing realised profits on his FX trades, including the OCTs, updates on the trades which had been executed but were still outstanding by reference to their existing position, and his own opinions about the market and potential strategies. Mr Vik said he tended to focus on the realised profit figure alone. On 18th September however, he asked Mr Said specifically about the positions that he currently held, saying that it would be beneficial to put together a schedule with all the trades and P&L for each on it. Mr Said's reply said it would be difficult to do that but set out a summary of trading thus

far, referring to the sale of options, Correlation Swaps and reverse knock-outs as well as his core positions, which Mr Vik obviously read in detail since he responded to say all of the profit was essentially made on one trade, namely a NOK/EUR transaction with everything else effectively cancelling out the profits and losses in each direction.

778. On 3rd January 2008 Mr Said provided his final P&L figures for the first fourteen months of trading including an item "structured options net of several timer options and correlation swaps". In cross-examination Mr Vik said that this could include plain vanilla transactions and he did not know the difference between the two, which is not credible. Mr Said, in his report, said that it had been a successful year. The capital allocated to his trading was US$35 million and he had returned to Mr Vik net of his share around US$40 million. Mr Vik's response is interesting in the light of the US$35 million allegation which I have rejected: "In general I don't think in terms of equity capital allocations so don't let that be a restriction when you have very strong ideas".

779. On 19th February 2008 Mr Said emailed Mr Vik to report his realised profit and loss of around US$9 million so far that year. He said that his positions were largely unchanged but he was looking at two interesting structured options similar to the timer/accrual that he had done in EUR/NOK the previous year. There followed a sequence of emails that day, showing that Mr Vik had read the details of the positions about which he asked questions and to which Mr Said gave answers. There was discussion about his overall long NOK position and whether it was worth US$750 million or US$1.4 billion, figures which might have called for comment in a context of an alleged trading limit of US$35 million. He referred to the two Structured Options (EDT 1 and EDT 2) which Mr Vik denied discussing with Mr Said on 19th February because he said it was his birthday.

780. On 22nd February, Mr Said said that he had concluded the two structured options (EDT 1 and EDT 2) and said that if Mr Vik wanted to know the details he would "walk you through them next week." In his report the following Friday, Mr Said said he had added some more structured range trades and that the existing range trades were working well but did not appear in the P&L as yet. Mr Vik said that Mr Said had explained that he was not counting profits before they were realised but he did not understand until October 2008 that accrued profits were not earned until the trade knocked out, though he did understand that there was no guarantee of profit and there was the possibility of loss, unlike the OCTs which Mr Said had described in emails in 2007. Once again Mr Said had offered in his email to explain further but Mr Vik said he did not take up the offer.

781. On 7th March 2008 Mr Said emailed Mr Vik to say that the P&L was down around US$8 million (meaning a loss of US$8 million) and referred to three range accrual notes where profit would not be counted until they paid out. US$5 million had accrued but it was not guaranteed. Mr Vik accepted that he understood that the accruals were not the same as realised profits and could change but had no idea about the different options to which Mr Said referred. He said he did not notice the absence of any reference to premium in these emails about EDTs, as compared with OCT4. A week later Mr Said's P&L position stood at US$14 million negative.

782. There are further weekly reporting emails thereafter referring to accrued profit which was not yet realised on the range bets or accrual trades and reference to OCTs,

including one, the details of which had been explained to Mr Vik personally by Ms Sai of GS who had tried to sell it to him.

783. On 16th April 2008 Mr Said emailed Mr Vik on the subject of accrual trades, stating that the first and biggest one would knock out at its pre-determined profit target that day with US$7.5 million pure profit. Mr Vik in cross-examination said that he did not know how the profit arose and thought it could be premium, which is transparently ludicrous. He said he had no idea of the terms of the trade and did not find out about it from Mr Said who in the email referred to further trades, one of which was accruing losses. Mr Vik accepted he knew that Mr Said could lose money on the trades. In his response he approved the replacement/renewal of the accrual trade that had knocked out.

784. On 27th April Mr Said referred to his accrual trades as all behaving tolerably well, saying he had a decent sized bet on that and asking if Mr Vik wanted to know exact details of all the range bets. Once again Mr Vik said in cross-examination that he did not take him up on that offer.

785. The weekly reports from Mr Said showed a build-up of profits on a regular basis by virtue of the range bets, range accruals or range trades, as they were variously described. Mr Vik's evidence was that he never noticed where the profits came from despite it being spelt out in the emails.

786. On 21st June 2008 Mr Said explained the two strong views he had which correlated with the positions he had been taking which did not involve putting on much new directional risk. The first of those views was that the NOK was substantially undervalued. The second was that:

> "markets are stuck in ranges and are likely to stay that way with little new truly market moving new information likely to fundamentally change the picture. Implied volatility is overvalued. Consequently I am short vol through options and range trades. This has worked well so far. This week I took in another 4.5mm$ for an expired range trade and a good chunk more is coming early next week. I am replacing trades as they expire – it is still good value. Obviously not without risk at all if we get precipitous moves that do not mean-revert but good risk reward in this directionless market."

He said that the profit thus far that year was US$35 million. Mr Vik in cross-examination said that he did not understand what was meant by betting against higher volatility through his range trades though Mr Said often repeated his view about mean-reverting currencies.

787. On 27th June, Mr Said told Mr Vik that his profit was up to US$50 million and that he kept replacing the range trades as they knocked out and paid. He said there was still a fair amount of range risk but he was very comfortable with it. In the middle of the following week, in discussing the cash which Mr Vik was considering taking out of Mr Said's trading account, Mr Said referred to his current positions, saying he had a lot of money at risk in the range trades which were still working very well as the inactivity was the perfect scenario for him. Mr Vik's response was to tell Mr Said to

keep an eye out for a change in volatility in currencies because volatility had been increasing in interest rates and equities.

788. On 4th July Mr Said told Mr Vik that he had "a bunch of the range trades" which continued to perform very nicely but that he was a little uncomfortable with them and was not replacing them as they rolled off because he thought that there might well be a catch-up in volatility. He explained that the structures were such that unwinding them was punitive except in an emergency and for the moment they were still right in the middle of wide ranges. His profit was still US$50 million because, although he had lost some money on the EUR/NOK, he had made some money in the range trades. Mr Said's appreciation of market movement, as revealed in these emails to Mr Vik, tallies with the forensic accountants' evidence as to contractual margin requests and the portfolio from July 2008 onwards.

789. Mr Vik, in cross-examination, said that he did not know what was meant by range trades. Mr Vik said he thought that Mr Said was selling options but there was, of course, no reference to premium and this made no sense of the reference to accruals and profits on trades on a daily basis up to a maximum. In an email of 12th July, in a general discussion on email about what to do in the existing markets, Mr Said said that the view that had really panned out was the bet that the market would be stuck in ranges and that the ranges had held although "implied vol has come off". He said he still had a lot of these trades but because things were unsettled he had not added much at all for the first time in four months and he was keen to reduce them in case there was an explosion, but that had to happen through roll off. He then said that by the end of the next week he should have reached 90% accrual for many of the trades. Mr Vik's evidence was that he did not know what he thought about this at the time.

790. The following week Mr Said said his profits were down to US$44 million with the bulk of his risk in the range trades and none knocking out that week. He said that "playing the range really is the only way to make money" when the market was just spinning its wheels. The following week Mr Said's report said that three more of his accrual trades had knocked out but there was still a bunch more with plenty of risk and opportunity left. He was replacing some but not all and his profit was now US$55 million. He said that the market was still in the range and he needed to see a break out to be convinced differently.

791. On 1st August he said he had hedged around two range trades which were not doing so well. Mr Vik said he did not understand this meant they were nearing the edges of the range. Mr Said's profit was up to US$70 million but he was letting the range trades roll off, replacing few because volatility was low. The trading had worked for a long time but there was still US$15-20 million at risk in the trades which he hoped to realise in the next month. He said that something was going to go against him "one of these days" but he had a nice cushion, by which he was referring to the profit of US$70 million already earned.

792. In an email discussion the following week, on 8th August, Mr Said referred to a "wild few days" as the dollar went up and to losses on two directional trades while two range trades had knocked out with a gain. His profits were down to US$66 million but with implied volatility higher, he was thinking of concluding some more range trades and referred to four extant big range trades, one of which was fully hedged and two of which were largely hedged though he considered that gamma was tricky. Mr

Vik professed not to understand what "gamma" represented (it is the change in delta of a portfolio for a specified change in the FX spot rate and is a measure of how often a delta hedge must be adjusted over time). In the witness box he said he did not know that gamma was the rate at which delta was changing, though this was about the fourth occasion upon which Mr Said had referred to the word in his emails.

793. On 15th August the US$ was still going up, contrary to Mr Vik's expectations and Mr Said said that a "[w]ild week" was over. A lot of the accrual trades had knocked out and he only had two new ones, concluded because the range looked too good to miss. He said he had several existing trades that were a bit of a headache but he had hedges against all except the yen. "[T]hey could turn out not so good or quite nicely – but there is a fair amount of risk". He was up US$78.5 million with "lots of risk and opportunity still on the books, so not time to pop any champagne corks". Mr Vik responded approvingly.

794. The following week, a "[r]eal rollercoaster" in the last couple of days, Mr Said said that his profit was now US$81 million as a result of buying back a CAD/USD trade. He had a few new range trades on and he said the next month would be important though the next week would be very illiquid and probably choppy. The figure of US$81 million profit represented the high point of Mr Said's trading, having moved from a position of a US$14 million loss in March 2008, so that he had made some US$95 million in five months, almost entirely on the range trades as described to Mr Vik.

795. There is so much reference to the range trades in the emails and discussion of the ranges, the accruals and the knock-out features in the context of bets against volatility that I cannot accept Mr Vik's evidence that he did not understand the nature of these trades. It is inconceivable that he would not have asked for an explanation from Mr Said if he did not understand, particularly in circumstances where Mr Said regularly offered to "walk him through the details" or to explain the details of the range bets. Mr Vik would not have considered these vanilla options and plainly knew that they were Structured Options within the meaning of the FXPBA. The suggestion that Mr Vik thought that all that Mr Said was doing was selling options is absurd, given that there was no reference to premium (by contrast with the description given of OCT4) and there was express reference to accruing profits and losses until knock out. Substantial profits were being earned and, as Mr Vik accepted in cross-examination, substantial profits often meant a risk of substantial loss. Nonetheless, despite the figures given to him, and Mr Said's email comments, Mr Vik maintained that he did not see these trades as very risky.

796. There had been continuing discussion on email between Mr Said and Mr Vik about the continuing rise of the US$ and the decline in the NOK, much to Mr Vik's chagrin and Mr Vik was expressing his lack of understanding of the market and how he felt "out of sync" with it. Both Mr Said and Mr Vik considered it a very difficult market to trade in and Mr Vik, in an email headed "pretty ugly out there", said he was amazed and had no clue about what to do (as his own FX positions were deteriorating rapidly, particularly the USD/BRL trades). Mr Said's response was to suggest that Mr Vik should reduce his short dollar position, though he did not know how short Mr Vik was. For himself, he said he was selectively looking at adding risk by concluding range trades which he referred to as "selling volatility". Throughout September Mr Vik and Mr Said continued to discuss the progress of the range trades, with Mr Vik

expressing approval of Mr Said's trading where the "core portfolio" was going down but Mr Said was still realising profits on range trades which knocked out. His overall annual profit figure was however diminishing.

797. There is a significant discussion on 19th September between Mr Vik and Mr Said on email. It begins with Mr Vik asking Mr Said whether he has put on some range trades, to which he receives an affirmative response in respect of two trades, one an EUR/USD trade and another an EUR/NOK trade. In each case Mr Said specifies the "mid point" (i.e. the pivot) and the breadth of the range either side to the high and low strike prices (although he does not refer to them as strike prices and refers only to plus and minus figures either side of the pivot). Mr Vik's response was to ask whether the odds were very heavily in SHI's favour, saying that selling FX volatility on relative trades should be a good prospect with the existing implied volatilities. The response from Mr Said was then to say that the trades were very high risk, high reward because, at these volatilities, there were very wide spreads. He said that if the market should move outside the range and stay there, there was in theory unlimited loss potential. He had a couple that had done that but he had put other ranges round them to create an average portfolio and so far that had worked. He said he liked these trades because he thought that currencies were a bit of a side show in all of it (meaning that it was the volatility that mattered) and although there were sharp vicious moves up and down he did not think there would be a major sustained move which would negate his trading strategy. Mr Vik's reply shows that he fully understood what Mr Said was saying because he suggested that diversifying the pairs of currencies would reduce the overall risk as well. In cross-examination Mr Vik said that he understood that if the price moved outside the range and kept going a lot of money could be lost. He said he did not know how Mr Said was hedging but he did understand his general strategy. What is clear, however, is that he understood what the range trades involved in terms of the pivot and the high and low ends of the range and that the hedging to which Mr Said referred involved yet more range trades with wider ranges so that, if money was lost from the original trades, the wider range trades would still give rise to profit.

798. In the last of the emails sent on that day (September 19th) Mr Said expressed the key to his strategy by reference to four elements. The first was "spreading it out over time and never doing too much of any one trade". The second was being more aggressive when volatility was high and "pulling your horns in" when it is low. The third was picking the right currencies, meaning those which were "fundamentally rangey" but offered decent volatility and fourthly, diversifying the currencies. He said that these were risky trades, but offered good risk reward if you believed that currencies were often mean-reverting, which he did. They had, however, to be watched like a hawk.

799. In his witness statement, Mr Vik had said that he recalled that on or about 19th September, he did speak to Mr Said about a range trade whilst in the office in Greenwich and was told that it involved selling a call option at the top of a desired range and a put option at the bottom of the range. In cross-examination he suggested that this conversation preceded the email exchange to which I have just referred in some detail. He thought it followed an email of 18th September from Mr Said when he had said that the volatility was high and he could get wide ranges round the spot rate in EUR/NOK and EUR/USD, commenting that the average life of trades was one or two months and it was time to add more. The gist of Mr Vik's evidence on

deposition in relation to this conversation was that he understood that a good premium was obtainable because the volatility had gone up a lot. He accepted that, if the 19th September email followed the conversation in the office, it made no reference to it and that there was no request from him as to how much premium was obtained. The email exchange of 19th September gives the lie to Mr Vik's evidence and shows that he understood clearly not only that the TPFs were not vanilla transactions but also their basic characteristics. Since Mr Said's exchanges with other people showed that he was working from home on both 18th and 19th September, Mr Vik is probably wrong about the dates of this discussion in any event but what his evidence does show is that he did have a discussion with Mr Said about "a range trade" and there would have been no reason for Mr Said not to explain the nature of the transaction in full, particularly given the extent of email traffic on the subject. In all probability this discussion must have happened much earlier since, in the early emails Mr Said offered to give Mr Vik further explanation whilst the later emails do not and proceed on the basis that Mr Vik fully understood the position, as his responses demonstrate he did.

800. On 27th September 2008 Mr Said's email talks of a "tumultuous" week where his positions were largely unchanged but his profit figure was down to US$52 million (attributable to the decline in the NOK). The week was good for the accrual/range trades but none of them were close to maturing or knocking out, whilst directional positions were difficult to run in the market. Two days later, Mr Said expressed his surprise at the strengthening dollar, even though that helped his range trades. He was "hunkering down" and not entering any new trades whilst keeping a very close eye on the range trades, which were for the most part still doing well, but was ready to execute hedges quickly. He had made enough elsewhere to hold the position, was not comfortable but was still in business.

801. From this survey of exchanges between Mr Vik and Mr Said prior to October 2008, it is to my mind clear that Mr Vik's evidence about his state of ignorance of the types of trade that Mr Said was doing was not credible. Given the focus on range bets and accrual trades and the profits they were making in circumstances where directional FX trading was highly problematic, both for Mr Said and Mr Vik (as to which see elsewhere in this judgment), in my judgment it is inevitable that Mr Vik would have wanted to know details of the profitable trades in which Mr Said was involved and to understand how they operated. The emails reveal that he was told much in them and, as Mr Said said, there was other discussion between them about what was involved. Contrary to Mr Vik's evidence, he knew what the TPFs were, how profits accrued and how losses could occur if currencies moved outside the ranges and remained there. Neither he nor Mr Said thought that this would happen over any extended period. The emails make no reference to the size of the notional involved on a daily or weekly basis but the profits made by Mr Said must have indicated that substantial sums were involved. Moreover, in the context of face-to-face or telephone discussions between Mr Vik and Mr Said, however limited the evidence is of these, it would have been impossible for Mr Vik not to have asked basic questions about figures.

802. On Friday 3rd October Mr Said reported to Mr Vik in the morning that much trading was taking place, though the US$ was firm. He said the accrual positions were doing well though the MTM was all over the place. With a bit of luck that could give rise to nice realised profits over the next few weeks but there was a continuing problem with

the BRL where the market was very thin and driven by unwinds. Mr Said said he was making more than enough in the other positions but on an MTM basis, if SHI were to seek to unwind the trades it would look awful. That, he said, was the risk taken with "structures". He was accruing some losses on these every week but so slowly that he expected to get out of them over time with moderate or no losses.

803. Mr Vik questioned whether Mr Said should stay in BRL because he had "made the mistake in staying in these one way trains [which] seemed to go much further than expected or possible". Mr Said's response was to say "[y]es" although the BRL could go further but if it did, it would be due to further position wash-outs in a highly illiquid market. Not unwinding positions due to such squeezes on illiquidity was one of the big advantages that he considered he had with a more long term investment horizon. He said it was true that the major part of the long Brazil position was in option structures as was much of his other risk. The structures had made a great deal of money over the year and would make more money that year too. He said that payment for the profit potential was a certain illiquidity. MTM exposure to volatility and spot rates over the life of the trade were not really that relevant but it would hurt greatly if a decision was made to unwind them. "These are buy and hold trades and if they go awry (which they can) you manage [your] way through them – which is what I have done so far. With vol[atility] so high now I think most of the structures I have will be under water – some by a bit, some [by] a lot – on an unwind basis." He went on to say that he was accruing US$1.3 million a day, none of which was guaranteed until the trades knocked-out but he was pretty comfortable in thinking that over the next two weeks somewhere in the neighbourhood of US$20 million would accrue. He said the important point was to stick with the trades as he had all year and when something went "out of whack" that he did not think would self-correct, hedges could be put on. On the BRL trades, he considered they should be held but would refrain from adding hedges.

804. On the same day Mr Said was informed by MS of the MTM position on his five outstanding TPF transactions with that Counterparty. According to an inter-messaging chat between two MS representatives on the Monday, Mr Said was not expecting the MTM to be that much and the representatives reckoned that closing of the trades had just been expedited and that Mr Said would be fired. Another representative of MS on the Monday said that she had had a brief chat with Mr Said the previous week who said that he could not sleep at night thinking about the exposures and the trades which he could not unwind. He thought he could either get lucky or things could look sick. She considered that he was aware of the risk but did not know what to do with it. The figure on Monday 6th in respect of the three USD/BRL trades was a negative figure of US$103 million. Presumably the figure on the Friday was similar. Mr Said's end of the week report on the Friday referred to the markets as stressed and illiquid but the day had ended in most currencies where it had began, even the BRL. Mr Said thought that it would take time for the market to improve and he thought it was close to the bottom for stocks and risky assets which he thought might go in hand with a gentle weakening of the dollar. His profit figure stood at US$46 million including "all spot, forward and standard option positions on a full mark to market" basis. The range trades were not included, whether MTM or positive built-up accruals. On the BRL he thought it was a matter of sitting it out but would watch carefully for signs of change.

805. On Monday 6th October there were considerable email exchanges between Mr Vik and Mr Said, each of whom faced dire positions on their FX trading. Under the heading "very ugly" Mr Said still appeared optimistic, telling Mr Vik that his range trades were still alive and most of them accruing positively though at lesser rates with some taken to their boundaries. He said it was not a good situation but there was no quick fix as these were not trades that he could just unwind. Whilst very rewarding in anything but the wildest moves, there was not much liquidity and if the market moved sharply and stayed down they were dangerous. He said that volatility was sky-high and he was using that selectively to restructure some of the older trades to more favourable levels but there was nothing else to be done since hedging at that stage was not practical. He then responded to Mr Vik's enquiry as to his positions by setting out the main range trades in terms which would have been incomprehensible if Mr Vik did not understand how they operated. He referred to the three Brazilian TPFs which were all negative and accruing losses and said that he was concerned about the US$/JPY trade. He suggested a telephone conversation and said he was living on the profits made so far.

806. Later that day Mr Said said the only sensible course was to sit tight and take losses as they accrued, waiting for tradable markets before taking action. Mr Vik's response was to say that he was forced to close his own positions because the pain was too great, to which Mr Said responded that if the BRL was tradable in any meaningful way he would stop out of some of his trades too. He maintained that volatility was sky-high with trading at 10% bid/ask spreads which meant that the only rational course of action was to see what transpired. He was very uncomfortable and whilst there was still plenty of opportunity for matters to turn out OK, it was dangerous. He expressed surprise that DBAG had not yet asked for more collateral but was sure that they would. Mr Vik's response was to say that it was not a good time to add more collateral and Mr Said should reduce his positions as they came off. He then asked Mr Said about the BRL positions. In response to that question Mr Said said that the BRL position on an MTM basis would be absolutely awful and with volatilities at 30% with a 10% bid/ask spread, fire sale prices only would be obtainable for such complicated positions. On an accrual basis he was probably losing US$1-1.5 million a week if markets remained at the current level but there was no realistic alternative to waiting for an improvement in the market in which risk could be reduced.

807. Still later that day, Mr Said was expressing the view that his realised profit which was now standing at US$32 million should act as a sufficient cushion to cover actual losses on the "structures" although it would not be sufficient if they were unwound. If the markets calmed down a little, the cushion would increase as some of the trades knocked out. On the same day, Mr Said concluded EDT 41, an EUR/GBP TPF with CS, replacing EDT 2 at zero cost, notifying Mr Walsh of it by email "as discussed". The same day, having accepted new margin terms from Mr Spokoyny of 2.5 x 10 day VaR plus liquidity add-on, he told Mr Vik in an email that he had been having discussions with DBAG for a while about margin terms. He said that DBAG had finally woken up to the fact that they were giving terms which were, by any stretch of the imagination, way too generous. He knew of no-one who had terms "like what I was getting". Although DBAG had wanted to triple the requirements which would have been reasonable, he had negotiated them down to double with the current positions which meant an increase of US$20 million to US$40 million in collateral (the figures which Mr Spokoyny had given him). He went on to say that there was a

realised gain of around US$30 million in the portfolio but reminded Mr Vik that he had taken cash out of the account both in 2008 and 2007 and said that the account was now short. As the intention was that the account should be self-financing, the easiest thing would be for Mr Vik to increase the amount of the cross-pledge from DBS rather than adding cash.

808. Since Mr Said knew that the MTM on the three MS BRL trades was of the order of US$100 million, Mr Said, with his knowledge of the market, could not have failed to realise that DBAG's calculations did not include the EDTs. As appears elsewhere in this judgment, he knew from his meeting with Mr Spokoyny and Mr Quezada on 8th September that booking problems had still not been solved and that margining was based on the MTMs reported to him on the GEM website. He knew that on an MTM basis his BRL positions were "absolutely awful", that most of his structures were "under water" and that unwinding the trades would give rise to substantial losses. He discussed with Mr Walsh the constituent elements of the Collateral Summary report, which as appears in section 15 was so out of kilter with the Open P&L Report on his non EDT MTMs, let alone the MS BRL EDTs, that he must have known that DBAG's margining was hopelessly inadequate.

809. On 7th October MS made contact with Mr Walsh and then with Mr Campbell, who was part of DBAG's CMV team. It appears from the transcript of the telephone call between Mr Campbell and Mr Walsh that MS were looking for US$104 million by way of margin from DBAG in respect of the three USD/BRL TPFs that Mr Said had concluded. Mr Campbell said that MS were concerned because there was no record of these trades in DBAG's margin system. Mr Walsh said he could supply ID numbers but stated that the bookings were fudged because FXPB's access to RMS did not allow a full booking of the details. Mr Walsh did not understand how there could be a call for US$100 million on these trades.

810. The call obviously spurred Mr Walsh into action and he sent Mr Said an email asking him to let him know "how many fader options you currently have open", because he wanted to make sure he had accounted for/signed off on them all. Mr Said suggested a telephone call to go through trades one by one and in that call Mr Walsh said he had a huge stack which had got out of order and needed to double check all the details. The huge stack must have been a reference to the trade confirmations sitting on his desk for unbooked trades. This did not come as a surprise to Mr Said who knew from GEM and the last spreadsheet of the unbooked trades. Mr Said suggested sending to him the daily spreadsheets that he got from the banks, CS, GS, MS and DBAG, which he did. They then discussed them on the telephone and Mr Said explained the make up of them and how the trades worked with accruing profits and losses. He explained that the market had gone crazy but the best course was to continue accruing negative figures on the BRL trades which they could afford to pay until the market stabilised. It would have been plain to Mr Said that Mr Walsh had no idea about the MTM of these trades and, of course, looking at the accrual figures would not assist in that regard.

811. The position at this stage was that Mr Walsh had booked the new TPF concluded with CS on 6th October in the usual manner as a Resurrecting Fader but had not booked nine outstanding TPFs. In a telephone call to Ms Ng, Mr Walsh said that what had been booked was not "booked remotely close to correct", that they were not margined

and that he thought Mr Quezada knew that. He booked the five MS trades that day together with one CS trade and the balance on 9th October.

812. Meanwhile, that day, Mr Said emailed Mr Vik to say that all the range trades had performed very well despite the outrageous market. Some were at “dodgy points” but they had, overall, been a great success and kept him “in the game”. BRL was the exception but he thought he had the right strategy which was to spend money he had made elsewhere to buy time and let the market come round to less distressed levels. On 7th October he said that getting out now was not a realistic option – it would be prohibitively expensive to do so.

813. It was of course on 7th October that Mr Vik had his meeting with Mr Brügelmann. Mr Vik knew much more about Mr Said’s trading than Mr Brügelmann did because of his contact with Mr Said which Mr Brügelmann did not have. If any assurance had been given by Mr Brügelmann to Mr Vik on this occasion, Mr Vik would have seen it as a comment offered without knowledge of the situation.

814. On 8th October, on being asked by Mr Vik when the BRL structures terminated, Mr Said said that it was not for another ten months because they were one year structures. None had ever got close to maturing in the past as all had knocked out (save for one or two which he had unwound). On being asked what the exposure was and how it was going to be managed, Mr Said said there was not much that could be done. US$3 million was being lost a week on US$14 million worth of fixing but the need was to buy time. He thought that this meant days which could be handled because the money he had made in the past could act as a cushion. Mr Vik questioned how time would help since it appeared to be hurting a lot to do nothing, but Mr Said expressed the view that it would be utterly prohibitive to try to unwind the trades in the current state of the market and unwinding them or hedging them would become much cheaper as the US$ came down. It was better to run the trades for a while and accrue losses. In a further email he said that it was a matter of timing and things might get worse before they got better.

815. In further emails that day Mr Said explained to Mr Vik that he was considering with GS a restructuring of part of the BRL positions. The idea was to cancel one of the BRL structures and then to enter into two or more new range structures in a currency of Mr Said’s choice. The new structures would be done at very high volatility but be in larger amounts than the BRL trade which would be unwound but at less than the market spreads. His view was that this was a good time to enter into TPFs because implied volatility was so high and even if these spreads were below market, they were so wide that he thought that money would be made on them. Moreover, even if they started to go wrong, they would be easier to hedge. He thought that if structured right this could make real money albeit that there was plenty of risk. Mr Vik’s response was to say that this was a good idea but it would be better to do this when the BRL level was higher and asked what currency pairs Mr Said would choose. Mr Said suggested a phone call to discuss the matter and Mr Vik told him to call him on his cell phone. Mr Vik’s earlier responses show that he wanted to know the details and wanted to discuss the matter before Mr Said did anything.

816. Mr Vik, when cross-examined about this, said that he had no recall of any such conversation and he was in Europe at the time and would have gone to bed. He said that though he had invited Mr Said to call him, he did not speak to him about it. In a

Bloomberg chat with Ms Sai of GS about an hour and a half later, Mr Said told her that he had discussed the matter at fair length with Mr Vik, both in principle and in some detail. Mr Vik in evidence, was sure that Mr Said did not discuss the matter with him beyond the email which set out the proposal. I cannot accept Mr Vik's evidence about this. It is inevitable, given the exchanges between him and Mr Said, that they would have looked at the prospect and discussed the chances of a BRL rally, the accruing losses at the current rate of US$3 million per week for a further 10 months (or worse if the market deteriorated), the MTM of the trades and the costs of unwinding them. It does not seem possible for Mr Said to have failed to mention the MS collateral demands at this point.

817. Mr Walsh telephoned Mr Quezada on 8th October and told him of a potential margining problem, pointing out that the TPFs were booked with a placeholder, that MS had made contact looking for margin from DBAG but not mentioning to Mr Quezada the fact that there were trades left unbooked. He said he had talked to Mr Said who was willing to post more margin and expected it to be required. Mr Quezada's response was to say that the trades would be earmarked with the margin sought by MS and that approval from Mr Spokoyny and his team would be required for any new trades. If a direct trade was to be done, there would have to be some hard coding on RMS. If MS asked for margin, the request would have to be passed on to SHI and if Mr Said accepted the numbers, then those figures could be hard coded in RMS.

818. It is clear from the transcript of the telephone call that none of this came as any surprise to Mr Quezada who was talking in terms of creating a hard coded margin in RMS to match the MS call because he was aware from all the past history that the indirect TPFs could neither be valued nor margined in ARCS VaR and that no access had been gained to DB Analytics. He knew too that direct TPFs were not feeding in to ARCS VaR for margining either. Hence his immediate reaction and proposed course of action.

819. Following the call, Mr Walsh emailed MS to ask how much margin it was seeking and received a list of the trades with SHI and total MTM figures of US$153.8 million, nearly all of which was attributable to the five TPFs.

820. On 9th October Mr Quezada told Mr Walsh to check the MS MTM figures with Mr Said. Mr Walsh and Mr Said then spoke and Mr Walsh told Mr Said that the trades would have to be margined one by one from that point on because the bank had been unaware of the risk. It was the mark to market movement which had led to MS's approach and DBAG's need to re-examine its position. The phone call ended with Mr Said saying "Let me discuss it internally here", by which (no doubt) he meant that he would talk to Mr Vik.

821. A little later that day, there was a phone call between Mr Said, Mr Quezada and Mr Walsh. The transcript of the telephone conversation reveals the following:

> "Klaus: Well…you know… uh the problem is I mean I have to discuss this, I mean, I have discussed it in principle with, with Alex, but I mean what clearly has happened here is that um, you know, I mean we sort of got a free ride on those for the

past 6 months… from a mark to market point of… from a collateral point of view, right?

Rafael: Yeah.

Klaus: Uh, I realize that. Now it coincides unfortunately, this would have come up anyway, it coincides unfortunately with some of them having really moved out of whack, but these things have moved out of whack before and have come good. Now the Brazil is a very particular problem and, you know, I am working on restructuring some of them and so on and so forth, um but we clearly have to… Alex and I have to discuss what we, how we approach this going forward because it will just simply require a lot more capital.

Rafael: Yeah.

Klaus: Is that fair?

Rafael: Yeah, definitely and I think that, you know, up until, up until now, right, these things, kind of, you know, they sit there and, you know, you worked with us in terms of matching these… pairing these things off with the banks, right, but they, you now, they kind of sit in the place that, you know, we just need to be collectively diligent in terms of ear marking separate collateral on these, right, cause my engine does not capture these things, right?

Klaus: Right.

…

Rafael: No worries, yeah, so, you know, I mean I thinks it's a… you know those things don't fit nicely within, you know, the VAR calculator, either, right, so…

Klaus: Yeah, yeah, yeah, yeah."

822. Not only does this show Mr Said's understanding that the TPFs had not been margined over the preceding six months, which he had discussed with Mr Vik but he understood that the VaR calculator or VaR engine did not capture the risks which did not fit within it. The trades had just "sat there" after being matched but now needed to be earmarked for separate collateral. Mr Said was saying that Mr Vik and he had yet to discuss the provision of a lot more capital.

823. It is also clear from the balance of the telephone conversation that Mr Said knew that an MTM loss showed from the moment of entering a TPF and that Mr Said had a better idea about how much margin might be charged than Mr Quezada.

824. During the course of 9th October Mr Vik was travelling from Oslo to New York and Mr Said sent him an email to await his arrival in the afternoon saying they needed to

discuss the margin situation. The email is important in showing Mr Said's and Mr Vik's understanding:

> "The issue here is the range structures of which I have done many over the past 6 months. Many have knocked out with big profit, several are outstanding and will produce good profit a few are iffy but manageable and then there are the ones in brl that we discussed.
>
> However - they all have one thing in common - they are great structures if you can trade them and treat them as effectively an accrual product (longer term hold) which is what I have done. The disadvantage - as we have discussed, is that on a mark to market basis they will almost invariable show losses in most circumstances until they knock out. What I do in these trades is buy/sell a currency at the bottom/top of usually very wide ranges. Profit accumulates, losses get deducted (if it does move outside the range) until pre-determined knock out levels on the total profit figure is reached - and the trade goes away.
>
> For example:
>
> I am 99.99 pct certain a big euro dollar structure I had will knock out today. I did it with spot at 1.44. Vol was so high that the range I got was 1.33 to 1.55. I did this in 5mm euros per day and the profit cap was 5mm USD. Despite the massive move in eur dollar from 1.44 (where it was when I did) to a low of 1.3450 the trade always accrued. It took longer than I had hoped because of the spot move but today, unless something crazy happens in the next 1 hour it will reach the target. It knocks out. We book 5mm usd.
>
> So that is the good news. The bad news is that what I look at as a range is of course a combination of short options positions (puts and calls, at the moneys and wings) and it is pretty big. If from when I do a trade vol goes up at all (which it has of course in a big way) and spot moves away form the middle (which it invariably will) these trades will show substantial mtm losses very quickly.
>
> Even trades that are not that far from knock out and have not moved too much will show that - I have a nok/sek which is about 65% to knock out and accruing quietly but of course vol has gone up a lot and spot is off the 1.18 center where I did it - and it is showing a meaningful mtm loss (like 8mm $ or so)
>
> I am unconcerned about that - we trade these as accrual products - I manage the risk of course (restructure, hedge spot, overlay new trades for an average etc) but ultimately I look at these as hold to maturity trades. Not only is that my preferred way of trading the structures - it is also the only way. The wide

ranges and (in many cases) quick profits come with a cost - you have to take the swings and let moves mean-revert (and of course try to act quickly when you really think it is not coming back - but only then - otherwise you will get chopped up and lose all value and profit.

So far so good and we have discussed all this. Here is the issue:

For the past year Deutsche Bank gave us a free ride on these things because they could not value them properly in their system. That was great while it lasted. They have woken up. We can drag this out for a bit but we have to make two decisions:

1. Unless we want to unwind all the trades (which would be disastrous - both in terms of actual losses as well as foregone profits) we will have to post substantial collateral – I'll run you through the numbers as I have them. Right now only one of the counterparty banks has raised the issue and I am not sure if DB will extend it to all old trades and all new trades but the bank (Morgan Stanley) has of the brazil position we have and that of course on a MTM basis is causing the biggest issue (spot by the way is down to 2.15) but vol is still sky high and that is actually for the mtm just as big an issue. I know you don't like that - I can only say the money we have made on these on almost no capital was just a freebie. I don't know what you can negotiate with the private bank - just pledging, as before, rather than sending cash would of course be the best.

2. Going forward - these are great structures - they way we can trade and hold they are the best way to sell volatility at high levels. But - do you have the stomach for the swings in mtm - which will result in substantial collateral requirements. If you do not than I would have stop doing them - a shame given how useful and profitable they are but it does require capital. One way or the other I still want to put a bunch of new trades on to restructure some of the Brazil - that makes sense and should be net collateral neutral (we are shifting the accumulated mtm loss into other, more liquid currencies.

So that is the issue- not something we can ignore given the trades is on the books. I have so far largely ignored mtm in my trading (not completely - and I am always aware of it) which has been a great advantage for us because we can often buy when others are selling in panic or hold when others have to get out. We were able to do that essentially for free - almost no capital requirement. That will not be the case going forward ... I believe I can continue to make very nice returns - and you get 90% of them. But - it will now require a more "normal" amount of capital. What I am hoping is that you can allocate a

> meaningful portion of your nok t bills or whatever it may be (which does not produce that much of a return) on a pledge basis to this trading - I think the return has been and on average over the next few years should be worth it - but that is your call.
>
> So we need to discuss!
>
> Klaus"

825. It was clear to Mr Vik from this email, if not before, that DBAG had been unable to value or margin the EDTs (the range structures) over the previous year. Mr Said referred to the previous discussions between them about the trades and the mark to mark losses which had shown losses in most circumstances until knock-out and substantial losses very quickly if spot moved away from the pivot. Mr Said was pitching for more capital to be put up in circumstances where SHI had made money in the past on almost no capital – a "freebie" or a "free ride". (Mr Said also explained that the TPFs were a combination of short options positions, namely puts and calls, at the money and wings.) In his statement Mr Vik said he did not pay much attention to this email but spoke to Mr Said in person for 20-30 minutes at the office in Greenwich.

826. Paragraph 270 of Mr Vik's statement about the discussion with Mr Said is not credible, inasmuch as he states that his view was that the positions should be closed to reduce the risk below US$35 million, thinking that the most SHI could lose was US$35 million, whilst Mr Said was arguing against closure saying that an immediate fire sale would be damaging, that if DBAG was left to close the positions itself it would do it very badly with increased loss and that DBAG would go after SHI if it didn't pay, raping and pillaging SHI's accounts.

827. In cross-examination, Mr Vik said he understood from the conversation that the reason that more collateral was required was that DBAG could not properly value the trades in their system and had now woken up to the fact. He then said it was neither here nor there to him that he was told that DBAG had not been margining the trades properly because their systems could not handle them. The email speaks for itself and I find that Mr Vik fully understood its terms and what Mr Said was telling him which must then have been discussed fully when they met. Mr Vik knew that Mr Said was looking for substantial additional collateral and there must have been discussion of figures. In this context Mr Said already knew that MS were looking for US$153.8 million because Mr Walsh had forwarded to Mr Said the spreadsheet he had received from MS with those details on it. It is clear that Mr Vik and Mr Said must have had a very full discussion about the state of Mr Said's trading and the decision was then taken to close down Mr Said's positions in an orderly way as soon as possible.

828. Later in the day Mr Said had another conversation with Mr Quezada on the telephone. He said he had only had a chance to talk with Mr Vik briefly on the phone but he assured Mr Quezada that if there was margin to post Mr Vik would sort it out and that the MS valuations looked roughly in line. He said he had spoken briefly about reducing some of the positions, particularly those with MS, perhaps judiciously adding other positions not in BRL and with other banks. The issue was not about producing the money to pay margin – it was a question of trading strategy. He then

told Mr Quezada that he had not realised the full extent to which DBAG's system deficiencies gave them a "freebie" in terms of margin but now they were in a position of crisis management in the next two months. From this it is plain that there had been a discussion with Mr Vik about reducing positions as well as putting up margin. Mr Vik accepted in cross-examination that he did tell Mr Said at some stage that he was prepared to put up more margin and I so find. It seems from the conversation that Mr Quezada was looking to keep the situation "under the … radar" in DBAG.

829. On the morning of 10th October Mr Vik emailed Mr Said before leaving to attend a reunion at Harvard. He said he had slept poorly on the grave problem about which he had been informed the previous day and that Mr Said had ended up so far away from the deal where he was supposed to risk only US$35 million that the only viable plan was to reduce positions as best he could, thus minimising the loss. He asked Mr Said to put together a detailed plan in order to get out of everything needed in order to get back to a sustainable level without being killed. Mr Said said he would work on it and later said he thought that the twin objectives of reducing positions and minimising loss were not completely consistent and that it was a question of timing and slowly and carefully closing out positions and unwinding structures. He would produce some ideas for discussion.

830. There were a number of exchanges between Mr Said and Mr Vik that day about the course to adopt but the market was becoming more and more distressed during the course of the day. Mr Said said that the market was in full blown panic and it was an absolutely perfect storm where he was in the middle and all his positions wrong. He said he could go out and cut everything but it would cost several hundred million dollars. Nothing was safe and he was getting killed. He wanted to talk to Mr Vik and offered to work for him for free until all the losses were recouped.

831. Mr Vik asked him to spell out all his trading positions, the notionals, the ranges and the expected points at which trade might knock out. He asked him to send him five year charts on every currency pair that SHI was trading. Mr Said said that at the current distressed levels, three of his range trades, the USD/BRL, the USD/CAD and the AUD/NZD had become effectively forwards, by which he meant they were never going to come back within the ranges. He said that anything he did would lock in massive losses and there would be a big margin call. They spoke on the telephone at some point that day and shortly after midnight Mr Said sent a detailed set of recommendations to Mr Vik involving the cutting of some positions, the hedging of others and continuing with others. The recommendations were predicated on his view that the market was in the process of reaching a temporary bottom and in that sense was somewhat optimistic but not, as he put it, blindly hopeful. He was recommending that a lot of the risk be taken out which meant locking in losses. The plan was for Mr Vik to return early from Harvard and for them to meet later that day or the next day.

832. By this time, DBAG had begun to come to grips with the margining issues, which involved DBAG's direct trades as well. As set out in the section of the judgment relating to the FX Margin Calls, Mr Quezada and Mr Said spoke and Mr Quezada then sent an email on the Saturday afternoon saying DBAG would like to request additional margin on Monday and wished to schedule a telephone call at 9 am to discuss that, asking that the invitation be extended to Mr Vik to join in. The email politely suggested that if, prior to the call on Monday or over the weekend, SHI

wished to share its strategy to fund the account, manage the risk, minimise the risk and/or unwind, it should feel free to do so. Mr Said reported this to Mr Vik and told him that DBAG were being gentle and it was not clear that they would insist on cash as opposed to merely increasing the letter of guarantee. Mr Vik instructed him to do nothing until he had taken the opportunity to understand the situation and put together a plan. More detailed suggestions were forthcoming from Mr Said which involved a substantial margin posting to allow time to implement the strategies suggested.

833. It does not appear that Mr Vik and Mr Said did actually meet but on Sunday 12th there were two telephone calls of 35 minutes and 27 minutes in which they settled on a plan which was to close positions judiciously as quickly as possible. In the light of his previous request to Mr Said, it seems that Mr Vik would by this stage have received details not only of Mr Said's extant trades but of the movement of the currency pairs involved over the preceding five years in order to consider the course of action to be taken. Mr Said sent various spreadsheets to Mr Vik. There can be no doubt that Mr Vik would have considered the position in detail and discussed it with Mr Said before coming to the conclusions he did. The message to be given to DBAG was that margin would be put up whilst the plan was implemented. In evidence Mr Vik stated that his objective was to minimise the margin call and put up as little money as possible, structuring a plan which required the least amount of money. He had no idea what the right numbers were but understood that, although Mr Said had been talking of hundreds of millions, DBAG was thinking in terms of US$40-60 million margin. Between them, Mr Vik and Mr Said settled on a script of the presentation that Mr Said would make to DBAG on the Monday morning in circumstances where Mr Said had, in one of his emails on Saturday, told Mr Vik that DBAG might decide to ask for margin on the remaining range trades, that they had the right to do that and there was no way round it. All that could be done was to negotiate the amount and close the trades which in itself would require the posting of money to pay for the losses thereby sustained.

834. The presentation incorporated Mr Vik's thoughts and stated that unprecedented movements in the currency and volatility markets had created SHI's problems and that all weekend they had been working on a solution. Mr Vik had agreed to provide an increase in the letter of pledge. The plan was to reduce risk by unwinding or hedging positions effectively, particularly the USD/CAD and USD/BRL positions, whilst smaller positions would be cut. The AUD/NZL position would be liquidated but only over time when the market had improved whilst SHI wanted to hold on to range options in other currencies which were expected to continue to accrue profits and would disappear through knock-outs in the course of the next two to four weeks. In summary SHI was saying it would provide an increased guarantee, substantially reduce risk and seek to exit most, if not all, positions over time, but in a controlled, carefully thought out fashion.

835. At 9 am on Monday morning 13th October a conference call took place with Mr Said in which he followed the script he had agreed with Mr Vik. DBAG's representatives said they would be looking for margin later that day which had not yet been calculated. It was thought to be of the order of US$40-60 million. It was said that the two outstanding DBAG TPFs in USD/CAD and EUR/CHF had not been included in the margin calculations on the preceding Friday and there was a need now to bring into effect the new agreed form of calculation of VaR. Mr Said said he foresaw no

problems about the production of margin because he had discussed the issue with Mr Vik who was willing to provide it. Mr Said pressed for a little more information as to the figure and was told it would be at the upper end of the US$40-60 million ball park which he clearly thought was extremely low. Mr Said made plain that he knew he had gone wrong and what had to be done and that the "key goal here is to work with you".

836. It is clear that Mr Said told Mr Vik of DBAG's failures to book, value and margin the EDTs at the latest during the period of October 9th-13th. That alone explains how SHI would pay the margin calls in such large amounts without protest, where such calls were made up in part of collateral and in part of closing premiums.

837. On 23rd October Mr Vik was telling Mr Gunewardena on the telephone that DBAG had not even booked the EDTs so that it is clear that Mr Said had hidden nothing from him in that respect, over and above the valuation and margin issues which were plain from the prior history. Mr Vik was looking for some accommodation from DBAG for this, as was made plain in that telephone conversation on 23rd October. He said he wanted to talk to senior DBAG personnel about what had happened. When asked what it was he was trying to accomplish, he said initially that he was seeking to get all his money back. He then said that he was not sure but was looking for a settlement that was in the interests of both parties. He sought to obtain from DBAG that which he had been seeking since October 16th, and for which Mr Brügelmann had been pressing FXPB, namely a history of margining effected by DBAG on Mr Said's FX trading from 1st July 2008 to 31st October 2008.

838. Mr Vik knew that DBAG could not produce historic figures of this kind and was seeking to make capital out of it.

839. Mr Vik's email to Mr Brügelmann on the evening of 23rd set forth his request to Mr Gunewardena that a meeting should be organised with a top decision maker at DBAG. He said that "[a]mong other things I think DB was negligent and didn't follow normal margin rule and risk management practices allowing Klaus to take on risks vastly excessive in relation to the US$35 million of capital that was allocated to his trading. As we you well know, my expectation was that my maximum loss was US$35 million. DB certainly didn't exercise its fiduciary duty to Sebastian Holdings. It is ridiculous that only a few weeks ago you told me everything was fine."

840. Prior to the arranged meeting, DBAG participants held a "pre-meeting" no doubt as a briefing for the meeting which was about to occur. They must have discussed what they would tell Mr Vik. Mr Cloete's evidence was that at that meeting they discussed the fact that Mr Said's trades had clearly not been booked correctly. At the meeting on 30th October with senior bank personnel in London, Mr Vik formulated his main grievance, namely his complaint that losses exceeded US$35 million, whilst asking whether DBAG had been applying the proper margining process to monitor his trader's positions. He was told, probably by Mr Bouhara or Mr Cloete (according to Mr Brügelmann) that FXPB had posted appropriate margin throughout. This was probably known by all present at the meeting, not to be the true position. A margin timeline was promised by close of business on 31st October 2008 but all that was done by DBAG was to send an ex post facto reconstruction of MTM on the trades on 6th November 2008.

841. Mr Brügelmann's note of the meeting states that FXPB acted responsibly by intermediating risks and posting the appropriate margin number but had no responsibility to act as "risk manager" for SHI. In evidence he thought that this was said by Mr Bouhara or Mr Cloete although the latter had no recollection of this. It seems that the line being taken by DBAG at this meeting was that proper margining had been done throughout, although the Ignored Payments Error was admitted.

842. At exactly what point DBAG's lawyers were involved is unclear, but the provision of the MTM spreadsheet on 6th November, which contained nothing about margining and only covered EDTs that were still open on 7th October, appears to have been sent following the taking of advice.

843. Whilst in due course the internal audit report was produced by DBAG, with input from its lawyers, the essential criticisms made in it were all matters which were known to SHI.

17. The 2008 Agreements

17(a) The Equities PBA

844. Under the Equities PBA (which is governed by English law) it was agreed that SHI could contract to purchase or sell Securities (as defined) with a third party and nominate DBAG as its agent for settlement (Clause 1) and that DBAG at its discretion could finance SHI by cash financing or securities financing (the latter of which was to be effected by crediting the Securities Account with Securities or discharging any obligation of SHI to deliver Securities under any Transaction). Repayment of any loan (whether cash financing or securities financing) was to be made within a specified period of any demand (Clause 3).

845. Securities were defined in Part 1 in the following way:

> "*"Securities"* means (i) any bond, debenture, note or certificate (whether in tangible or intangible form) or other instrument or equivalent intangible holding evidencing indebtedness; (ii) any share, interest or participation in the issued share capital of a company including any replacement shares, interests, or participations following a surrender, cancellation, conversion, sub-division or consolidation; (iii) any warrant or future on, or any option or right to subscribe for or purchase any of (i) or (ii) above; and (iv) any other securities or instrument as agreed between the parties from time to time, and includes in each case an interest in a security accruing by virtue of the fact that the security is held through a clearing system, custodian or other intermediary;"

846. Clause 10 in Part IV provided that DBAG should open and maintain a Cash Account and a Securities Account (or more than one) and that all cash or securities held by or received by it from or for the benefit of SHI under the Equities PBA should be held in those accounts. Clause 10 went on to say that SHI could at any time instruct the Prime Broker by Notice (either electronically or in such form as might be agreed)

either to settle a Transaction entered into between SHI and a third party (or its agent) or to enter into a Transaction of sale or purchase of securities with SHI.

847. Under Clause 5, the ownership of Securities held by DBAG in the Securities Account was vested in SHI and those securities were held by DBAG upon trust for it. SHI however granted DBAG a security interest by way of first fixed charge over the Prime Broker Securities and any other interests in and rights in relation to the Securities held in the Securities Account. Prime Broker Securities were defined as those securities purchased under Purchase Transactions, Securities deposited with DBAG as margin, Securities credited to the Securities Account as a result of securities financing "or any other Security as agreed" by DBAG and SHI. In addition SHI granted DBAG a floating charge over all its assets held by DBAG including amounts payable by DBAG to SHI under the Equities PBA, the Master Netting Agreement or otherwise.

848. Clause 4 provided for margin in the following terms:

> "4.1 On each Business Day the Prime Broker shall in good faith calculate the Margin Requirement in accordance with its procedures and notify the Counterparty thereof.
>
> 4.2 In the event that the Margin Requirement on any Business Day is higher than the Margin Requirement on the immediately preceding Business Day, the Counterparty shall on demand:
>
> > 4.2.1 deposit Securities of a type acceptable to the Prime Broker into the Securities Account; and/or
> >
> > 4.2.2 transfer cash into the Cash Account;
>
> such that the aggregate of the Market Value of any such Securities held in the Securities Account and the face value of any cash held in the Cash Account shall, immediately following such transfer on that Business Day (converted where necessary into United States dollars at the Prime Broker's spot rate for such conversion) equals the Margin Requirement notified by the Prime Broker for the relevant Business Day."

849. Events of default, as set out in Clause 6, included failures by SHI to repay loans, to comply with the terms of Clause 4.2 in relation to margin and default under any Specified Agreement with DBAG such as to cause early termination or close out of obligations under such an agreement where written notice of default was served. The definition of "Specified Agreement" included any ISDA Master Agreement (e.g. the Equities ISDA).

850. Clause 29.1 provided that the agreement was to apply "in respect of all Transactions entered into between the parties and all Transactions between [SHI] and a third party which [SHI] requested [DBAG] to settle on its behalf".

851. A number of issues of construction arise in relation to this agreement.

i) The first turns on the definition of "Securities". The authority extended by DBAG to SHI to nominate it as its agent for settlement relates to agreements to purchase or sell "Securities", but this is of no significance as all FX transactions concluded by Mr Vik were made with DBAG directly and none were made with a third party, involving any agency of DBAG. The terms of Clause 4 however provide for the Margin Requirement to be assessed by reference to the Market Value of Securities held in the Securities Account. The question arises as to whether FX transactions are included.

ii) The second issue arises in relation to the wording of Clause 4.2 and what is meant by "the Margin Requirement" where SHI submits that DBAG is restricted to making a demand for additional collateral where the House Margin for any given day is higher than that for the previous day so that, if a margin deficit arises by reason of the diminution in the Market Value of the securities and cash held in the Securities Account and Cash Account, no demand can be made.

iii) A third issue arises as to whether or not DBAG is bound to demand additional margin if circumstances arise to which Clause 4.2 relates.

iv) The fourth issue arises on the construction of Clause 4.7 and the dispute between the parties about cross margining on the GPF account.

17(a)(i) The First Issue of Construction

852. The definition of Securities in the Equities PBA focuses on bonds and similar instruments evidencing indebtedness, shares and similar interests in corporations, futures and options relating to those categories and finally "any other securities or instrument as agreed between the parties from time to time". The issue which arises is whether or not FX transactions can be seen as instruments for this purpose, although, for reasons which appear later in this judgment, DBAG and SHI did agree, by word and conduct, that Mr Vik's FX trading was to be governed by the Equities PBA and margined accordingly, regardless of any such definition. In the ordinary way, an instrument means a formal written legal document of some kind. Where the word "instrument" appears earlier in this definition, it is in the context of bonds, debentures, notes or certificates as something which "evidenc[es] indebtedness". What is there envisaged plainly is a document of some kind which can be compared to bonds, debentures or the like. Where the word "instrument" appears towards the end of the definition, it is part of a sweep-up provision allowing the parties to agree that other documents which represent assets should fall within the scope of the Equities PBA. It is to be distinguished from the words "any other securities" and from the words "other instrument evidencing indebtedness" and is not limited by the inclusion of interests which fall within the following wording in the last two lines of the definition. I see no reason why a written contract does not qualify as an instrument and therefore why an FX contract should fall outside this wording, if the parties should agree on its inclusion.

17(a)(ii) The Second Issue of Construction

853. The commercial purpose of Clause 4.2 is clear, however infelicitous the wording. I venture to suggest that the argument on construction put forward by SHI would not

occur to anyone who was not looking for an excuse not to pay margin. As SHI submits, however, the use of the words "Margin Requirement" presents intractable difficulties, if those words are to be given the same meaning in each part of the Clause in which they appear. The definition of Margin Requirement is unhelpful because it simply refers to "the amount determined and notified in accordance with Clause 4.1".

854. Apart from the references in Clauses 4.1 and 4.2, the only other reference to "Margin Requirement" in the Equities PBA is in Clause 10.7.3.4 which provides one of the exceptions to Clause 10.7.1. This states that cash held by DBAG for SHI in the Cash Account is repayable on demand. In addition to the other exceptions in Clause 10.7.3, Clause 10.7.3.4 exempts DBAG from the requirement to repay where DBAG "reasonably believes that immediately after the payment or transfer there would be a Margin Requirement payable in terms of clause 4.2 above". This sub-clause therefore envisages that the Margin Requirement represents a sum which SHI is obliged to pay under the terms of Clause 4.2 and therefore can only represent the amount representing the differential required to bring the total margin up to the appropriate total level (the House Margin).

855. The last sub-paragraph in Clause 4.2 draws a comparison between the aggregate of the Market Value of Securities held in the Securities Account, together with the face value of cash held in the Cash Account, on the one hand and the Margin Requirement notified by DBAG for the relevant day on the other. What Clause 4.2 obliges SHI to do, in the circumstances there set out, is to provide collateral (in the shape of acceptable Securities or cash) to a value which equates with the total figure for margin that DBAG requires (the "House Margin"). This latter figure is referred to as the Margin Requirement in Clause 4.2.2, rather than the amount which has to be paid, which is what Clause 10.7.3.4 would suggest. SHI therefore submits that the Margin Requirement referred to in Clause 4.2 equates with the House Margin, the total figure and not the deficit or shortfall required to be paid to achieve that total.

856. Clause 4.1 provides that DBAG should calculate the Margin Requirement on each Business Day in accordance with its procedures and notify SHI of it. On the ordinary and natural meaning of the words, the Margin Requirement could here mean either the House Margin or the additional amount payable – the amount which DBAG requires that day in respect of margin (i.e. the deficit shortfall). If expressed in terms of paragraph 2 of the Equities ISDA CSA it could represent either the Credit Support Amount or the "Delivery Amount" (which is the difference between the Credit Support Amount and the value of the Credit Support Balance).

857. Clause 4.2 of the Equities PBA sets out the circumstances in which SHI is obliged to provide further collateral by reference to a demand from DBAG "[i]n the event that the Margin Requirement on any Business Day is higher than the Margin Requirement on the immediately preceding Business Day", in a sub-clause where the last sub-paragraph suggests that the Margin Requirement is the total House Margin figure.

858. In the ordinary way, a requirement for additional margin can arise in one of two situations. First the House Requirement may increase because of an increase in financing or because of an increase in the risk assessed by reference to transactions in the portfolio. Secondly, there may be a fall in the value of the Securities held as margin. In either case there is a margin deficit as compared to the previous day. By construing the words "Margin Requirement" throughout Clause 4.2 as meaning the

House Margin, SHI arrives at the result that there is no basis for a demand for additional margin unless there is an increase in the total House Margin figure, even if there is an increased deficit because of a loss of value in the Securities held as collateral. This yields such an unreasonable result that it is to be rejected unless the conclusion is inescapable.

859. I am not constrained to arrive at that conclusion. The overall sense of the Clause is clear. Standing on their own, the words "Margin Requirement" can either mean the House Margin or the deficit (i.e. the equivalent of the Credit Support Amount or the Delivery Amount referred to in paragraph 2 of the Equities ISDA CSA). Clause 10.7.3.4 uses the term Margin Requirement in the sense of the deficit or Delivery Amount. So also, in my judgment, does Clause 4.1 since a notification to SHI of a total House Margin would be meaningless without a notification of the market value of Securities held in the Securities Account plus cash held in the Cash Account. The client must be told what the differential shortfall is which is to be made up. The purpose of Clause 4.1 is to inform SHI of the amount which it is required to pay by way of additional margin, namely the deficit.

860. Clause 4.2 must then be read consistently with the Equities ISDA and CSA and the commercial objectives underlying this provision. Although the last part of Clause 4.2 requires that securities or cash must be provided in order to bring up the Market Value of the Securities and Cash Account to the notified Margin Requirement for the relevant Business Day and, on the face of the words used that must refer to the House Margin, the first two lines of Clause 4.2 cannot be read as restricting the entitlement to demand margin to a situation where the House Margin, in absolute terms, increases from one day to the next. The only sense that can be made of the provision is that the words Margin Requirement in each of the first two lines refer to the deficit payable, so that if there is an increased deficit on any day compared with that of the previous day, assuming the latter to have been paid, further margin is required. The words when used in the first two sections bear a different meaning to the usage in the last sentence of the sub-clause.

861. Alternatively the reference to the Margin Requirement on the immediately preceding Business Day (in the second line) is to be read as the fulfilled Margin Requirement (House Margin) for that day. The Clause assumes that there has been compliance the previous day inasmuch as the Margin Requirement, once fulfilled, becomes the margin equity which has been provided, (namely the Credit Support Balance, if expressed in terms of the Equities ISDA and CSA). Then, if the Margin Requirement on the following Business Day is higher than the value of the fulfilled Margin Requirement the previous day (the Margin Equity), DBAG is entitled to demand additional collateral to bring the total market value up to the House Margin figure.

862. This involves a degree of manipulation of the words in question but SHI could not advance any sensible explanation or commercial reason for the Clause to be read in accordance with its construction based on a literalistic interpretation of the words used with the same meaning throughout sub-clause 4.2. Such a construction would still involve a different meaning being given to the words in Clause 4.1 and Clause 10.7.3.4. There is no shortage of authority to say that the more unreasonable or uncommercial the result the less likely that construction is and in these circumstances a robust approach is required to give the provision the obvious meaning that commercial commonsense requires.

17(a)(iii) The Third Issue of Construction

863. As to the third issue, Clause 4.1 of the Equities PBA makes it a requirement that DBAG should, in good faith, calculate the margin requirement in accordance with its procedures and notify the Counterparty thereof (which it did on the GPF DBX Website). As established by the evidence, the procedures referred to were the ROR, as interpreted by GPF Risk and the Equities ISDA and CSA which is referred to as a "Specified Agreement" in the Equities PBA. Although it was an express requirement of Clause 4.1 that DBAG should calculate the Margin Requirement and notify SHI of it each day, there was no obligation to demand additional margin under Clause 4.2. This is not surprising because the provision of margin was solely for the benefit of DBAG. If it chose not to demand collateral, it ran the risk of unsecured indebtedness on the part of SHI but that could be of no concern to SHI. Clause 4.2 set out the circumstances in which it was entitled to make demands and the circumstances in which SHI was obliged, if such demand was made, to provide the additional margin, but there was no obligation to demand margin.

17(a)(iv) The Fourth Issue of Construction

864. Clause 4.7 of the Equities PBA reads as follows:

> "Notwithstanding any other provision of this Agreement or any other Underlying Agreement, transfer of cash or Securities in compliance with Clause 4.2 shall constitute good discharge of the Underlying Margin Obligations of the Counterparty for the applicable Business Day under each of the Underlying Agreements."

865. Although the argument about this Clause emerged late in the day, the effect of it is, in my judgment, clear. DBAG relies upon it as an important provision in relation to the intended cross margining regime which is referred to in the recital to the Master Netting Agreement to which I refer in section 17(c) of this judgment. What Clause 4.7 envisages is a transfer of cash or Securities as margin under the terms of Clause 4.2 of the Equities PBA. This would be effected pursuant to a calculation on a given Business Day. The wording of the Clause specifically provides that a transfer of such margin is to constitute good discharge of "the Underlying Margin Obligations of the Counterparty … under each of the Underlying Agreements."

866. This only makes sense in the context of a combined margin calculation for the Underlying Agreements, as defined in the Master Netting Agreement, namely the Equities ISDA, the Equities PBA and the Listed F&O Agreement.

867. Whilst there are other margin provisions in each of the other two agreements, the opening words of Clause 4.7 of the Equities PBA specifically give priority to it over any such provisions. Margin paid under the Equities PBA therefore is to constitute a good discharge of margin obligation under the other Underlying Agreements for the applicable Business Day. This could only work if there was a combined figure payable under the Equities PBA, cross margined in one way or another or netted off against the other Underlying Agreements.

868. SHI contends that this construction renders the margin provisions of the other Underlying Agreements redundant and all that Clause 4.7 covers is the situation where surplus cash or Securities are transferred pursuant to a demand under Clause 4.2. The surplus margin is then to be applied to the margin requirements of the other Underlying Agreements. Alternatively, SHI says that, at most, the provision could be said to deal with transactions which are truly covered by more than one agreement.

869. In its closing submissions, SHI argued that Clause 4.7 meant that "if there is a demand for margin under one of the Underlying Agreements, then that demand will be discharged by cash or Securities that have been paid in response to a demand under the Equities PBA. Thus, as set out in Recital (B) of the Master Netting Agreement, the margin obligations are "netted" against each other. "Netting" obligations arising under different agreements in relation to different asset classes does not mean "cross margining" all assets together with no regard for the separate agreements that govern each asset class. SHI submitted that the Clause did not mean that margin for F&O transactions or margin for any transaction governed by the Equities ISDA Agreement could be demanded under the Equities PBA or the Listed F&O Agreement or vice versa. Each agreement was said to have its separate capital requirements relating to the specific asset class with which it was concerned and margin had to be demanded and paid pursuant to the relevant agreement.

870. SHI's submissions do not do justice to the wording of Clause 4.7. On its own terms, it not only provides for the priority of this provision over the margin provisions in the other Underlying Agreements but specifically states that the provision of margin under Clause 4.2 of the Equities PBA is to constitute a discharge of the underlying margin obligations under each of the other agreements. As I have already said, this can only work if there is a combined margin requirement made under the Equities PBA with such cross margining as the ROR provides.

871. The provision ties in with Recital (B) of the Master Netting Agreement which stated that the parties wished to provide for netting of obligations to provide margin pursuant to the terms of the Underlying Agreements. The effect is that a margin calculation performed under Clause 4.1 and 4.2 of the Equities PBA, in accordance with the ROR, constitutes a single net margin obligation, as envisaged by Recital (B) of the Master Netting Agreement. By meeting a margin call made under Clause 4.2, SHI would then discharge all the margin obligations under the Underlying Agreements.

17(b) The Listed F&O Agreement

872. The Listed F&O Agreement contained, as part of its title, the words "Professional Client Trading As Principal" in brackets. It, like the Equities PBA, was governed by English law and dated as at 30th January 2008. By Clause 1.2 the status of the parties was confirmed inasmuch as DBAG was to act as principal when transacting business on an exchange and to contract with SHI as a professional client. There were, therefore, to be back to back principal-to-principal transactions and no agency involvement on DBAG's part when transacting Listed F&O trades. In consequence DBAG would be subject to the margin requirements of the exchange and SHI would be subject to DBAG's margin requirements as set out in Clause 12.

873. Clause 10.1 and 10.2 read as follows:

> "10.1 Transactions: This clause applies, except to the extent inconsistent with Applicable Regulations, to transactions in futures and options. In this clause, "Transaction" means the transactions listed in sub-clauses (i)-(iv) of the definition of Transaction.
>
> 10.2 Matching trades: In respect of every Transaction made between us subject to the Rules of an Exchange, we shall, unless otherwise agreed in writing in relation to a particular Exchange, act as principal in any Transaction with you, and we shall have made (or arranged to have made through an intermediate broker who may be an Associated Company) on a principal-to-principal basis a matching transaction on the market operated by the relevant Exchange or shall have accepted the designation of such a Transaction."

874. Clause 3.1 provided that all dealings under the agreement and all Exchange Contracts as defined would be subject to the rules, regulations, procedures and customs of any relevant exchange, market or association of dealers and its clearing house if any. Clause 3.2 provided that, save as otherwise provided, there would always be an equivalent exchange contract made by DBAG to that between SHI and DBAG.

875. By Clause 4.1 and 4.2 SHI acknowledged that it was solely responsible for making its own independent appraisals, investigations and decisions on trades and that DBAG gave no warranty as to the suitability of the products and was not obliged to provide any advice in relation to the management of investments.

876. Clause 12 set out the margin arrangements in the following terms:

> "12.1 *Margin Call*: You agree to pay us on demand such sums by way of margin as are required from time to time under the Rules of an Exchange (if applicable) or as we may in our discretion reasonably require for the purpose of protecting ourselves against loss or risk of loss on present, future or contemplated Transactions under this Agreement. You will be required to supplement that payment at anytime when your account with us shows a debit balance or an increase in your Margin Requirement.
>
> 12.2 *Purpose of Margin*: All margin shall be held for the following purposes: for application in respect of Transactions entered into pursuant to this Agreement; to pay to the relevant Exchange or broker any margin due from us to it on such terms as we think fit and in respect of all positions held by us for all our clients (including connected persons); to apply in or towards satisfaction of, or in reimbursement to us of, all costs, damages, losses, liabilities and expenses incurred under or in respect of all and any transactions and all liabilities and expenses (including dealing turns, charges and taxes) incurred as result of the performance by us of our duties or the exercise by us of our rights, powers and/or privileges hereunder

> (irrespective of the currency in which the same is denominated).
>
> 12.3 *Transfer*: You shall Transfer to us, on demand or within such time as we shall specify, such Acceptable Margin as we may require in accordance with our Margin Requirement.
>
> 12.4 *Title*: You agree that all right, title and interest in and to any Acceptable Margin Transferred hereunder shall pass to us outright, we being obliged to Transfer Equivalent Margin in the following circumstances:
>
> (a) if we determine, in our sole discretion, that our Margin Requirement has been reduced;
>
> (b) provided that none of your obligations to us are then outstanding, upon an assignment or transfer of a party's rights under the Agreement; or
>
> (c) provided that none of your obligations to us are then outstanding, upon termination of the Agreement."

877. It can be seen that, by the terms of this Clause, SHI agreed to pay on demand either the amounts that DBAG was required to pay as margin under the Rules of Exchange or such amount as DBAG might in its discretion reasonably require for the purpose of protecting itself on existing, future or contemplated transactions. The Clause made it plain that SHI would be required to supplement payments made at any time when its account with DBAG showed a debit balance or an increase in the Margin Requirement. The Margin Requirement was defined as DBAG's "requirement from time to time in relation to the amount or value of Acceptable Margin to be transferred by [SHI], which requirement shall be determined by us in accordance with our standard practice from time to time."

878. Acceptable margin was defined in Clause 19.1 as "cash or other securities that constitute acceptable margin to [DBAG] for the purpose of collateralising [DBAG's] exposure to [SHI] under this agreement and any Transactions, the valuation of which shall be subject to haircut in accordance with [DBAG's] standard practice from time to time."

879. It can thus be seen that, as with the Equities PBA, DBAG could demand margin in accordance with its standard practice which could be referable to the Rules of an Exchange (and in the ordinary way might well be because of the primary purpose set out in Clause 12.2) but DBAG was given considerable latitude in assessing margin in order to protect itself in accordance with its standard practice, which included the ROR.

880. The interpretation section, Clause 19, also included the following definitions:

> ""Master Netting Agreement" means any Master Netting Agreement between you and us in relation to the Prime Brokerage Agreement, as amended or supplemented from time

to time. This Agreement shall constitute an Underlying Agreement for the purposes of the Master Netting Agreement;

…

"Prime Brokerage Agreement" means the Prime Brokerage Agreement between you and us dated [30th January 2008], as amended or supplemented from time to time;

…

"Specified Agreement" means any master agreement (including, but not limited to, any lSDA Master Agreement as published by the International Swaps and Derivatives Association, Inc and the Prime Brokerage Agreement) between the relevant parties whether already executed at the date of this Agreement or at any time in the future which governs the terms of the transactions entered into between the relevant parties pursuant to any such master agreement, regardless of whether any one or more of such transactions was or were entered into before or after the execution of any such master agreement;

"Transaction" means:

(i) a contract made on an Exchange or pursuant to the Rules of an Exchange;

(ii) a contract which is subject to the Rules of an Exchange; or

(iii) a contract which would (but for its term to maturity only) be a contract made on, or subject to the Rules of an Exchange and which, at the appropriate time, is to be submitted for clearing as a contract made on, or subject to the Rules of an Exchange;

in any of cases (i), (ii) and (iii) being a future, option, contract for differences, spot or forward contract of any kind in relation to any commodity, metal, financial instrument (including any security), Currency, interest rate, index or any combination thereof;

(iv) a transaction entered into between the parties and/or which is matched with any Exchange Contract within paragraph (i), (ii) or (iii) of this definition;

(v) any other transaction, which we both agree shall be a Transaction

…"

881. The Listed F&O Agreement thus made cross-reference to the complex of agreements making up the 2008 Agreements as well as the Equities ISDA.

882. In its closing submissions SHI submitted that Clause 12.1, on its proper construction, meant that if transactions were governed by the Rules of Exchange, those Rules must determine the margin levels. It was only if there were no such applicable rules that DBAG had a residual discretion to determine the amount of margin. In my judgment, the first sentence of Clause 12.1 gave DBAG an option whether to charge margin on the basis of what it was required to pay under the Rules of an Exchange, where that applied, or to charge such margin as it reasonably required for the purpose of protecting itself against loss or the risk of loss on transactions under the Listed F&O Agreements.

883. As indicated in section 20 of this judgment, because DBAG acted as a principal in transactions with SHI with back-to-back transactions on any exchange, it was, under the Rules of the Exchange, obliged to maintain a segregated account with margin for the Exchange transaction. This did not however bear upon the margin to be charged to SHI although in practice a multiplier of two to the exchange requirement was only utilised for non-equity linked exchange traded futures and the ROE was applied to equity linked futures.

884. Attention is also drawn by SHI to the difference in the title provisions relating to margin in the Equities PBA and the Listed F&O Agreement. In the former case, title remained in SHI with DBAG having a security interest whereas under the Listed F&O, title was transferred to DBAG.

885. None of this is inconsistent with the cross-margining regime for which DBAG contends.

17(c) The Master Netting Agreement

886. This too was dated 30th January 2008 and referred to the Equities ISDA, the Equities PBA and the Listed F&O Agreement as the Underlying Agreements. Recital (B) stated that the parties wished to provide for netting of obligations to provide margin pursuant to the terms of the Underlying Agreements. Recital C stated that the parties wished to provide for the ability to terminate the Underlying Agreements concurrently and to net off termination amounts payable thereunder.

887. Recital C was put into effect by Clauses 2 and 3 of the Master Netting Agreement with provision for designating a master termination date upon the occurrence of an event of default under the Equities PBA, the Equities ISDA and the Listed F&O Agreement. Such master termination would then give rise to the calculation of termination amounts under each of these agreements and the netting of one against the other to produce the Net Termination Amount.

888. There was no express provision which put into effect the terms of Recital (B) but the intention of the agreement is clear and the references in the Equities PBA and the Listed F&O Agreement to margining in accordance with DBAG's procedures or standard practice were sufficient to incorporate the ROR and to provide for one composite figure to be put forward by DBAG as the margin requirement in respect of

transactions effected under the terms of these agreements which, for the reasons given hereafter, included Mr Vik's FX transactions conducted under the Equities PBA.

18. Ratification

889. Later in this judgment I refer to the decision taken by Mr Vik over the weekend of the 10th-12th October 2008 to close down Mr Said's trading in an orderly fashion, paying the premium necessary to do so and the collateral required to keep trades open until the propitious moment arrived for closing them out. This decision was taken in full knowledge of the types of trade conducted by Mr Said – the nature of the EDTs and OCTs, and of DBAG's failure accurately to report on their value or the margin requirements for the portfolio as a whole (including such EDTs) because of its inability to book, value or margin the complexities of the trades in its systems.

890. Mr Vik's actions demonstrate that he did not consider that what Mr Said had done was beyond the authority given to him – otherwise he would have raised objections at the time and refused to pay. He treated the trades as authorised.

891. If the trades had been beyond the ambit of the Said Letter of Authority and/or the FXPBA, DBAG's case on ratification of any breach of authority would be hard to refute. Both parties approached this issue as a matter of English law. SHI relies on the decision of Andrew Smith J in *Sea Emerald SA v Prominvest Bank* [2008] EWHC 1979 (Comm) and on various passages in *Bowstead on Agency* (19th edition) which show the need for the principal to make a conscious decision with knowledge of all material circumstances (unless the intention to ratify is clearly evidenced regardless of such knowledge) and to manifest the unequivocal intention to adopt the acts in question. Thus, it is said that the principal must know all the material circumstances or intend to take the risk whatever the consequences might be and that any alleged conduct, in order to constitute ratification, must not be capable of any other explanation.

892. Mr Vik's knowledge of some individual EDTs is shown by the email exchanges with Mr Said in 2008 and his approval of some of them is also clear from those exchanges. These individual transactions would be authorised or ratified by Mr Vik's unilateral manifestation of his will in permitting them to go ahead. The nature of these EDTs and the risk profile was sufficiently set out in the exchange and, as appears later in this judgment, Mr Vik fully understood what such "range bets" involved. The effect on contractual margin would however not have been known to him and the authorisation/ratification of individual trades could not apply across the board for EDTs if they were outside the ambit of a financial trading limit.

893. By the time SHI came to pay the margin calls in October 2008 however, Mr Vik knew the exact situation because Mr Said had provided him with details of trades he had done (and a five year chart showing the history of the currency pairs involved) and told him that closing down the trades would cost hundreds of millions of dollars. The collateral demands from MS were known to Mr Vik before the weekend as was DBAG's desire to discuss making a margin call and to discuss SHI's future business plans in the light of the situation as it then stood. Mr Vik could have been in no doubt as to the nature, the risk profile, the terms and extent of the EDTs concluded by Mr Said, having received details of them from him when discussing with him the course to be adopted. They agreed upon a strategy and put forward an agreed script, through

Mr Said, on Monday 13th October, which involved conducting a controlled and orderly close out of Mr Said's FX trading with the provision of the margin necessary to do so at the time of SHI's own choosing. The exact premium required for closing out trades was of course not known – nor were the collateral figures which would be required. In a moving market this was inevitable and regardless of the figure, Mr Vik treated the trades as binding on SHI and decided to cut SHI's losses on them regardless of cost, as can be shown by the subsequent payment of the margin calls to the tune of US$511 million.

894. On 16th October, in the circumstances set out later in this judgment, in a joint telephone conversation between him, Mr Said and DBAG personnel, he repeated his stance about closing out the trades and sought a reduction in margin requirements from DBAG because of the closing out process that was then being conducted. He obtained DBAG's agreement to this in the context of treating all the trades as binding.

895. By paying these margin calls, SHI also ratified, to the extent that it was necessary, Mr Said's agreement to the changed margin terms.

19. Mr Vik's FX Trading with DBAG and its collateralisation

896. At no time before March 2010 did it occur to Mr Vik to contend that his FX trading in 2008 fell to be margined under the terms of the FX ISDA as opposed to the Equities PBA and the suite of agreements dated 30th January 2008. Nor was there any suggestion that his FX trading was subject to a trading limit such as the PAL. The 2008 Agreements executed by him, all of which bear the same date but were in fact signed by him before 10th December 2007, are the Amendment Agreement to the Equities ISDA (the second amending Agreement as there was an earlier Amendment Agreement dated 28th November 2006, executed at the same time as the FXPBA), the Equities PBA, the Listed F&O Agreement, the Master Netting Agreement and the Overseas Lenders Agreement.

897. As mentioned earlier in the context of the PAL, the genesis of this argument is of considerable significance since it is a lawyer's construct which appears to have first crossed the minds of English counsel acting for Mr Vik in the course of a hearing before Mr Justice Burton on 8th March 2010 on an application to strike out DBAG's claim in the Vik Millahue proceedings. In that action DBAG had sought recovery from a company associated with Mr Vik on the basis, essentially, that had DBAG known of its own errors in computing the sums standing to the credit of SHI in the GPF account (the account which reflected all the transactions under the 2008 Agreements) it would not have permitted the sum of US$25 million (approximately) to be paid to that company on 14th October 2008. DBAG had produced a series of different explanations for the errors which are now defined as the Russell Multiplier Error and the Ignored Payments Error. Whilst SHI's formal position is that such errors are not admitted, there was no challenge to the evidence now put forward by DBAG on these topics.

898. The notion that Mr Vik could ever have considered that his FX trading in 2008 was governed by the FX ISDA or the FXPBA and the margining arrangements relating to it (the FX ISDA, Schedule and CSA) defies credibility because of his evidence in the New York action, the history of events, the size of the FX transactions he concluded and his desire, constantly expressed in his evidence, to keep Mr Said's trading

separate from his own. Had he thought that his trading was governed by the FX ISDA and margined by reference to the Pledged Account, the actions that he took in response to an email from Mr Brügelmann of 3rd September 2008 are inexplicable. Mr Vik made vain attempts to explain that he had not understood that email to refer to losses incurred on his own FX trading and the need to reduce his exposure on those trades because of the margin requirements under the GPF arrangements and the 2008 Agreements. It is clear however that this is what the email stated and that the reduction in his USD/NOK trades was effected in order to reduce the margin requirement thereunder.

899. Moreover, the size of his FX positions could not conceivably have been covered by the PAL or the collateral in the Pledged Account and when the margin calls were made in respect of Mr Said's FX trading in October 2008 it was self-evident that Mr Vik's FX transactions were not being referenced but were margined separately and not under the FX ISDA. At one point, after DBAG had agreed on 16th October to forgo any element of VaR or liquidity add-on in calls, Mr Said suggested to Mr Vik that he might move his FX transactions to the FXPB account in order to obtain that margining benefit but Mr Vik replied that he wanted to keep his trading separate.

900. In his first witness statement however Mr Vik stated that it was obvious to him (at the time of his statement) that his FX trading should be governed by the FXPBA and not by the Equities PBA and that he was not aware at the time of the events in question that such trades were in fact being booked in the GPF account. He said that he assumed at the time that they were being booked into an account opened under the FXPBA but had no visibility on this because he relied on Mr Brügelmann to manage such matters for SHI. He said that his understanding throughout was that his FX transactions were governed by the FX agreements and booked in a separate FX account and had he been told otherwise, he would have reacted adversely and remembered it, since this ran completely contrary to his own understanding of what DBAG had agreed with him.

901. In another paragraph of his statement he said that he understood that limited FX transactions could however take place in the Equities account but only for the purpose of purchasing foreign currencies to purchase foreign shares, or for the purpose of hedging exposures to foreign currencies in relation to shares held in foreign companies and not for the purpose of taking large directional FX positions unrelated to any equities positions.

902. Mr Vik's evidence in his statement was untrue. When he came to be cross-examined, he told the court that he was not aware of the rates of margin being applied to his FX trading, whether at DBS or at DBAG. Further, as set out earlier in this judgment, he said that at 19th February 2009 the argument that the FX account was subject to the PAL had not occurred to him, despite the fact that he had suffered serious losses on his FX trading in 2008. The whole issue of margining was, by then, the subject of the New York action. Later, in cross-examination, he said he did not consider during the time of his FX trading whether the PAL represented a limit to his FX trading or not.

903. It was on 8th March 2010 that counsel for Vik Millahue first suggested that Mr Vik's FX trading was governed by the FXPBA and not by the Equities PBA. This led directly to the PAL argument. These issues run together. If Mr Vik did not consider whether the PAL applied, it was because he had not considered that his trades were

margined under the FXPBA, by reference to the Pledged Account. In consequence, his evidence in his first witness statement must be a fabrication.

904. This is made plain when regard is had to Mr Vik's evidence in the New York action. In this context, as mentioned earlier, Mr Vik always considered that Mr Said's FXPB account was a New York account, rather than a London account because his dealings were with FXPB in New York and New Jersey (although technically it was a London account). The point assumed significance in relation to the jurisdictional dispute which arose in relation to the New York action since Mr Vik's evidence in that action was that he always believed the FX account in which his own FX transactions were booked to be a London account, in contradistinction to Mr Said's FXPB account in New York. In the jurisdiction dispute Mr Vik and SHI's position was that all Mr Vik's trading, whether of equities, F&O or FX, was effected through a London account or London accounts but had no connection whatsoever with the FXPBA which was reserved for Mr Said's trading.

905. In his affidavit of 19th February 2009 he referred to an account opened in New York to be used exclusively for FX trading by Mr Said with an allocation of US$35 million as collateral and to the opening of new accounts in London by SHI more than one year later. These accounts were said to be "unrelated in any way to the New York FXPB account" which had been opened exclusively for Mr Said's trading.

906. The affidavit continued:

> "In connection with the opening of the accounts in London in which Said had no role, and again unrelated in any way to the New York FX PB Account or its activities or transactions, and solely for other investment purposes of Sebastian Holdings, the Bank and Sebastian Holdings entered into various agreements, all drafted by the Bank, including another, unrelated prime brokerage agreement dealing solely and exclusively with the London accounts. …"

In other words, the London agreements stood on their own and the New York FXPB Agreement and documents stood on their own, the latter Agreement being exclusively for Mr Said's trading.

907. In another affidavit of 6th April 2009 he stated that all of Mr Said's FX trades were effected by him through the New York offices of the bank with its New York personnel whereas the Equities PBA was entered into more than one year after the New York FXPBA and "relates only to the London accounts for the purposes of other, non-Said trading activities which therefore have no relationship to the New York FXPB account or the Said trades at all."

908. In cross-examination Mr Vik said that he was not going to dispute that his first affidavit was fundamentally inconsistent with the account which he had put forward in his first witness statement. He refused to accept that he had changed his story but said that it definitely did not occur to him how everything operated until much later. He accepted that it was correct that he had never suggested in those affidavits that there was another FX London account (or sub-account) which was not in any way related to the Equities PBA.

909. Further, in the Vik Millahue proceedings, Mr Leslie in a witness statement which was based on instructions from Mr Vik, distinguished two main separate sources of trading between DBAG and SHI. The first course of trading consisted of trades done in London under the Equities PBA whilst the second consisted of trades done in New York under what was described as the FXPBA, which were managed by Mr Said. "That course of trading was wholly separate from the [Equities PBA] trading in London. There was no interrelationship between the two courses of trading or the agreements under which they were conducted."

910. Again Mr Vik accepted in cross-examination that there was no suggestion at that point by SHI that Mr Vik's trading was being carried out under the FXPBA and that the point being made specifically was that it was Mr Said who traded under that agreement alone.

911. Moreover, Mr Leslie swore a fifth statement on 9th March 2010, presumably furnished to the court in draft on an earlier date, which referred to a Schedule showing positions for Mr Vik's FX trading cross-margined by DBX under the 2008 Agreements on the GPF platform. In his statement, Mr Leslie said that information in respect of the document had been provided to him by Mr Vik but there was no complaint at all as to the margining of the Vik FX transactions in this way. Mr Vik denied that he had been involved in any detailed work in relation to this schedule, despite Mr Leslie's evidence.

912. In his cross-examination Mr Vik would not concede that his legal team had identified the argument about his FX trading being margined under the FXPBA and FX ISDA and that he had invented factual evidence to support the argument. He did however say that it was really a question of whether and what agreements governed the position and if there was a common assumption, but that this was really a legal question.

913. What is clear from the evidence of Mr Brügelmann in particular but also all those DBAG personnel involved in handling Mr Vik's FX transactions and his F&O transactions was that they all worked on the basis that these trades were governed by the 2008 Agreements. Margining, whatever the details of it, was conducted on the GPF platform and an overall figure for margin in respect of all SHI's trading other than Mr Said's FXPB trading was produced by DBAG as a composite figure. Much time was spent with the witnesses on the mechanisms that were adopted and whether there was truly cross-margining between the different asset classes, in the sense that exposures on one currency in one asset class could be offset against assets in another class denominated in the same currency, but the details are unimportant. The issue is whether or not there was a common understanding between SHI and DBAG that Mr Vik's trading in all classes of assets gave rise to a single aggregated figure for margin under the Equities PBA and the other 2008 Agreements as opposed to the FXPBA of November 2006.

914. The starting point for SHI's submission lies in the Amendment Agreement of 22nd November 2006 and the Schedule to the FX ISDA of the same date.

i) In the Amendment Agreement it was provided that the following should be added as a preamble to the Schedule to the Equities ISDA of May 8th 2006:

> "For the avoidance of doubt, it is intended that this Agreement govern all Transactions other than FX Transactions and Currency Option Transactions. Unless otherwise agreed between the parties, FX Transactions and Currency Option Transactions (as defined in the 1998 FX and Currency Option Definitions, as published by ISDA, the Emerging Markets Traders Association and The Foreign Exchange Committee (the "FX Definitions")) shall be governed by the ISDA Master Agreement dated 22 November 2006 between Party A and Party B (which expressly provides for FX Transactions and Currency Options Transactions to be governed by that Agreement)."

ii) Paragraph 7 of Part 5 of the Schedule to that ISDA was to be deleted and replaced by identical words to those which were to appear in the preamble.

iii) In the Schedule to the FX ISDA of 22nd November 2006, a preamble appeared in the following wording:

> "For the avoidance of doubt, it is intended that this agreement shall only govern Foreign Exchange Transactions and Currency Option Transactions (as defined in the 1998 ISDA Definitions as published by the International Swaps and Derivatives Association, Inc. ("ISDA") (the "FX Definitions")) between Party A and Party B.
>
> Unless otherwise agreed between the parties, any Transactions other than Foreign Exchange Transactions and Currency Options Transactions shall be governed by the ISDA Master Agreement dated May 8, 2006 between Party A and Party B."

iv) Paragraph 11 of the Schedule, headed "Scope of Agreement" then provided that the FX ISDA should govern only Foreign Exchange and Currency Options transactions and "unless otherwise agreed between the parties, any other transactions … shall be governed by the Equities ISDA of May 8th 2006."

915. As at 28th November 2006, there was a clear distinction made between FX and Currency Option Transactions on the one hand, which were to be governed by the FX ISDA and its annexes and other transactions which were to be governed by the earlier Equities ISDA of May 8th 2006. The Equities PBA and other accompanying agreements are all dated in manuscript as of 30th January 2008 with deletions of earlier typed dates in November and December 2007. The Amendment Agreement as of 30th January 2008, in its preamble, referred to the parties' desire to amend the terms of the Equities ISDA of 8th May 2006 "as previously amended from time to time". The terms of this Amendment Agreement are unimportant for present purposes but SHI draws attention to it because the parties appear to have applied their minds to the Equities ISDA of 8th May 2006 and, at least in general terms, to amendments to it, albeit that there is no specific reference to the Amendment Agreement of 22nd November 2006.

916. The Equities PBA related specifically to "Transactions (as defined) in respect of Securities (as defined)." Transactions were defined to mean a Purchase Transaction or a Sale Transaction and Securities were defined in the following manner:

> ""Securities" means (i) any bond, debenture, note or certificate (whether in tangible or intangible form) or other instrument or equivalent intangible holding evidencing indebtedness; (i) any share, interest or participation in the issued share capital of a company including any replacement shares, interests, or participations following a surrender, cancellation, conversion, sub-division or consolidation; (ii) any warrant or future on, or any option or right to subscribe for or purchase any of (i) or (ii) above; and (iv) any other securities or instrument as agreed between the parties from time to time, and includes in each case an interest in a security accruing by virtue of the fact that the security is held through a clearing system, custodian or other intermediary; …"

917. Although in my judgment, FX transactions and Currency Options are included within this definition of securities, on the face of the contracts concluded by the parties, FX transactions were to be governed, not by the Equities PBA or the Equities ISDA (as amended) but by the FX ISDA and its annexes.

918. In these circumstances it is necessary to explore the history of what occurred in 2007/2008 in order to see how DBAG came to treat Mr Vik's FX transactions as being governed by the Equities PBA and the 2008 Agreements. The essential reason, it would appear, was that there was initially an intention to create a Prime Brokerage account for Mr Vik which would allow him to transact all his trades, FX, Fixed Income and Equities backed by collateral held with DBS in the form of his equity portfolio (see Mr Brügelmann's email of 8th August 2007 to Eckhard Fitschen). What Mr Brügelmann was looking to achieve was one account through which Mr Vik could effectively trade anything he wished with third parties with one common source of collateral. Mr Brügelmann was frustrated in seeking to achieve this aim and was disappointed to find that the Equities PBA would not give Mr Vik such flexibility, although the 2008 Agreements did provide for a breadth of products in which Mr Vik could trade. One of the other options was to create a Fixed Income PB account through which FI and FX trading could be conducted, because the Equities PBA was not designed for FX trading although it could be used for that purpose. A yet further possibility was an FXPB account or sub-account linked to Mr Said's with a common pool of collateral although this would inevitably have had to be larger than US$35 million if it was to accommodate the FX trading of both of them.

919. Mr Vik's trading transactions had become too large and complex for DBS to handle. In particular Mr Vik wished to be able to short Equities and Equities Futures. This DBS could not do. He also wanted maximum flexibility to trade in anything that he considered appropriate and from about May 2007 onwards, Mr Brügelmann embarked upon investigations with DBAG in an attempt to find a vehicle for Mr Vik to conduct such trades with the flexibility he wanted. This proved to be much more difficult than he had thought. He had plainly hoped that the Equities PBA would at least go some way towards this result but he was looking to personnel in DBAG's FI and FXPB departments for assistance to set up accounts or sub-accounts for Mr Vik, and

encountered some resistance because the scope of Mr Vik's anticipated FI trading was not attractive to DBAG and the methodology of margining Mr Vik's FX transactions (by the NOP methodology) did not accord with the methodology applied to Mr Said's FX trading, which Mr Said was unwilling to change (VaR methodology). There were technical difficulties for DBAG's systems in putting together two sub-accounts on the FXPB account, one for Mr Said and one for Mr Vik, with different margining methodologies and much time was spent in seeking to resolve this issue before, in May 2008, Mr Vik himself offered the solution of using a different company for his FX trading, namely CM Beatrice Inc (Beatrice). Arrangements were made for an FXPB account for Beatrice and documents were sent to Mr Vik for execution but on 15th October, at the time of the margin calls, he declined to proceed further with this.

19(a) The Course of Events in 2007-2008 relating to Mr Vik's FX trading

920. As mentioned above, from some time in 2007 Mr Brügelmann was seeking to set up a Prime Brokerage arrangement which would allow Mr Vik to transact a variety of different trades. In an email of 8th August 2007 Mr Brügelmann said that he was working on setting up such an agreement "which would allow him to transact on all his trades (FX, Fixed Income, Equities) with CIB backed by collateral held with DBS in the form of his equity portfolio". Although the GPF (Global Prime Finance) platform is, as its name suggests, a prime brokerage platform which is intended to provide financing to clients to borrow against the assets purchased, it is essentially an equities-based operation. It was not designed for large scale FX trading nor Fixed Income derivatives. The cross-margining system within it allowed for the setting off against equities of equity-linked F&O trades and FX trades, where such had a hedging effect. This was governed by the Rules of the Road (ROR) designed by the GPF Risk team. Mr Singh, the European head of GPF Risk described, GPF as being predominantly used by clients who engaged in equities-related strategies, stating that the amount that a client could borrow from DBAG was determined by applying a margin requirement to the client GPF portfolio to produce a minimum amount of equity which the client had to hold in its GPF account. The client's GPF portfolio was both the portfolio for which the DBX system showed a margin requirement on the Global Prime Website and the portfolio whose Margin Equity was aggregated to determine whether that margin requirement was satisfied. The Margin Equity of the portfolio was calculated by DBX which aggregated the previous day's close of business MTM valuations of each position in the portfolio that were fed to DBX from underlying systems in relation to different classes of assets. DBX operated on a T plus 1 basis because its margin calculations were based on valuations at the end of the previous day. A range of types of trade could be cross-margined in DBX to produce a single margin requirement in accordance with the methodology set out in the ROR. F&O trades were booked in an F&O account and FX trades were booked in an FX account but some types of trades, such as non-equity futures and interest rate swaps, could not be cross-margined.

921. I have referred to Mr Vik's desire to trade in a wider range of assets and the flexibility he sought. Mr Said had met with the FIPB team on 30th August 2007 to discuss the opening of an FIPB account and Mr Brügelmann continued those discussions with Mr Bausano in September 2007. Mr Bausano was the co-head of GPF and suggested that GPF could handle products such as bonds on their platform and might be able to accommodate some of the trading that SHI wanted to do. The GPF account would

however only enable Mr Vik to trade FX with DBAG and not with other parties. At DBS there was a single pool of collateral for all of Mr Vik's trading. Despite initially suggesting otherwise in his first statement, he accepted that this was the case and that there was therefore no specific pool of collateral for his FX trading. The documents show that both Mr Meidal and Mr Brügelmann were alive at Mr Vik's behest to speak to CRM to reduce the margin requirement for Mr Vik's trading in the light of the hedging effect (partial or complete), of the equities trades (often referred to as Mr Hanssen's account) and the futures trades. The documents also show that Mr Vik was looking for separate reporting of the P&L for different asset classes whilst wanting cross-margining and increased leverage.

922. The evidence of Mr Brügelmann and the DBAG personnel involved was that once the Equities Prime Brokerage Account was proposed it was envisaged that the whole of SHI's Swiss portfolio would move to DBAG to a new Prime Brokerage Account. Mr Vik agreed that this is essentially what happened but not that this was the original proposal. Mr Vik's evidence was that his primary aim was to be able to short stocks and futures and that he did not want to be any worse off than he was at DBS with regard to margin, although he did not pay a great deal of attention to the details or much care about how it was done.

923. On 14th November 2007 Mr Vik met with Mr Brügelmann and Mr Orme-Smith who was the GPF salesman who intended to make a sales pitch to Mr Vik. The meeting took place in Mr Vik's apartment at New York and, in the recollection of all three participants, did not last long – around forty minutes to an hour. DBAG had however prepared for this meeting by doing a number of things.

i) Mr Orme-Smith sent to Mr Brügelmann a standard GPF pitch presentation document which explained the benefits of cross-margining on the GPF platform, together with the relevant version of the ROR and an agenda for the meeting which referred to "Global Prime Finance Overview", "Financing, margin, risk" and "Transition & Reporting" as items for discussion. The basis upon which Mr Orme-Smith was proceeding was that all of SHI's portfolio at DBS would move to the GPF platform, including Mr Vik's F&O and FX trading. Mr Brügelmann, at Mr Vik's request, sent on these documents to him prior to the meeting taking place.

ii) In addition, the GPF Risk team prepared a demonstration account to show to Mr Vik. This demonstration account reflected the contents of SHI's portfolio at DBS, as provided by Mr Brügelmann, which included F&O and FX positions as well as a predominantly equity-based portfolio. The summary portfolio included US$700 million worth of European and Asian equities, US$300 million of Norwegian treasury bills, a USD/NOK FX position and various equity index-linked futures. In such circumstances Mr Vik's long NOK positions did not produce any real benefit in cross-margining because they did not have any hedging effect against the other assets.

924. Although Mr Orme-Smith said he would have taken notes of this meeting, none were disclosed by DBAG. Mr Vik did not produce any notes. Mr Brügelmann sent an email on 17th November to Mr Halfmann of PWM CRM about the meeting and in a phone conversation of 9th January 2008 with Mr Orme-Smith and Mr Said made reference to it. The 17th November email was a response to a request from Mr

Halfmann to be updated on the outcome of the meeting and raised questions of the kind that CRM would be concerned with. He wanted to know whether SHI fully understood the ROR and accepted them. He wanted to know if SHI was aware of the collateral call and close out mechanisms and expressed his understanding that the ROR would have been explained in detail. Mr Brügelmann's response was to say that the margining process, including ROR, had been explained in detail and that Mr Vik was comfortable with the process to be applied by DBAG. He said that the change in the margining process (48 hours cure vs same day) had been highlighted and that Mr Vik had expressly assured the others that he did not intend to get even close to margin call level. He said that Mr Vik was a private individual who had not provided a personal balance sheet but agreed to be margined on the assets held in custody by DBAG.

925. In his telephone call of 9th January with Mr Said and Mr Orme-Smith, Mr Brügelmann explained that, at the meeting on 14th November, Mr Vik had been told that GPF would apply the same lending standards as PWM but that there would be an additional boost in terms of margining capability by reference to cross-margining benefits, to which Mr Vik had responded that he was not concerned as long as he got the same set-off that he had with DBS and the capability of shorting various stocks and indices.

926. Mr Vik accepted that on 6th November he had asked DBAG to send in advance what it wanted to present to him on 14th November. He said that he wanted to open the account as a matter of urgency and it was common ground between those present that, at the end of the meeting, he wanted to sign the documents there and then. As they were only specimen documents, that could not be done. Mr Vik said in his evidence that there was nothing to present to him at the meeting because he had already made his decision even though he had not read the presentation brochure on GPF and the ROR or at least did not recall reading them.

927. There can be no doubt that the GPF brochure referred in terms to cross-product margining and risk management, referring to multiple asset classes including all products tradable under the Equities PBA, Listed F&O, FX transactions and Over the Counter (OTC) products, hybrid portfolio swaps, OTC equity derivatives and CDS. The ROR made it plain that the maximum benefit from rules-based margining would occur when the client was trading diversified portfolios and that the margining approach considered the two primary risk components for each trade, namely the hedging component and the unhedged component. It was recognised that security portfolios might incur foreign exchange exposure from positions in differing currencies and that they might have a hedging effect for securities of the same currency, in which case the risk reducing nature of the hedging transactions would give rise to margin relief. Margin however would be required on outright or residual currency exposures, whether the positions were in cash, future or forward form. The overall requirement would consist of the aggregate risk assessment in the foreign exchange and interest rates components of the position.

928. Mr Orme-Smith's recollection of the meeting was limited. He did not recall Mr Brügelmann being present. Although in his statement he said that he recalled providing Mr Vik with a bound copy of the GPF presentation, a presentation concerning an investment strategy and a copy of the ROR and a template of the Equities PBA, he agreed in cross-examination that this was incorrect. He went

through the presentation and ROR and produced documents from his bag but did not hand them to Mr Vik. Mr Vik wanted to sign up straight away. Mr Vik was late for the meeting and in a hurry because he wanted to go on to an auction of some kind. Mr Orme-Smith said he gave his usual sales pitch by reference to the benefits of cross-margining, without going through the Rules of the Road in any detail. He could not talk for more than ten minutes about ROR. Whilst he had no recollection of the specific discussion, that would be his normal sales patter and in doing so he would speak about the range of trades or products, equities, FX, F&O, bonds and the like. He had made many such presentations and this was his normal approach. Given the agenda for the meeting it would have been virtually impossible for Mr Orme-Smith not to have dealt with the issue of cross-margining in discussing the second item of "Financing, margin, risk" since this was considered to be a selling point, whether or not of specific interest to Mr Vik. In his statement he described his general recollection of doing so but, given the length of the meeting, he did not go through the ROR in detail but referred Mr Vik to the document as containing a detailed explanation of the manner in which GPF cross-margining operated.

929. Whereas Mr Brügelmann may have been keen to reassure Mr Halfmann that the details of the margining process and ROR had been explained and that may be something of an exaggeration, this near contemporary record of what was said must reflect the fact that Mr Orme-Smith did explain, at least in general terms, how cross-margining worked in respect of different asset classes of the kind that Mr Vik traded in, namely, equities, F&O and FX. The demonstration account was not accessed during the meeting but Mr Vik was given a link to it at the end of it. This showed how ROR worked.

930. In his first statement, Mr Vik said that he understood that the segregation between SHI's equities, futures and FX trading with DBS would remain after the new Equities PBA had been set up. He recalled Mr Brügelmann and Mr Orme-Smith saying that this is what DBAG required and that there would no cross-margining between any of these types of trading during their operation. In his second witness statement he corrected this by saying that he understood that there would be segregation between these different types of trading when the Equities PBA had been set up. One of the three things which stood out in his mind as having been expressly agreed at the meeting was that each of the equities and F&O accounts would be segregated and separately collateralised during their operation whilst FX would remain segregated and separately collateralised under the existing FXPB arrangements.

931. Mr Vik's evidence in his statements cannot be correct. The major thrust of Mr Orme-Smith's presentation, as well as the documents sent in advance, was the stress on the benefits to be achieved by cross-margining with a single pool of collateral to finance borrowing. It would have been impossible for Mr Orme-Smith and Mr Brügelmann to have suggested the contrary and the change between Mr Vik's first and second statements in relation to the position at DBS is illuminating. Mr Vik would not have contemplated anything worse than he was currently getting at DBS where there was a single pool of collateral for all his trading with off-setting/hedging transactions being taken into account, at least to some degree. When GPF advertised itself as providing such a benefit, as recorded in the documents provided, Mr Orme-Smith and Mr Brügelmann could not have agreed the opposite and Mr Vik would not have accepted it either. Furthermore, any suggestion that Mr Vik's trading would be collateralised

under the existing FX ISDA, would inevitably have led to significant discussion about the extent of margin required and how segregation of Mr Vik's trading from Mr Said's trading would be achieved in that circumstance. Mr Vik did not suggest that this took place.

932. If there had been agreement of the kind Mr Vik suggested, then DBAG would not have proceeded to put into place the arrangements that were actually made in putting all Mr Vik's trading onto the GPF platform.

933. In cross-examination Mr Vik's evidence was diluted. He maintained that, as far as he was concerned, it was a meet and greet occasion. He did not look at the material sent to him before the meeting and was pretty sure that he did not look at it during the meeting either. He said that he did not get a key message of cross-margining at the meeting and by the end of it he did not understand why they had come at all. He never accessed the sample portfolio to which he was given access. He said he was happy for DBAG to set up things the way they wanted with terms either better or no worse than before, as long as he had the ability to short stocks and bonds. He thought that SHI's equities trading, FX trading and futures trading were all going to London but that FX would be moved over under the FXPBA with an FX account opened in London for him to trade. He said he had no impression of any meaningful agreement being made on November 14th at all.

934. He said that he had only a vague memory of the meeting and had no exact memory of what he was told and that what appeared in his statement was based on going through the documents with the lawyers and stating what his assumptions were – "but maybe those assumptions are wrong". He stated in cross-examination that there was no express agreement on 14th November of the kind set out in his first witness statement. He could not recall how but he conceded that he did understand from Mr Brügelmann that FX trades for hedging purposes of foreign currency shares would be booked with equities trades on GPF, as distinct from FX investments/speculations. As he later instructed Mr Brügelmann to convert the surplus cash into NOK, it was inevitable that FX transactions would be necessary to achieve that end. It was therefore impossible for Mr Vik to have thought that all his FX trading would take place under the FXPBA.

935. Mr Vik said that he had no recollection of any reference to the FXPBA or the PAL at the meeting of 14th November and said that there was no discussion of how much collateral would be required to support his FX trading on that occasion.

936. Mr Vik conceded that there was no agreement at the meeting about segregated and separately collateralised equities trading, F&O trading and FX trading with the latter placed under the FXPBA. At the end of the meeting he was, as he accepted, happy for the bank to set up arrangements in accordance with whatever their procedures were and for him to get on with doing the trading that he wanted to do.

937. I conclude that not only was Mr Vik's first statement inaccurate but that it was put forward to make a case which had no basis in reality at all. Mr Vik's readiness to do this does him no credit and it is plain, however brief the meeting was and however rushed Mr Vik himself was, that he could not fail to have understood that the trading he had previously conducted through DBS, including his FX trading, was now to be carried out with DBAG on the GPF platform with composite margining producing

one aggregate figure for his trades and not under the FXPBA which at all times had been entirely separate and devoted to Mr Said's FX trading. Indeed, this was what Mr Vik wanted and assumed would take place with the optimum leverage available, whilst not concerning himself with the specific detail of margining calculation.

938. In his first witness statement, Mr Vik stated that he had signed the suite of 2008 Agreements on 30th January 2008 at a further meeting with Mr Brügelmann and Mr Orme-Smith at his flat, following which they took the documents away without leaving him with copies. He said that he relied on Mr Brügelmann to ensure that they reflected the terms discussed and agreed and Mr Brügelmann confirmed that they did. In his sixth witness statement he abjured that evidence and stated that he could not be sure that a further meeting had taken place. On cross-examination he accepted that it looked as though he had signed the 2008 Agreements in December 2007 and so I find. He also stated that he had no recollection of any confirmation by Mr Brügelmann as to whether the contractual documents gave effect to any agreements previously made, whether on 14th November (which he had by this stage accepted were not made) or otherwise.

939. It is clear from the evidence of the DBAG personnel who were involved in setting up the GPF account that it was set up to accord with the Rules of Road and to provide for full cross-margining in accordance with its terms. The Credit Memorandum dated 8th January 2008 referred to full ROR and both Ms Hart and Mr Singh confirmed that the "covered products" referred to in the context of Master Netting, meant that cross-margining applied to the items marked (here excluding CDS). FX forwards, futures and listed options and OTC options were all included. It matters not for this purpose that the Master Netting Agreement, which referred in the preamble to the parties' desire to provide the netting of obligations to provide margin pursuant to the terms of the Underlying Agreements, actually contained no such express term to that effect. That was the clear intention of the Master Netting Agreement and the reality was that everyone involved at DBAG on the GPF account proceeded on the basis of the understanding that all Mr Vik's trading fell within the terms of the 2008 Agreements.

940. A pricing proposal was sent to Mr Vik by Mr Orme-Smith which contained no prices for FX and F&O positions but since this proposal related to financing charges and not transaction charges, this is irrelevant to the issues between the parties. Moreover, GPF did not charge a fee for FX transactions because it did not provide an intermediation service in respect of them. All FX trades were concluded between SHI and DBAG with the profit element in the price itself. Mr Orme-Smith explained this to Mr Said on 9th January 2008 in the course of a telephone conversation which took place with him and Mr Brügelmann, to which I have already referred.

941. On 21st December 2007, Ms Hart specifically asked Mr Brügelmann whether SHI was going to use the same FX account as already existed or whether a new account was to be created. Mr Brügelmann's response was that a new account was required because the existing account was specifically tied to one trader. He then said that all incoming FX trades would be executed by himself on behalf of the beneficial owner and in due course, on 18th January 2008 Mr Vik sent a letter to DBAG for Ms Hart's attention giving Mr Brügelmann authority to do so. The letter confirmed that in relation to the ISDA Master Agreement, Prime Brokerage Agreement, Listed Futures and Options Agreement, Master Netting Agreement, Electronic Trading Service Agreement and any supplementary or other agreements relating thereto, as between

DBAG and SHI, various DBS employees were authorised to transmit instructions on behalf of SHI to DBAG. There can be no doubt that this letter referred to the Equities PBA and not the FX PBA because of the references to the other agreements associated with it. Mr Brügelmann was given access by Mr Vik to the GPF account via the DBX system so that he could see the current position and report it to Mr Vik, as he did daily.

942. Despite the arrangements which culminated in the 2008 Agreements, Mr Said, Mr Brügelmann and Mr Vik continued to explore the idea of an FIPBA for SHI to trade in fixed income derivatives and a separate FXPB account or sub-account for Mr Vik to trade in FX with Counterparties in a similar way to Mr Said. There is thus a note of Mr Brügelmann's dated 21st December 2007 with a diagram which illustrates two accounts in the name of Klaus and Alex feeding into a box with a number 2011084 in it which plainly represents the Pledged Account. Another note of Mr Brügelmann's at about that time refers to the GEM platform – "new account for Alex". As Mr Brügelmann said, Mr Vik was a man with many ideas who threw them out and looked to see if they could be implemented. There was thus a proposal for a separate FXPB account or sub-account in GEM, alongside that of Mr Said's for Mr Vik, even at the time when the 2008 Agreements were being finalised and implemented. That proposal was at all times separate from the Equities PBA and the trading under it but the idea was that, if a new FXPB account for Mr Vik could be brought into existence, the FX trades which he was doing could be put under that umbrella as opposed to the Equities PBA.

943. In the telephone call of 9th January Mr Said asked whether, when "the Prime Brokerage Agreement" was set up, it would enable "us" to deal equity, fixed income and foreign exchange products under the one umbrella. It is unclear whether Mr Said was referring to the Equities PBA or a distinct FIPBA/FXPBA. The answer he received was that his own trading would be kept separate from that of Mr Vik and there was then discussion of a separate account for Mr Vik in New York for FX Prime Brokerage transactions or of two sub-accounts, one designated Alex and one designated Klaus. Mr Said pointed out that additional collateral would be required for this latter proposal to work above and beyond the US$35 million in Switzerland and Mr Brügelmann's response was to say that their FX positions and collateral would have to be entirely separate. It was unclear how any trades which Mr Said might then want to do in fixed income swap business might be collateralised under the FIPB/FXPB arrangement.

944. Whilst this call is confused and difficult to follow and it is uncertain whether Mr Brügelmann and Mr Said were clear in their own thinking, distinctions were being drawn between the London and New York accounts, between Mr Said's and Mr Vik's trading and between the collateral required for their respective trading.

945. From this point onwards two distinct courses of action were being followed. The first was the transfer of assets from DBS to the GPF platform to support the trading which Mr Vik wished to carry out, including FX transactions. The second was the attempt to create a new FIPB or FXPB account with a view to Mr Vik trading in that way and perhaps Mr Said being able to trade in fixed income also.

946. Mr Brügelmann's telephone conversation with Ms Hart on 10th January shows that he was discussing the possibility of three sub-accounts on the Equities PB account, one

for Mr Vik, one for Mr Hanssen and another for Mr Said which would be entirely separate from the FXPB account which would remain untouched. It was agreed that this was not a practical proposition because of the split between financed and non-financed accounts in any event, whether or not fixed income business could be done through the Equities PBA, which Mr Brügelmann seemed to envisage. In that conversation, Mr Brügelmann specifically referred to Mr Vik trading in FX, futures and derivatives but Mr Said only trading in derivatives. Ms Hart again talked of all the figures on GPF rolling up into one number on Global Prime DBX. Whatever other possibilities were being discussed, it is plain that Mr Vik's FX trading was to be dealt with on the GPF platform with margining under the 2008 Agreements not the FX ISDA.

947. The email exchanges between 9th and 11th January between Ms Hart and Mr Brügelmann and others, including representatives of CRM and GPF Risk, show that the overall GPF account was set up with cross-margining of FX, F&O and OTC (over the counter trades) and the FXPB account was to continue to function on a stand-alone basis independent of what was being set up. Mr Vik's FX trading was to be carried out on a standard FX account on the GPF platform cross-margined with the assets there, rather than through a separate FXPB account which was said to be typically used by "higher volume clients and required additional legal doc[ument]s". Despite delays by the legal department, by 30th January all the internal accounts had been set up to include Prime Brokerage, stock loan, FX, listed futures and OTC options.

948. On being referred to his deposition in the New York action where he had said that it was in February 2008 that Mr Brügelmann had told him that his FX trading would be transacted under the FXPBA, Mr Vik maintained that this was so and that he recalled a number of conversations including one at that time.

949. On 5th February Mr Vik approved Mr Brügelmann's suggestion of transferring treasury bill positions from DBS to "the Prime Brokerage account as collateral to cover FX and Futures positions". Mr Vik thus confirmed his agreement to that collateral being provided for both those types of transactions which were to be effected through the GPF platform. On 7th February Mr Said emailed Mr Vik to say that Mr Brügelmann had just called and that the Equities PBA was in place. He continued: "Positions are being moved over (your positions that is – mine have to stay separate because I am located in the US and this is a London law agreement – don't ask me, but apparently that's the way it is)." In the email, Mr Said went on to say that Mr Vik would be able to book trades, "anything really", into the account and although it was not as highly automated as his own agreement which catered only for FX it was a much more flexible, robust and collateral efficient way of doing things. Once again the understanding of Mr Said and Mr Vik that their respective trading was entirely separate is illustrated.

950. On 10th February 2008 Mr Brügelmann sent Mr Vik an email telling him that for reporting purposes the accounts would be broken out and reported as "Sebastian Holdings and your personal account (FX, Futures) for margining purposes we have consolidated the account managed by Harald and your account into one account". This reflected their mutual understanding of cross-margining between the equities account managed by Harald Hanssen and Mr Vik's FX and futures trading on the GPF platform.

951. On 12th February, Mr Brügelmann sought authorisation for Mr Vik to transfer all equity, NOK, T-bill, cash and futures positions from the SHI accounts with DBS to the Prime Brokerage account in London. The FX positions were allowed to mature and close out in the DBS account but any new FX trades instructed by Mr Vik were then booked in the GPF account and Mr Brügelmann notified Mr Vik on 17th March that "all your FX positions are booked in DB London" (which was understood by all to mean the GPF platform).

952. In internal emails of 12th and 13th February 2008, Peter Lay of PWM CRM agreed with the GPF team that, under the ROR, equities futures, which were cross-margined in GPF, were margined at the rate of the exchange (ROE) on which they were traded without any multiplier. Commodities futures however which could not be cross-margined required a margin multiplier of two to the ROE, because the credit worthiness of SHI was not the same as that of DBAG on the exchange.

953. On 15th February 2008 Mr Said and Mr Brügelmann had a telephone conversation in which Mr Said was pursuing the question of FX Prime Brokerage for Mr Vik and the possibility of "an executive give-up agreement" in the interim. Mr Brügelmann told Mr Said that he had set up Mr Vik's foreign exchange account as part and parcel of a Prime Brokerage equity portfolio, not an FX Prime Brokerage account, to which Mr Said responded that Mr Vik wanted a Prime Brokerage agreement that covered all products and specifically wanted to be able to do give-up trades in FX. Mr Said complained that he had made it plain long before in discussions with Mr Bausano that he wanted cross-product Prime Brokerage with a limited number of Counterparties (which Mr Brügelmann had been unable to achieve for Mr Vik).

954. Mr Said followed up on this telephone call by emailing Mr Vik and telling him that he should have a separate account in the Prime Broker arrangement that he, Mr Said, had and that there would be no need for additional collateral (though he had presumably no idea of the extent of Mr Vik's trading). Mr Said said he had asked DB to go ahead. Mr Vik replied "OK" and Mr Said forwarded this to Mr Brügelmann. His reply stated that Mr Quezada was "on the case, that no legal work was necessary and that an account would be opened on Monday with a parent account linked to the collateral pool and two sub-accounts feeding into it". He also referred to the FIPB proposal saying that he had had good news from Mr Bausano and was checking whether cross-margining would work. He promised an update the following week.

955. Mr Brügelmann was cross-examined on a succession of emails hereafter in which efforts to put together both the FIPB arrangement and a sub-account arrangement for Mr Vik were pursued but without success. Notwithstanding all that SHI says on the point, it is clear that, although Mr Vik left these matters to Mr Said to sort out, he knew at all times that arrangements had not been concluded other than the 2008 Agreements with the margining of his FX trades thereunder. Mr Vik's evidence that Mr Brügelmann told him that his FX trading would be conducted under the FXPBA cannot be accepted as the necessary sub-account was never put in place with operative margin arrangements.

956. On 19th February, Mr Vik asked Mr Brügelmann by email whether his assets were segregated in the London Prime Brokerage set up and was told that they were in segregated accounts and that his outright risk to DBAG was in the open P&L in his FX positions. Mr Vik accepted that this made it clear that his FX positions were

being dealt with as part of the London Prime Brokerage set up (as opposed to the New York Prime Brokerage set up).

957. SHI's submissions indulge in casuistry in seeking to suggest that a sub-account for Mr Vik's FX transactions was set up and was operative by the end of February which is absurd since, had it been operative, there would have been no reason for it not to be used. The unresolved issue of margining prevented any such account from becoming functional. SHI does not suggest that an FXPB account ever came into existence but seeks to contrast these positions.

958. According to Mr Brügelmann the FIPB agreement proved to be problematic because FIPB did not want to take on the business which appeared to involve limited income and additional work in monitoring the trades and margining. There was an issue as to which of FIPB and GPF would take the risk of a Counterparty failure and a need for a Service Level Agreement to set this out. FIPB was interested in high volume trading only and Mr Vik appeared only to wish to carry out the occasional trade. A suggestion that the FXPBA be amended to add in FIPB products also proved fruitless.

959. Whilst the idea of a parent FXPB account and two sub-accounts for Mr Said and Mr Vik made some progress and Mr Quezada and Ms Greenberg explored the possible arrangements which could be made, the issue which arose related to the margining of the two sub-accounts and the feed to a parent account which was to be linked to a pool of collateral. The email exchanges between Mr Vik and Mr Said show an awareness on their part that existing positions on Mr Vik's trades could either be left where they were or moved over. They both understood fully that Mr Vik's FX trades were not being then booked alongside Mr Said's FX trades or margined by reference to the Pledged Account.

960. The idea of an SHI parent account which housed two sub-accounts through which Mr Said and Mr Vik would trade respectively, collateralised by the Pledged Account, created an obvious problem. Mr Said was margined by the VaR method and Mr Vik was not. Moreover, the senior personnel in FXPB considered NOP to be a better method of reflecting risk than VaR and Mr Said was known not to want to move away from VaR margining on his portfolio. The system for sub-accounts on DBAG's system was set up for NOP margining, not VaR margining, so that an alternative structure with separate pools of collateral for each of the two sub-accounts would not resolve the problem. On 16th April 2008 Mr Brügelmann told Mr Vik in an email that he realised that things had been dragging on for far too long but the sub-account margining facility only operated on NOP and although efforts were being made to modify the systems, "realistically we are looking at another delay of 2-3 months". He said that if the SHI account was moved to NOP margining, sub-accounts could be set up at once and all that would be required was an amended CSA. Mr Said, who was copied into the email, responded to say that moving everything to NOP was not an option. He asked if Mr Vik could be set up on NOP separately as an interim solution until the VaR methodology problem was resolved. If that meant Mr Vik posting separate collateral, that would probably not be a problem as an interim solution since he was already posting collateral in his PB account (referring to the Equities PB Account).

961. In response Mr Brügelmann said that a stand alone account could be set up on NOP for Mr Vik which would require a separate CSA and separate collateral "via internal

transfer from his existing equity PB account". Efforts to achieve this however foundered because Mr Brügelmann was informed that it was not possible to have two separate FXPB accounts under the name of the same legal entity (which was doubtless why sub-accounts had been suggested in the first place). The obvious solution to this was to create a new FXPB account, margined by NOP in the name of a separate legal entity. At a meeting between Mr Brügelmann and Mr Vik on 7th May, in the context of discussions about the adequacy of the margin figures for Mr Said's trading, and against the background of an internal agreement that SHI should, so far as was possible, be moved to NOP margining, the idea of using a separate legal entity emerged, though there was an issue between Mr Brügelmann and Mr Vik as to which of the two made the suggestion. Each said that the other had. On 26th June 2008 Mr Brügelmann, by email, referred to the meeting and the agreement of Mr Vik to provide the name of the separate legal entity for the FX Prime Brokerage account for him. On 8th July 2008 Mr Vik supplied the name of Beatrice.

962. Passing over for a moment the email of 3rd September from Mr Brügelmann to Mr Vik concerning the margin situation in the GPF account and continuing with the history relating to the setting up of a new Vik account specially for FX, it should be noted that it was agreed at the May meeting that when the Beatrice account was set up, Mr Vik's FX transactions would be transferred to it. SHI, in its closing submissions, suggested that the solution solved Mr Brügelmann's problems and meant that he did not need to tell Mr Vik about the way in which his current FX transactions were being handled. This idea is absurd in the light of the exchanges to which I have already referred and what follows. Mr Brügelmann had no reason to hide the situation from Mr Vik who knew that this was the culmination of the various attempts which had been made to set him up with his own FX Prime Brokerage account in circumstances where he had been conducting trades with DBAG alone, without any intermediation, and had not been trading with third parties under Mr Said's FXPBA or by reference to the Pledged Account collateral, which would have been insufficient for the size of trades he had been conducting.

963. The legal agreements between DBAG and Beatrice to govern the Beatrice account were sent to Mr Vik and returned by him duly executed between 1st and 4th September 2008.

964. On 25th September 2008, Mr Brügelmann sent Mr Vik an email informing him that his FXPB account in the name of Beatrice would be ready in a few days and saying that he had instructed the set up of the collateral account to be for NOK. This meant that Mr Vik would post NOK and all P&L would be converted into NOK at maturity. The email went on to say that "once the set-up is complete, all open positions will be transferred from Equities PB to the new FXPB account", thus again setting out their mutual understanding that Mr Vik's existing FX trading was being effected on the GPF account. On 13th October when asked by Mr Vik how it would work to transfer all positions to Beatrice, Mr Brügelmann confirmed that there was no problem in moving FX positions through novation but that there would be a need to transfer cash to the Beatrice account on the same day that the positions were moved. He said he would send him a transfer request to sign. In a further exchange that day, Mr Vik asked what accounts he had and what their individual legal status and function were. In response Mr Brügelmann said that most of his assets were housed in the Equity Global Prime Finance account of DBAG in London and that he now had two FX

Prime Brokerage accounts, one of which was in the name of Beatrice, "for your FX positions to be transferred from the above account, and one in the name of [SHI] managed by Klaus." Once again the mutual understanding was repeated.

965. On 14th October Mr Brügelmann emailed Mr Vik in respect of the Beatrice account stating that the purpose of the account was for booking all his open FX positions "currently booked in the DB London Equity Prime Brokerage account". On 15th October Mr Vik instructed Mr Brügelmann to close the Beatrice account but the exchanges to which I have referred made consistent reference to Mr Vik's FX trading being conducted on the GPF platform under the Equities Agreement, without any demur on Mr Vik's part. Given all the projected arrangements for movement of his FX trading from that account to a new account, ultimately that of Beatrice, it is clear that he shared Mr Brügelmann's understanding that his FX trading was being margined under the 2008 Agreements and not under the FXPBA devoted to Mr Said's trading and the FX ISDA to which it referred.

19(b) The pattern of Mr Vik's FX trading

966. During 2008, Mr Vik increasingly focused on FX transactions, in particular building up short positions of US$100 million against the Canadian dollar and the Swiss franc and US$2.9 billion against the NOK as at 23rd July 2008. In August 2008, the MTM on his short USD/NOK position deteriorated significantly so that by mid-August the MTM of his FX transactions gave rise to a negative figure of about US$120 million and by 10th September about US$250 million. It is inconceivable that Mr Vik could have considered at this stage that his FX transactions were supported by collateral in the Pledged Account, even allowing for the profits that Mr Said had made by August 2008, on top of the US$35 million originally allocated. In cross-examination he accepted that the surplus over the US$35 million in the Pledged Account which related to Mr Said's trading could at most have been US$35-40 million in September. By 7th October, in a document handed to Mr Vik by Mr Brügelmann, the MTM of his FX trading gave rise to a negative figure of some US$290 million whilst the total balance on the Pledged Account was only US$67 million.

967. Furthermore, if Mr Vik had considered that his FX trading was being margined in the FXPB account by reference to the Pledged Account, he would not have told Mr Brügelmann at their meeting in May 2008 to resolve margining issues for the FXPBA with Mr Said and without reference to his own transactions. Even Mr Vik agreed in cross-examination that this could be seen as inconsistent with his evidence that he thought that he and Mr Said were both being VaR margined from the same pool of collateral.

968. There was discussion in June and July 2008 at DBAG about increasing the margin rates on Mr Vik's FX transactions because of the concentration of his large FX positions on the NOK. By 24th July a decision had been taken to raise the margin rate from 5% to 10% on the large USD/NOK transactions. The effect of implementing the increase was the application, in accordance with ROR, of a rate of 8.7% on all USD exposure. Mr Brügelmann was tasked to inform Mr Vik, but he never did so, hoping that the new FXPB account for Mr Vik would shortly be in operation and knowing that no margin call was imminent on the new basis. This is an example of Mr Brügelmann not wanting to create issues with Mr Vik and being unwilling as

Relationship Manager to be the bearer of bad news. The situation on Mr Vik's FX trading with the NOK was however rapidly to deteriorate in August/September.

19(c) The 3rd September email

969. On 3rd September, Mr Brügelmann sent an email to Mr Vik in the following words:

> "I'm writing to you with an update on your margin situation in the London PB account.
>
> In summary, following the recent rise in the USD, your available margin is being eroded quickly. Today's continued decline in the NOK could prompt a margin call soon.
>
> Please consult the table below with a summary of your margin situation as per cob yesterday:
>
> Net Cash: NOK 1.607 bln
>
> Securities: NOK 3.851 bln (incl. NOK 1 bln DnB CD and NOK 2.05 bln T-Bill)
>
> Margin Equity: NOK 5.458 bln
>
> minus FX losses: (NOK 0.877 bln)
>
> plus futures liquidation: NOK 0.100 bln
>
> adj. Margin Equity: NOK 4.681 bln
>
> Margin Requirement
>
> L/S equities: (NOK 0.739 bln)
>
> Bonds: (NOK 0.102 bln)
>
> FX: (NOK 2.686 bln)
>
> Special: (NOK 1.268 bln)
>
> Margin Requirement (NOK 4.795 bln)
>
> An inflow of an additional NOK 115 mio is pending from the sale of equities instructed by Harald
>
> "Special" refers to the positions in Thule and Confirmit, as well as the DnB CD which is considered a private placement and, thus, ineligible for collateral purposes
>
> In Geneva you hold an additional NOK 150 mio in available cash in the account managed by Klaus as well as NOK 100 mio in your account used to make payments on your behalf

> Please advise whether you would prefer to wire in additional collateral or whether you would like us to transfer internally, if needed."

970. The terms of this email clearly set out the margin situation in the GPF account, referred to as "the London PB account". It was the rise in the dollar and the decline in the NOK which had the effect of eroding the margin equity. As Mr Vik well knew, he had at this stage a very large short USD/long NOK position in his FX trading. The table to which the first few lines of the email referred set out his margin equity in cash and securities before deducting from it his current FX losses of NOK 0.877 billion (equivalent to approximately US$125 million) and then adding in the realised sums from closure of some of Mr Vik's futures positions. The adjusted margin equity was NOK 4.681 billion whilst the margin requirement was set out by reference to long and short equities, (including equities futures) bonds, FX and "special" items as described in the email. The margin deficit on this basis was NOK 114 million (NOK 4.795m – NOK 4.681m) but an inflow of NOK 115 million was due from the sale of equities by Harald Hanssen.

971. There is no doubt that Mr Vik read this email with a measure of care as can be seen from his response to it. Notwithstanding his protestations that he read this and earlier emails on his Blackberry and on this occasion he was climbing mountains in South America, the importance of this email was plain, particularly bearing in mind his desire not to get close to a margin call. He must have appreciated, on reading the email, that his FX transactions, his equity transactions, his bond transactions and his futures transactions were being aggregated for margin purposes in the GPF account and that the reason for the deterioration in his margin situation on that account was his FX position (negative MTM of NOK 2.686 bn) and in particular his USD/NOK trades. Had Mr Vik not shared the mutual understanding that his FX trading was being conducted on the GPF platform in the Equities PB account, there can be no doubt that he would have raised the point in response to this email. He did not.

972. Mr Vik's evidence was that, as a consequence of this email, he took action from this point on until 19th September. He closed various short positions with resultant loss of profit since he would otherwise have held them until much later. For Mr Vik to have taken such action, on his own evidence, requires him to have read the email with some care. Despite his attempts in his first witness statement to advance an alternative interpretation, it is plain what this email meant. As Mr Vik himself recognised in cross-examination, his big assets were expressed in Euros and US Dollars, meaning the F&O positions, and the problem was self-evidently with his FX trading with long positions in NOK and other currencies against the rising US Dollar. The margin calculation took account of both F&O and FX alongside the other types of trading conducted on the GPF platform.

973. According to SHI's closing submissions its expert accountant Mr Davies has concluded that the FX margin requirement represents a composite of all currency exposure arising from all asset positions on the GPF account and not just Mr Vik's FX trading. That shows the cross-margining that DBAG was applying but regardless of that, the size of the figure made it clear that the essential margin problem related to Mr Vik's FX trading.

974. Mr Vik's response to this email was immediately to suggest that DBAG should accept the DNB Certificate of Deposit, referred to in the email as a "special" item which was ineligible for collateral purposes, as collateral, and to email DNB to ask about liquidating that NOK 1 billion Certificate of Deposit some two weeks before maturity. His exchanges with DNB reveal that there was a further NOK 853 million held on account there and that realising the CD would produce 99.907% of the total figure. Mr Vik forwarded the exchanges to Mr Brügelmann on 4th September, pointing out the liquidity value of the Certificate of Deposit, saying that he hoped that this would change DBAG's view about treating it as collateral, which it did not.

975. Also on 3rd September Mr Vik and Mr Brügelmann exchanged emails in respect of the close out of a substantial interest rate swap transaction. Mr Vik checked with DNB about the pricing of that close out and complained to Mr Brügelmann that the execution price was insufficiently competitive and that he did not want to get ripped off.

976. There can be no substance to any suggestion that Mr Vik did not fully appreciate the contents of Mr Brügelmann's 3rd September email about the potential margin deficiency and his actions thereafter are consistent only with that understanding. Furthermore, on his own case, he closed out F&O positions in order to help with what he claimed he understood to be a margin deficit on equities positions.

977. SHI submitted that there was a lack of clarity about the alleged agreement or common understanding or convention because of the existence of three different agreements with separate margin regimes, namely the Equities PBA, the Equities ISDA and the Listed F&O Agreement. It is true to say that each contains its own margining provisions as set out in section 17 of this judgment. SHI draws attention to the different provisions as to what constitutes eligible margin under each of the agreements and the different title regimes which operate in relation to margin supplied.

978. Clause 4.7 of the Equities PBA however specifically provides that the provision of margin under its terms constitutes good discharge of the margin obligations under the other Underlying Agreements, whilst the Master Netting Agreement, in Recital (B), referred to the parties' wish to provide for netting obligations to provide margin pursuant to the terms of the those Underlying Agreements. What was envisaged was a global margin figure in respect of the Underlying Agreements where margin provided pursuant to the Equities PBA would suffice.

979. Moreover, although the Equities ISDA provided for margin to be in cash or Eligible Assets (as defined), it also allowed for "the possibility of anything else "agree[d] in writing"." Similarly, the Listed F&O Agreement provided for margin to be by way of cash or Securities that constituted acceptable margin to DBAG and the Equities PBA provided for cash or Securities (as defined which included "any other … instruments agreed between the parties". Since the margin provisions were for DBAG's benefit, it was always open to it to accept as security assets which fell outside the terms of any of the agreements.

980. Under the Equities PBA SHI retained a beneficial interest in the margin with a security interest granted to DBAG whilst the Equities ISDA and the Listed F&O Agreement provided that title in margin would pass to DBAG. If collateral was

always produced pursuant to the Equities PBA, sufficing for the purposes of the other Underlying Agreements, no issue could arise in this respect. Where however it was necessary for margin to be supplied under the Rules of an Exchange, DBAG had of necessity to earmark a segregated fund for that purpose but that did not affect the margin provisions between it and SHI. This is not inconsistent with cross margining nor gives rise to any lack of clarity in relation to Mr Vik's FX transactions. Even if there was inconsistency this could not affect the mutual understanding and agreement that they would be governed by the Equities PBA, with its provisions for margining and netting of obligations with the other Underlying Agreements.

981. As already stated, Mr Vik could not have considered that his FX transactions were governed by the FXPBA and the margin terms of the FX ISDA which applied to Mr Said's FX trading. He might well not have understood the intricacies of the cross margining provisions but, as with his trading at DBS, he knew and accepted that there was a single pool of collateral which was available for his trading on the GPF platform, whether it be in FX, Equities or Futures. He was untroubled by the details of margining as long as he was no worse off after transfer of his trading from DBS to DBAG. In the end, whether or not there was express agreement to cross margining is not of importance. Whether it was cross margining or netting of aggregate obligations is neither here nor there in the overall context of this dispute because what matters is whether or not the parties agreed that Mr Vik's FX trading should be conducted under the Equities PBA or whether it was governed by the FXPBA.

19(d) Agreement, estoppel by convention, acquiescence and waiver

982. As is plain from the above rehearsal of the facts, at all material times Mr Vik and Mr Said both knew that Mr Vik's FX and F&O transactions were being margined on the GPF account under the 2008 Agreements. The exact mechanism of cross-margining or aggregation of margining is neither here nor there for this purpose although SHI sought to dwell upon the complexities in the application of cross-margining rules in the ROR and the manner in which the DBX system operated to put these into effect. Whether or not there was full or partial cross-margining in the sense of transactions in one asset class being treated as a hedge for trading of assets in another class or whether there was merely an aggregation of the margin requirements of each class to produce a composite figure is ultimately irrelevant for current purposes. What matters, in the light of SHI's case on this point, is whether or not Mr Vik's FX transactions fell to be margined under the FXPBA, the FX ISDA and its annexes by reference to the Pledged Account. In such circumstances margin calls would have been made in respect of Mr Vik's FX trading under those agreements, regardless of the margin calls which were made in October in respect of Mr Said's FX trading.

983. As I have mentioned before, the case put forward by SHI on this point is a lawyer's contrivance supported by fabricated evidence by Mr Vik from which he resiled for the most part in cross-examination. It was, he said, a question for the lawyers. SHI's argument therefore depends entirely upon the terms of the first Amendment Agreement dated as of 22nd November 2006 to the Equities ISDA and the terms of the Schedule to the FX ISDA of the same date, which provide for FX Transactions and Currency Options to be governed by the FX ISDA and for other transactions to be governed by the Equities ISDA of May 8th 2006, "unless otherwise agreed".

984. As at 30th January 2008, when the suite of 2008 Agreements became effective, no amendment was made to the earlier contracts to provide for Mr Vik's FX trading to be conducted under the Equities PBA. At the time, there were discussions about a separate FXPB account or sub-account for Mr Vik as well as an FIPB account or a combination of the two and it was hoped that one of these proposals could be put into effect for Mr Vik's FX trading, which had previously taken place through DBS with DBAG alone. He had no give-up facility for his FX trading at DBS and none at DBAG, as he well knew. The purpose of the different proposals and the ultimate Beatrice solution, which was never put into effect, was to give him this facility, as he well knew.

985. In the meantime, the vast majority of his assets were moved from DBS to the GPF platform and constituted collateral for the equities trading managed by Mr Hanssen and Mr Vik's trading in equities, futures and options and swaps. Self-evidently, if Mr Vik was to conduct FX trading, that had to be collateralised also and Mr Vik was always insistent, on his own case, that Mr Said's trading and allocated capital should remain separate from his own trading. There was, therefore, only one way in which Mr Vik could carry out separately collateralised FX trading with DBAG, absent any fresh contract, and that was through the Equities PBA. The emails from Mr Brügelmann to Mr Vik in February 2008 relating to the transfer of assets from DBS to DBAG and in relation to margining of equities, FX and F&O made the position abundantly clear.

986. I have no hesitation in finding that DBAG and SHI did agree by words and conduct to Mr Vik's FX trading being conducted under the Equities PBA. The exchanges of emails and the whole course of conduct between the parties from February through to October 2008 is only consistent with such an agreement having been made. As all the evidence shows, at no time could Mr Vik have considered that his FX trading was being conducted under any other agreement and specifically not under the FXPBA, the FX ISDA and CSA by reference to the Pledged Account.

987. Mr Vik expressly agreed to the transfer of his assets from DBS to DBAG to cover his FX and futures trading, was told that they were being margined in his PB account in London and regularly gave instructions to Mr Brügelmann to execute FX and futures trades which were then booked to that account and margined accordingly.

988. Mr Vik accepted that limited FX transactions could take place in the equities account for the purpose of purchasing foreign currencies to purchase foreign shares, or for hedging exposure to foreign currencies in relation to shares held in foreign companies and gave the example in his witness statement of purchasing shares in a Korean ship building company which would require the purchase of Korean Won and a possible desire to hedge the exposure to the Won by entering into an equal and off-setting FX forward transaction. He said in cross-examination that he drew a distinction between FX transactions for the purposes of purchasing or hedging foreign currency shares on the one hand and "speculative FX transactions" on the other. In his witness statement he distinguished between the former and the "large directional FX positions such as those that I was taking for SHI (which had nothing to do with its equities positions)". There is no doubt that the former type of FX transaction was the type of transaction that was ordinarily transacted on the GPF platform which was essentially equities-based. The GPF platform could accommodate large directional trades but was not designed with that in mind. The former type of transaction would attract cross-

margining benefits if there was any hedging effect, whilst the latter would be much less likely to do so unless specifically concluded with a hedging object in mind. Yet the effect of SHI's case is that all FX transactions conducted by Mr Vik would fall under the aegis of the FXPBA, a conclusion that runs directly counter to Mr Vik's evidence and would have created enormous problems in the context of a purchase of foreign shares of the kind to which Mr Vik referred and in the context of his standing instructions to Mr Brügelmann to convert surplus in the GPF account into NOK. Since Mr Vik wished his available cash to be held in NOK, there was a need for spot trades to be conducted in order to make a payment required in a different currency such as US Dollars or Euros in order to post margin in accordance with ROE requirements for the F&O trades. Equally, sums held in other currencies could not be converted into NOK as Mr Vik desired.

989. There is therefore an internal inconsistency in SHI's case. Mr Vik appreciated, on his evidence, that some FX trading was essential to the running of the GPF account, for the reasons just given and, despite SHI's case that FX trading would remain segregated and separately collateralised under the existing FXPBA, acknowledged that, although he could not remember a specific conversation in which there was discussion of such ancillary FX transactions being booked in the GPF account, he claimed to understand that this was the case. As he said the only person he really had contact with was Mr Brügelmann and there can be no doubt that, by reason of the course of conduct of the account by Mr Brügelmann on Mr Vik's instructions, it was agreed between them that these types of trades could be effected on the Equities PB account.

990. The reality is that the agreement went much wider than that, as the whole course of events shows. At the meeting of 14th November 2007 the basis of the GPF account with trading in different asset classes was explained, by reference to ROR and cross-margining, whatever lack of interest Mr Vik had in that at the time. The 2008 Agreements were executed and the GPF account opened on that basis with a letter of authority given to Mr Brügelmann to give instructions for SHI in relation to trades under those agreements. Mr Vik approved the transfer of assets from DBS to DBAG on the terms of the emails to which I have earlier referred and Mr Vik thereafter gave frequent instructions to Mr Brügelmann for him to execute trades in relation to those agreements which Mr Brügelmann did and which resulted in bookings by DBAG and margining on that basis. This continued with Mr Cummunale. All Mr Vik's transactions were dealt with in this way as he well knew and accepted.

991. There is no difficulty about the enforceability of this agreement in the light of the terms of any of the written contracts. Both the Amendment Agreement and the Schedule to the FX ISDA simply provided for the allocation of transactions to the Equities ISDA or the FX ISDA "unless otherwise agreed", without specifying the form which that "other agreement" might take. Any agreement to that effect which the parties intended to be binding (which they clearly did here since they acted on the basis of it) did not have the effect of modifying or varying the actual terms of the agreements since there was express provision for this alternative agreement for the allocation of transactions.

992. The Equities PBA contained an "entire agreement" provision at Clause 29.1 which superseded all other communications and prior writings with respect to its subject matter. That did not prevent the parties from agreeing to allocate business to the

Equities PBA in accordance with the alternative provisions in the Amendment Agreement and the FX ISDA Schedule. Moreover, in so far as the agreement was constituted by words or conduct which post-dated the conclusion of the Equities PBA, the Clause would not bite in any event.

993. Equally, if regard is had to the FX ISDA, the entire agreement provision in section 9(a) and the no oral modification provision in section 9(b) are ineffective for much the same reasons. So far as the latter is concerned, which is governed by English law, it presents an evidential burden alone which DBAG surmounts for the reasons already given. The same position obtains in relation to section 9(a) and (b) of the Equities ISDA.

994. Although SHI made much of the inconsistency alleged in DBAG's position in on the one hand rejecting the very possibility of any oral agreements which had the effect of varying the FXPBA, the FX ISDA and the CSA (the CLA, the CWA, the PAL and the vanilla trades agreements) and on the other hand putting forward an alternative agreement about the allocation of FX business to the Equities PBA, the positions are not comparable. SHI's allegations were based entirely upon Mr Vik's evidence of oral agreements which I have rejected. DBAG's submission is based upon the exchanges between the parties as evidenced in the documents and the course of conduct of the parties which is beyond argument as well as the evidence of DBAG witnesses. Moreover, SHI's allegations run directly counter to the express terms of the written contracts whereas DBAG's case here relies on the form of words found in the written contracts which allow for an allocation of business as "otherwise agreed".

995. In these circumstances I do not need to go on to consider the estoppel by convention case, but, had I been required to do so, I would have found that there was a common assumption that the Vik FX transactions were to be booked and margined on the GPF account and governed by the Equities PBA and that the requirements of estoppel by convention as set out in *ING Bank NV v Ros Roca SA* [2012] 1 WLR 472 at [55]-[65] were met. The parties acted on the assumption to which I have referred which was shared between them. It would be unconscionable to allow SHI to resile from that assumption which was shared by Mr Brügelmann, all those operating the DBAG GPF facilities and margining the GPF account (including Mr Lay, Mr Orme-Smith, Ms Borque, Mr Cummunale, Ms Hart, Ms Carroll and Mr Singh), and Mr Vik and Mr Said. Both parties worked upon the basis of this assumption over a period of nine months or so, conducting the business of the Equities Prime Brokerage account in accordance with it. Each party conveyed to the other that common assumption in such a way that each was entitled to rely upon it and did rely on it in the conduct of their business affairs.

996. Furthermore, if estoppel by acquiescence was required, there is more than sufficient evidence of acquiescence on the part of SHI in accordance with the test set out in the *Indian Endurance* [1998] AC 878 at [913H]-[914C]. In circumstances where SHI knew that DBAG was booking and margining the Vik FX transactions on the GPF account, a reasonable man would expect that SHI, acting honestly and responsibly, would have informed DBAG if it considered this to be contrary to what had been agreed between them, a breach of contract, an improper allocation of business and/or a mistake on the part of DBAG. The conduct of Mr Vik and Mr Said confirmed all that DBAG did in this respect.

20. Mr Vik's F&O transactions and their collateralisation

997. SHI's contention is that the 2008 Agreements did not permit DBAG to cross margin F&O transactions at all and only to apply ROE margin requirements to its trading with DBAG. SHI submits that DBAG could not demand by way of margin anything more than the official exchange requirement in respect of its F&O positions and relies upon evidence from Mr Vik that he agreed with DBAG on separate collateralisation for his F&O transactions and on margining by reference to the ROE.

998. It is also said that Mr Brügelmann's email of 3rd September 2008 wrongly included F&O positions in the overall calculation which caused SHI to close profitable F&O positions that it would otherwise have kept open.

999. I have set out the relevant terms of the 2008 Agreements in section 17 of this judgment and my conclusions as to their proper construction. The Listed F&O Agreement made express reference to the Master Netting Agreement, the intention of which is plain from the second recital, even without an express Clause putting that recital into effect. The parties expressed their desire to provide for the netting of obligations to provide margin pursuant to the terms of the Underlying Agreements which expressly included the Equities PBA and the Listed F&O Agreements. Whatever else "netting" may mean in this context, it has to mean aggregation and set off of positive and negative figures for the different asset classes traded under the 2008 Agreements (including, as I have found, Mr Vik's FX transactions) with a composite demand.

1000. The reference in the definition of Margin Requirement in the Listed F&O Agreement to DBAG's standard practice and the width of the discretion given to DBAG under Clause 12.1 of that Agreement provide for the operation of the ROR.

1001. So far as the definition of "Securities" is concerned in the Equities PBA, it is apt to include Equity linked futures and options by reason of sub-paragraph (iii) in the definition and, for reasons that I have already given, Forward FX transactions of the kind concluded by Mr Vik constitute "other instrument[s] as agreed between the parties".

1002. There is therefore no difficulty in applying the margin provisions of the Equities PBA with the ROR to the Listed F&O Agreement, and the Master Netting Agreement. The figures for the FX transactions and the F&O transactions fell to be included in the margin calculations under the respective agreements, whether positive or negative in value. The ROR provides for netting as between certain classes of assets and not between others. CalcType 81 and Tier 3 were applied to the GPF account which under the ROR provided for cross margining of listed futures, equity options, bonds and FX positions. There would be little or no point in SHI's argument without it being said that there was a trading limit or limited pool of collateral available for any particular class of trading which is of course what is alleged in relation to Mr Vik's FX transactions but not in respect of his/SHI's Equities or F&O transactions. As I have rejected SHI's allegations in relation to the PAL or any other limit operating in respect of Mr Vik's FX transactions and the allegation that they fell to be margined under the FXPBA and the FX ISDA to which it referred, it appears to me to be of no consequence whether there is truly cross-margining of different asset classes or aggregation of separate margin calculations, unless it is being said that there is a

breach of the Agreements which give rise to loss to SHI. The only such loss alleged relates to the allegation that DBAG should not have charged anything other than the ROE margin rate in respect of SHI's F&O transactions.

1003. Moreover, under Clause 5.3 of the Equities PBA, DBAG held a floating charge over any and all assets of SHI which were held by it, including any amounts payable by DBAG to SHI and any obligations owed to it under the Equities PBA or elsewhere. Such obligations included obligations under the Master Netting Agreement. DBAG was thus entitled to look to collateral held under any one of the Agreements as security in respect of exposure under the Equities PBA.

1004. As provided for by the Listed F&O Agreement, when SHI traded in a future or option listed on an exchange through DBAG, DBAG entered into a trade with the Exchange with a back-to-back transaction with SHI. Whilst DBAG was bound to provide margin to the Exchange, SHI was bound to provide margin to DBAG. The Exchange Requirement reflected the creditworthiness of DBAG whereas DBAG's Margin Requirement reflected the creditworthiness of SHI.

1005. In practice, because of the Rules of Exchange, DBAG was required to maintain cash within separate F&O accounts to cover the ROE margin requirement for which it was itself liable to the Exchange. It was therefore necessary for cash to be moved backwards and forwards between the F&O account and the Equities PBA cash account and an auto sweep mechanism was put in place to provide for this. The auto sweep operated to ensure that sufficient cash was held within the F&O accounts to cover ROE margin requirements, not DBAG's margin requirements, and the cash held for this purpose in the separate accounts was treated as part of the margin equity by DBX so there was no question of any duplication in DBAG's margin requirements. The way in which this worked is established by the evidence of Mr Laws and the contemporary documents.

1006. The evidence establishes that equity linked futures were the subject of cross-margining under ROR on DBX, in circumstances where they had a hedging effect. In such cases, DBAG charged SHI the ROE and nothing more. Where, however, non-equity linked exchange traded futures were held, such as those relating to commodities, bonds or interest rates, they could not be cross-margined and DBAG applied a multiplier of 2 to the Exchange Requirement. In consequence of this there were two F&O accounts, an F&O Equities Account and an F&O Non-Equities Account on GPF, with a third account, the F&O Family Account, which was a parent account showing the aggregate of the cash balances and positions in the two child accounts. The parent F&O Family account was not intended to be used for margining nor for cash movements which should have been booked in the child accounts. DBX did not receive an information feed from the F&O Family Account.

1007. It was this arrangement which gave rise to the Ignored Payments Error inasmuch as, when payments were made out of the F&O Equities Account, the debt was booked to the F&O Family Account (of which DBX took no cognisance) instead of the F&O Equities Account itself (of which DBX did take account). The true cash balance in the F&O Equities Account was therefore overstated. Debits corresponding to the excess cash swept out of the F&O Equities Account by the auto sweep arrangement were booked in the F&O Family Account. These payments were ignored by DBX

because DBX did not receive a feed from the Family Account – hence the description of the mistake as the "Ignored Payments Error".

1008. The existence of these separate F&O accounts and the auto sweep arrangements did not negate the cross-margining for which ROR provided, namely between equities and equities-linked futures (and FX). SHI had been set up on DBX to achieve this cross-margining result. On his own evidence, Mr Vik was not much interested in this level of detail and never looked at the Global Prime Website.

1009. SHI seeks to muddy the waters by reference to an apparent degree of confusion on the part of some DBAG personnel about the identity of the accounts setting out margin requirements and the "calc Types" utilised for them. The key accounts were in fact the Financed Account, the Non-Financed Account (where assets did not qualify for financing) and the Roll-Up Account. Both the Financed and Roll-Up Accounts were set for cross-margining of FX and F&O positions whereas the Legal Entity Account, to which, on Mr Patel's evidence, no reference should have been made for margining purposes, did not. Mr Patel's evidence was clear. Ms Borque's evidence was that she referred to the Roll-Up, Financed and Non-Financed Accounts for margin purposes and Ms Carroll said that she would use the Financed and Non-Financed Accounts, although there is evidence of her and others wrongly referring to the Legal Entity Account in October 2008. None of this however affects the essential questions which fall for determination by me since none of these persons had any dealings with Mr Vik, made any agreement with him or shared any understanding with him and DBAG's set up was designed to provide for full cross margining.

1010. I have no difficulty in accepting the evidence of DBAG's witnesses and the email exchanges which show that the Legal Entity Account had to be visible on DBX but was never intended to be used for margining at all and was so marked in the isGPS settings. It could not be used to aggregate the margin requirements from the Financed and Non-Financed Accounts and its function was to provide a record of assets recorded in CPORT DW. It was originally set to show zero margin so that it would be obvious that it was not to be referred to for margin purposes and many emails made that point. As a result of experimentation with CalcTypes, Mr Patel found that the best way of achieving the zero figure was to use CalcType 73 which coincidentally was the CalcType which excluded F&O and FX positions from cross margining. Although SHI considered this significant, it also excluded equity specials, bonds and currency exposures which SHI accept should be cross margined so the point does not support SHI's argument.

1011. SHI takes numerous other points intended to cast doubt on the DBX system and what was and was not visible in 2008 and 2012. In November 2008 Mr Johansson downloaded figures from the Legal Entity Account which showed a margin figure which was not zero. This was probably due to a system-wide override such as might occur if DBAG had decided that a 100% margin rate should apply to particular assets in a given jurisdiction. In Mr Johansson's witness statement, he said that his recollection was that he downloaded all available DBX margin reports but that cannot have been the case as the Structured Data demonstrates that the Financed, Non-Financed and Roll-Up Accounts were accessible throughout 2008. The Legal Entity Account was not available to SHI on Global Prime more recently since, in June 2012, prior to giving SHI access to it again, DBAG set the "client access" settings in DBX to "admin only" for the Legal Entity Account because it was considered irrelevant to

any issues in the action. Because SHI seized upon various references to the figures in this account, and because Mr Johansson had gained access to it in 2008, that "client access" setting was changed so that the experts could then view the Legal Entity Account. Unlike the position in 2008, because of a development request in August 2009 the system had been altered so that the Roll-Up Account and the Non-Financed Account became accessible independently of the visibility of the Legal Entity Account.

1012. Moreover, notwithstanding SHI's submission, the Roll-Up, Financed and Non-Financed Accounts were all subject to the Russell Multiplier Error and the Ignored Payments Error which illustrates that these were the accounts which were visible and used in Ms Borque's calculations.

1013. Those errors on the GPF/DBX system were as follows:

i) First the F&O Multiplier error: on 16th October, it was discovered that there had been an error in the calculation of exposure on the Russell Futures Position on 15th October where a multiplier of 1 was applied instead of 100 for each point in the Russell Index. The wrong multiplier was applied because DBX did not correctly load the appropriate multiplier of 100 from another system and because that had not been manually corrected as usually was done within a short period of time from the trade being entered. Here it had not been done with the result that exposure was understated by US$115 million and the margin requirement was therefore understated. This error was corrected and the Margin Excess figure of US$75 million shown on DBX was thus turned into a deficit.

ii) Secondly, the F&O DBX Ignored Payments Error: owing to the way in which the GPF platform and the DBX system were set up, accounting debit entries in respect of transfers from the F&O Equities Account to GPF were recorded, not in the F&O Equities Account itself, but in the F&O Family Account which did not feed into DBX. In consequence, until 22nd October 2008, no-one at DBAG appreciated that the DBX system overstated SHI's assets by US$315 million. At earlier stages from March 2008 onwards the error would have given rise to different figures including a discrepancy of around US$250 million at 3rd September 2008.

1014. There is no doubt that the Global Prime DBX system was complex and that there was room for confusion but the very existence of these two F&O errors, as they ultimately affected the funds available on GPF for the margin calls, demonstrates the unified nature of the margin applied on the GPF platform to FX, F&O and Equities, in calculating the funds available to pay the margin calls on Mr Said's FX transactions in October.

1015. The point taken about Mr Vik's F&O trading margin levels was a very late entrant onto the scene in the run of arguments put forward by SHI. Mr Vik's first four witness statements in this action (the fourth being dated 15th February 2013) made no mention of any specific agreement with DBAG with regard to the margining of his F&O transactions beyond the assertion in the first witness statement that one of the components of the new arrangements agreed on 14th November was that each of the equities account, F&O accounts and FX accounts would be segregated and separately

collateralised, the latter under the existing FXPBA (as amended by his second statement). As referred to above, he resiled from this evidence in cross-examination.

1016. Following the service of SHI's forensic accountant's expert report in December 2012 in which Mr Davies expressed the view that the GPF account would not have been in margin call on 3rd September 2008 if all Mr Vik's F&O transactions had been margined according to the ROE margin, without a multiplier, SHI served a draft amended Defence on 1st March 2013 in which it alleged that the margin position for the GPF account shown in the 3rd September email had wrongly included a margin figure for F&O positions. DBAG's forensic loss accountant's report on loss of 20th March 2013 then opined that, if DBAG had margined all of SHI's F&O positions by applying the ROE requirement and applying a multiplier of two (as DBAG did for the commodities F&O positions that were not cross-margined), the GPF account would have been close to a margin call on 3rd September (if Mr Vik's FX transactions were also included).

1017. Mr Vik produced a fifth witness statement on 25th April 2013, served after Mr Brügelmann had begun to give evidence, in which he explained for the first time that his understanding was that SHI's Listed F&O Transactions were to be margined according to the rules of the relevant exchange because he recalled Mr Brügelmann telling him that either over the phone or at one of their meetings. In cross-examination he said that Mr Brügelmann definitely told him that DBAG would margin on the Rules of the Exchange. When asked about his statement, he agreed that it was vague about such a conversation but he remembered that in some form or fashion Mr Brügelmann had communicated to him that margining would be by reference to the Rules of an Exchange but said he had no idea how the ROR worked when asked whether reference had been made to a multiplier of two. In fact, it was Mr Brügelmann who had questioned the position earlier and had enquired with GPF and GES personnel as to how the ROE operated and was told how and where the multiplier arose. The arrangement was logical and that is the only information he could have given to Mr Vik, namely that on equities linked Futures, ROE applied but for non equity linked Futures a multiplier of two operated in respect of ROE. Mr Vik's evidence cannot be right.

1018. As set out above, SHI's case as to an agreement to separate collateralisation founders, not only on Mr Vik's evidence, but on the exchanges between the parties to which I have referred in relation to Mr Vik's FX transactions. Mr Vik could never have understood that his F&O transactions were being margined entirely separately from either his or Mr Hanssen's equities trades or his own FX trading with completely separate pools of collateral. He, to the contrary, accepted by words and conduct that they were all margined under the 2008 Agreements on the GPF platform with the provision by DBAG of a total margin figure which encompassed all the asset classes in which he traded on that platform.

1019. Whatever the purpose that underlay the allegations relating to F&O margining, they go nowhere. The F&O transactions plainly fell to be margined in one way or another. If they were margined under the Listed F&O Agreement alone, there would be no benefit of cross-margining at all under the ROR. The exact operation of the cross margining regime is immaterial to the question of the parties' agreement or common assumption that FX, F&O and Equities would be subject to margining in accordance with the 2008 Agreements and the ROR. It is clear that the 2008 Agreements and the

conduct of the parties tallied in treating the F&O, FX and Equities as subject to an overall margin calculation measured against a common pool of collateral. Anything beyond that is a matter of detail which is not the subject of complaint, save for the ROE issue, where I have rejected Mr Vik's evidence and where DBAG's evidence shows the correctness of the application of a multiplier of 2 to the non-equity-linked F&O transactions.

1020. In consequence, the 3rd September email exhibited the correct approach to the margin required on SHI's GPF account, combining, as it did, the margin requirements for Mr Vik and Mr Hanssen's equities transactions and Mr Vik's FX and F&O transactions (with the necessary cross-margining already taken into account on DBX, from which the figures were drawn.) No complaint is made as to the substantial accuracy of the figures as they appear in that email and the fact that Mr Vik, following receipt of this email, acted on it to close out some of his futures positions in order to cover margin resulting from his FX transactions, shows his acceptance and agreement to the basis upon which margin was being calculated. It was also clear that he reduced his FX positions following this email, although that was a process which he had already commenced because of the large negative MTM. In short, Mr Vik, from the outset of the Equities PBA and throughout its operation, always knew and expected his own trading and that of Mr Hanssen to be subject to combined margin calculations set against the common pool of the collateral constituted by his assets in the GPF account. His actions are wholly inconsistent with any notion that his FX trading was governed by the FXPBA or any PAL or that his FX, his F&O and his Equities trading fell to be collateralised on an entirely differentiated basis.

<u>21. The DBS Counterparty Issue</u>

1021. One of the more extraordinary arguments put forward by SHI was that it was not a party to any Agent Transaction with DBAG within the meaning of Clause 4 of the FXPBA. SHI contended that, despite the terms of the contracts concluded between DBAG and SHI, when Mr Said committed DBAG to Counterparty Transactions with other banks, DBAG concluded an equal and offsetting transaction with DBS rather than with SHI. Whilst not spelt out in any detail, it was SHI's case that there was a further "informal prime brokerage relationship" between SHI and DBS so that there was a further back-to-back transaction between DBS and SHI, corresponding to the Counterparty Transaction and the offsetting transaction between DBAG and DBS. In consequence SHI contended that it had no liability to DBAG for any losses incurred on Mr Said's transactions and DBAG had no entitlement to claim collateral from SHI in respect of any of them. In these circumstances the margin calls of October 2008 were calculated on an entirely incorrect basis and were made in breach of contract.

1022. This submission runs counter to all the contractual documentation and the evidence of DBAG's witnesses. It is not supported by any evidence from Mr Said or Mr Vik, both of whom at all material times until the Defence was served, clearly considered that Counterparty Transactions were concluded by Mr Said as agent for DBAG and that equal and offsetting transactions were concluded between DBAG and SHI in accordance with the FXPBA. SHI's argument is based upon the names used by DBAG in its internal records and accounts, rather than any contractual documentation or exchanges between the parties. In addition, SHI draws attention to the particular form of words used in the Trade Confirmations of the transactions.

1023. I have already, earlier in this judgment, referred to the structure of the FXPBA and to the Said Letter of Authority. By the latter, Mr Said was authorised by SHI to conclude FX and Options Transactions with DBAG and to sign and deliver any documentation relating to the execution of such Transactions. That authority specifically related to the conclusion of transactions with DBAG, without any reference to DBS. The FXPBA authorised SHI to act as agent for DBAG in executing FX Transactions and currency options with Counterparties and provided by Clause 4 that "[i]n connection with entering into each Counterparty Transaction, DBAG shall contemporaneously therewith enter into an equal and offsetting transaction or transactions with … Agent" (defined as SHI). DBS makes no appearance in the FXPBA.

1024. Under the Pledge Agreement, SHI pledged to DBAG all of its assets held in the Pledged Account with DBS as collateral to DBAG for all claims that DBAG had against SHI. DBS was, specifically, the "Pledge Holder" and the assets referred to in Clause 1 of the Pledge Agreement were those deposited or relating to SHI's account 2011084 with DBS.

1025. Trade Confirmations were signed by Mr Said which bound SHI to DBAG on the equal and offsetting Agent Transactions. There is not the slightest suggestion anywhere in his deposition evidence that he considered he was doing anything different, such as binding SHI to DBS, which, under the terms of the Said Letter of Authority, he would not have been entitled to do. The Trade Confirmations referred to the party to the transaction with DBAG as "Deutsche Bank Suisse SA AC Sebastian Holdings Inc." for direct trades and as "Deutsche Bank Suisse SA AC Sebastian Holdings Inc. Indirect" for indirect trades. The name at the top of the confirmation to which the confirmation was addressed was "Deutsche Bank Suisse SA AC Sebastian Holdings Inc." with the postal address of DBS and on many if not all of the confirmations, Mr Said's name and fax number. The opening wording of the document stated that the purpose of it was to "confirm the terms and conditions of the transaction entered into" between DBAG and "Deutsche Bank Suisse SA AC Sebastian Holdings Inc.". Similarly, the space at the end of each confirmation for signature named the party signing as "Deutsche Bank Suisse SA AC Sebastian Holdings Inc." to which Mr Said appended his signature.

1026. Quite apart from the Said Letter of Authority, the FXPBA and the Pledge Agreement, there was, of course, also the FX ISDA with its Schedule and CSA which governed "Transactions" between DBAG and SHI and provided for confirmations "exchanged between the parties confirming those Transactions". The FXPBA itself provided that each Agent Transaction or Option was subject to and governed by the applicable ISDA Master Agreement between DBAG and SHI, including the CSA which was a part of it. It went on to provide in Clause 4 that SHI should be required to post collateral with respect to its obligations under the FX ISDA in accordance with the terms and conditions of the CSA and that any breach of the FXPBA by SHI (but not by DBAG) should constitute an Event of Default under the FX ISDA. There are no comparable documents setting out any contractual relationship of this type between SHI and DBS, nor between DBS and DBAG.

1027. In these circumstances, I regard SHI's submission as untenable. Whether or not Clause 4 of the FXPBA can be read as providing that, when Mr Said bound DBAG to a Counterparty Transaction with another bank, there automatically sprang into

existence an equal and offsetting transaction between DBAG and SHI, the effect of the Clause was that DBAG and SHI agreed that there should be such a transaction. The notion that, instead of this, a transaction came into existence between DBAG and DBS with a further transaction between DBS and SHI is fanciful. No-one at DBS was ever involved in the creation of such a transaction and Mr Said, self-evidently, had no authority to bind either DBS to DBAG or SHI to DBS. When Mr Said signed transactions in the name of Deutsche Bank Suisse SA AC Sebastian Holdings Inc., he was doing so as agent for SHI in its trading relationship with DBAG and not for any other entity.

1028. It is true that the words "Deutsche Bank Suisse SA AC Sebastian Holdings Inc." referred to DBS and that the Counterparty Transaction leg for indirect transactions entered into between DBAG and other banks set out DBAG's counterparty as e.g. "Credit Suisse London AC Sebastian Holdings Inc. PBR" or "Goldman Sachs International AC Sebastian Holdings Inc. PBR". None of these appellations are the most obvious form of words to use for the transactions in question but the initials "PBR" are a clear reference to the Prime Broker position of DBAG. SHI do not contend that Mr Said did not commit DBAG to concluded trades with the Counterparties such as CS or GS, in such a way as to bind DBAG; nor does SHI submit that the reference to "AC Sebastian Holdings Inc. PBR" alters the nature of that transaction. The manner in which the Counterparty Transaction leg and the Agent Transaction leg referred to the parties is clearly designed to show that the trades take place under the FXPBA and the FX ISDA between DBAG and SHI and the reference to DBS can only be explained on the basis that the collateral was being held by DBS in respect of the transactions.

1029. Whilst the form of words in the Agent Transaction Trade Confirmations could be read as suggesting that the transaction in question was between DBAG and DBS acting as agent for SHI, it is not suggested that there was any such agency and nowhere in the contractual documents is there anything which could suggest that DBS had any authority to act as agent for SHI or that DBS acted as principal with a further back-to-back transaction with SHI.

1030. SHI's case, as expressed in its defence, is that "it appears that the Bank [DBAG] decided that its counterparty in respect of Mr Said's transactions would be [DBS], and not SHI. It is to be inferred that it was because the FX Prime Brokerage Division of [DBAG] did not accept SHI as a direct customer for the trading of FX transactions through its Prime Brokerage Division. In any event, the relationship was set up so that [DBS], rather than SHI, would be the counterparty to Mr Said's transactions". It is thus contended that, without any agreement on the part of SHI or DBS, by some form of unilateral decision, DBAG decided to depart from the contractual structure and to conclude Agent Transactions with DBS with the inherent suggestion that DBS entered into a similar offsetting transaction with SHI.

1031. Had such a point been pleaded by DBAG or DBS, it is not hard to imagine what SHI's response would be. SHI would immediately seize upon the absence of any contractual documents which supported such a submission and say that it was not a possibility. SHI's case has no logic to it. It would be contrary to business common sense for DBAG to decide that it would not contract with SHI but with DBS instead without any contract with DBS or without any contract between DBS and SHI and without any agreed collateral in respect of such trading.

1032. The evidence of Mr Manrique, Mr Lay, Ms Greenberg (with a Civil Evidence Act statement) Mr Giery and Mr Brügelmann is all to the contrary effect. As I have already mentioned, Mr Said and Mr Vik (apart from a passing comment in cross-examination of the latter) provided no supporting evidence.

1033. The point appears to be based, as I have already mentioned, on various internal records and accounts in DBAG's systems which cannot change the contractual position between the parties or the structure of their inter-relationship. Whilst many of these entries and titles are neither logical nor fully explained (nor perhaps even fully explicable), SHI's formulation of its case on this point runs counter to the whole of the agreed structure and basis upon which Mr Said carried out his FX trading. Mr Manrique explained that the form used in the trade confirmations was one that was commonly used for DBS PWM clients, a point which is exemplified by the long form counterparty information recorded within RMS ("Deutsche Bank Suisse SA AC Sebastian Holdings Inc.") and the "short RMS Code for the FXPB Account" as "MTS Sebastian". The reference to "MTS" is a reference to Margin Trading Switzerland which illustrates the significance of the reference to DBS, as the place where margin was held. No such reference appears in relation to SHI's other trading with DBAG in 2008, where there was no margin held in Switzerland against the trading of Mr Hanssen or Mr Vik in equities, F&O or FX.

1034. SHI seizes upon a number of other internal documents of the bank in its attempt to show that the contractual structure was in some way subverted by a unilateral decision on the part of DBAG. Reference is made to exchanges in November 2006 prior to the execution of the Said Letter of Authority, the FXPBA, the FX ISDA and the Pledge Agreement and to exchanges between DBAG and DBS CRM both before and after. Despite reference to the "Account Holder Party Name" as DBS, the "Trading Relationship Name" was always SHI. Various documents appear to show that some individuals within DBAG thought that DBS might be acting as agent for SHI but this was not the basis upon which the Prime Brokerage relationship was put in place and structured. There can be no doubt that individuals within DBAG were muddled in their thinking and that the names given to various accounts or identity codes do not assist in clarifying this confusion. Some of this nomenclature may have reference to projected Service Level Agreements between DBAG and DBS as to which of them would be responsible for any counterparty risk in the event of default by SHI, but this again cannot affect the contractual interrelationship between DBAG and SHI. Revenue sharing agreements are likewise immaterial in this context. The applicability of any of the existing SLAs or draft SLAs to a Prime Brokerage relationship was not a model of clarity but this takes SHI nowhere. Whatever account names were used, with references to DBS and Switzerland, "NOTE TEXTS" referred to the client being owned by PWM, by whom "Know Your Client and credit checks" had been done. Nor could it make any difference to whom account statements for various sub-accounts were sent.

1035. SHI's position on this argument is without substance. Whilst internal documents within the bank can be read in a number of different ways, what remains clear beyond peradventure is the contractual structure and the conduct of the parties on the basis of it. The ingenuity of SHI in exploiting anomalous references in the nomenclature used by the bank is matched only by the lack of merit in the submission made which bears no relationship to the reality of the position between the parties.

1036. A final point taken by SHI in this respect is that the account in which the transaction settled and into which cash was paid was not an SHI account but a DBS account, with a consequent breach of Clause 2(a)(ii) of the FX ISDA which required payments under it to be made on the due date for value in "freely transferrable funds". It was maintained that the funds were not under SHI's control and were not freely transferrable by it because the accounts were those of DBS and not SHI. This is not sustainable. At all times SHI was able to give instructions in relation to the accounts in which funds from its transactions were held and there has never been any suggestion that its instructions would not have been implemented, when given. Account 406463 and account 2011084 were SHI accounts in respect of which SHI could give instructions, subject only to the terms of the Pledge Agreement and other contractual documents.

22. The Alleged Misrepresentations

1037. There are four alleged misrepresentations pleaded by SHI apart from the misrepresentation which is said to arise by reason of the terms of the FX ISDA about the absence of an Event of Default or Potential Event of Default which is dealt with elsewhere in this judgment. Because there were no relevant Events of Default or Potential Events of Default, no misrepresentation can arise.

1038. The other four misrepresentations are said to have been made in the following way:

i) At a meeting on 7th May 2008 in London, Mr Brügelmann is said to have represented impliedly that:

a) Mr Said's trading was within and had not exceeded the US$35 million limit.

b) The transactions entered into by Mr Said had been booked correctly and accurately by DBAG.

c) Each of the transactions entered into by Mr Said had been included in DBAG's calculations of collateral required to support his trading.

ii) Following an exchange of emails on 28th/29th June 2008, between Mr Vik and Mr Brügelmann, on 3rd July DBAG transferred the sum of approximately US$75 million (partly in USD and partly in Euros) from Mr Said's FX account to an account of SHI with DBS. By permitting such transfers pursuant to Mr Vik's instructions, it is said that DBAG impliedly represented that:

a) Mr Said's FX trading was within the various limits that had been agreed in respect of it.

b) The transactions entered into by Mr Said had been booked correctly and accurately.

c) Each of the transactions entered into by Mr Said had been included in DBAG's calculations of collateral required to support his trading.

iii) In an email dated 6th October 2008 from Mr Spokoyny to Mr Said, which was forwarded by the latter to Mr Vik, in which Mr Spokoyny said that he had

internal DBAG approval to a change of the VaR parameters to 2.5 x 10 day VaR plus liquidity add-on and that the effect on Mr Said's current portfolio would be to raise the margin requirement from US$21 million to US$40 million, DBAG impliedly represented that:

a) The collateral requirement of Mr Said's portfolio under the existing VaR formula was US$21 million.

b) The collateral requirement under Mr Said's portfolio under the proposed new VaR formula would be US$40 million.

iv) At a meeting on 7th October 2008 in London Mr Brügelmann impliedly represented to Mr Vik that:

a) Mr Said's trading was within the US$35 million limit.

b) The transactions entered into by Mr Said had been booked correctly by DBAG.

c) Each of the transactions entered into by Mr Said had been included in DBAG's calculations of collateral required to support his trading.

1039. Although the experts differed as to the date when Mr Said's FX trading margin requirement first exceeded US$35 million, they each agreed that it was exceeded on occasion in 2007 and was substantially exceeded in April 2008 and from July 2008 onwards. A table and graphs showing the forensic accountants' respective calculations is attached as Annex 3 to this judgment. As appears from earlier sections in this judgment, DBAG's systems could not cope with many of the OCTs and all the EDTs. Many of the former were therefore inadequately booked and all the EDTs were inadequately booked and were not the subject of contractual valuation or margining from the date of the conclusion of the first two on 19th February 2008. It is unclear exactly which EDTs remained unbooked as at the dates of the alleged representations but Mr Walsh's deliberate practice of leaving them unbooked until knock-out appears to have begun after obtaining Mr Kim's sign off to EDTs 12-14 dated 20th June. In all probability, as at the end of June/beginning of July, EDT 15 is likely to have been unbooked. As at 6th October 2008, it is known that there were nine unbooked EDTs which Mr Walsh proceeded to book over the next three days.

1040. SHI alleges that Mr Vik relied upon each of these representations by continuing to permit Mr Said to trade and without intervening to ensure that his trading stayed within the US$35 million. As I have found that this figure did not represent a contractual limit on Mr Said's trading but was merely the amount of margin that had been allocated to it, small and temporary excesses are of much less significance than SHI suggests. If Mr Vik had been told of significant additional margin requirements, the question then arises as to what he would or would not have done in such circumstances. In my judgment, Mr Vik would not have been unduly concerned, if Mr Said's trading appeared profitable, as long as the margin requirement remained within the sums in the Pledged Account, regardless of the Allocated Portion, or within the total represented by the sums in that account and the profits which he had taken out of it, namely US$30 million in 2007 and approximately US$75 million in 2008 i.e. at least US$140 million. Further, it was not until mid-September 2008 that Mr

Said's FX trading began to show a loss on a cumulative basis, on realised figures and unrealised MTM.

1041. That point is made good by reference to Mr Vik's approach to the first margin call where, on his own evidence, he wondered if Mr Said's profits should be taken into account when assessing the appropriate figure for the CLA or PAL. Furthermore, he said he was content to pay the first margin call on the basis that the VaR element in it would "come back" once the trades had closed down. Mr Said's evidence on deposition also falls to be taken into account in this context. In his view, if the MTM requirements had been US$150-200 million, his trading strategy would have been seen as untenable. Mr Vik's general approach can be seen from his email to Mr Said in early 2008 in which he said that Mr Said should not feel constrained by the amount of capital allocated to him. At levels of US$150-200 million margin, in my judgment Mr Vik would have required Mr Said to reduce positions but, given his general approach when faced with hundreds of millions of dollars of losses in October 2008, he would undoubtedly have worked together with Mr Said, as he did in October, to close positions in the most judicious manner possible to bring the figure down. On the forensic experts' figures, it seems that, depending whose figures are accepted, these levels of US$150-$200 million would be approached in late August/September 2008 with a mid-September date for Mr Said's account showing an overall loss. Although the market was tight and illiquid at that stage, there would have been greater opportunities to close down trades at lesser loss than was ultimately the case in mid-October.

1042. A number of questions arise in relation to the allegations of misrepresentation, including the question of the applicable proper law, the need for a special relationship for a misrepresentation claim to run under New York law, contractual barriers to any such claim, whether the alleged representations can be implied, whether there was negligence in making them and whether there was any reliance by Mr Vik.

1043. The question of the applicable law is governed by Part III of the Private International Law (Miscellaneous Provisions) Act 1995 (the 1995 Act). Under that Act, the general rule is stated to be that the applicable law is the law of the country in which the events constituting the tort take place. Where there are different elements of the tort in question, section 11(ii) states that, in applying the general rule, the relevant law is that of the country in which the most significant element or elements of the events took place.

1044. It has long been held that the most significant element in a misrepresentation claim is the element of reliance and causation of loss. In the context of the 1995 Act, the decision of Mance LJ (as he then was) in *Thierry Morin v Bonhams & Brooks Ltd* [2004] 1 Lloyd's Rep 702 focused on the place of reliance and action taken as being the place in which the most significant element or elements of a misrepresentation occurred. The decision of the Court of Appeal in *VTB Capital Plc v Nutritek International Corp* [2012] EWCA Civ 808 is to the same effect.

1045. Under section 12(i) of the 1995 Act, the general rule set out in section 11 can be displaced if it appears in all the circumstances that it is substantially more appropriate for the applicable law for determining the issues arising to be the law of another country. The factors which fall to be taken into account for this purpose are factors

which relate to the parties, to any of the events which constitute the tort in question or any of the circumstances or consequences of those events.

1046. The location of reliance is by no means clear in relation to all of the alleged misrepresentations. Mr Vik travels the world and although the 7th May meeting and the 7th October meeting both took place in London, that is not the location from which Mr Vik carries on his business. Monaco was the centre of SHI's activities and Mr Vik was a resident there. The maximum amount of time that he was supposed to spend in Greenwich Connecticut was sixty days a year. With a number of business interests, Mr Vik was a regular international traveller, operating by means of his Blackberry.

1047. I conclude that the applicable law to the alleged tort is that of New York. The reliance is said to have given rise to the continuation of trading by Mr Said in New York, where he conducted his FX business. Existing trades were allowed to continue and new trades were concluded in circumstances where it is said that, if Mr Vik had been informed about the true position, that trading would have been cut back or come to an end. The tort is intrinsically bound up with the FXPBA and the implied terms alleged, so that in my judgment, wherever the place of continuing reliance was, the action or inaction and the loss suffered relate to the New York trading activities of Mr Said under the FXPBA which was governed by New York law. In these circumstances it is substantially more appropriate for the applicable law in relation to the alleged misrepresentations to be the law of New York which governs the FXPBA, and the duties of the parties relating to it. The same point holds good in the context of the Said Letter of Authority which is, as is common ground, also governed by the law of New York. Those two instruments were the key instruments relating to Mr Said's FX trading which governed the interrelationship between DBAG and SHI, with the FX ISDA, its Schedule and CSA governing the individual transactions under it. It is not said that any particular individual transaction was induced by the misrepresentation. What is said is that the continuance of trading under the FXPBA and the Said Letter of Authority was so induced. The alleged misrepresentations specifically relate to the performance or non-performance of alleged terms implied into the FXPBA.

1048. If I am right in concluding that New York law is the applicable law, the claims cannot succeed because a special relationship is required for a claim in negligent misrepresentation to run under that law, as set out in section 9 of this judgment dealing with concurrent duties in tort. Not only has Justice Kapnick already come to that conclusion, upheld by the Appellate Division but the application of the law as set out in the New York authorities to which I have made reference in the earlier section leads me to the same conclusion.

1049. SHI and DBAG were sophisticated commercial parties who contracted with one another in an arm's-length relationship. The ISDA terms specifically negated any fiduciary or advisory duties on the part of DBAG in Part 5 of the Schedule where SHI acknowledged that it was not relying upon any communication of DBAG's when entering into individual transactions. It also acknowledged that DBAG had made no representations as to the result, effect, consequence or benefit of any such transaction and that, as a sophisticated investor, it was for it to determine the suitability of any transaction for it. Whilst the FX ISDA was governed by English law, the terms impact upon the implied duties alleged under the FXPBA and the suggestion of any

special relationship for the purposes of New York law. An application of *Kimmell* and other authorities referred to results in the conclusion that, given the nature of a Prime Brokerage relationship, there is no special relationship which could give rise to a cause of action for negligent representation against DBAG as Prime Broker. Nor could Mr Brügelmann or DBS, a stage removed from the FXPB Account, be in a special relationship, having no additional knowledge of Mr Said's FX Trading beyond that of Mr Vik and in fact knowing much less.

1050. If I am wrong in my conclusion as to the applicability of New York law to the alleged misrepresentations, then the position must be considered under English law, since no other applicable law is alleged and there is no evidence of the content of any such law apart from English law.

1051. Where an implied representation is alleged, the court must consider "what a reasonable person would have inferred was being implicitly represented by the representor's words and conduct" – see *IFE Fund SA v Goldman Sachs* [2007] 1 Lloyd's Rep 264 at paragraph 50. What matters is what a reasonable representee would have understood that the representor was telling him – see *Raiffeisen Zentralbank Őesterreich AG v Royal Bank of Scotland Plc* [2010] EWHC 1392 (Comm) at paragraph 108. Furthermore, the representee must show that he understood the implied representation in the sense found by the court in order to establish that he relied upon it.

<u>22(a) The first implied representation at the meeting of 7th May 2008</u>

1052. This was a meeting attended by Mr Brügelmann and Mr Vik, neither of whose evidence was very satisfactory. I conclude that neither of them had any real recollection of it. When talking of his meetings with Mr Brügelmann in cross-examination Mr Vik said that he always got very positive information about Mr Said's FX trading. In relation to this specific meeting, in his statement he said that Mr Brügelmann told him that Mr Said was doing very well and that there were no problems. In cross-examination he said that he thought it was made clear that SHI was well within the US$35 million figure at that time. He was pretty sure that was communicated and that Mr Brügelmann said that Mr Said was "well within the risk budget and the collateral calculations. He was doing well. Everyone was happy with him."

1053. When it emerged in the experts' reports that, as at 7th May 2008, the collateral requirement at that date for Mr Said's trades was between US$0-10 million, SHI amended its case to plead that there was an implied representation that there had been no prior breach of the US$35 million limit. Mr Inglis and Mr Davies find the date at which the US$35 million figure was first exceeded to be 18th January 2007 and 16th August 2007 respectively.

1054. Even on Mr Vik's evidence, I cannot find that there was an implied representation to the effect alleged. A comment to the effect that Mr Said was doing well and everyone was happy with him would be so general as to convey nothing about past margin figures. At the time, if Mr Brügelmann had said anything about the current margin requirement, it was in fact within the US$35 million figure.

1055. Mr Brügelmann was, in fact, not in a position to say anything very much about Mr Said's trading since he knew so little about it. In contrast to Mr Vik who was receiving weekly reports from Mr Said about the trades that he was conducting, with realised profit and loss figures and comment about his outstanding transactions in the current market situation, Mr Brügelmann knew virtually nothing and had to obtain figures from Mr Gehlfuss of the CMV team in London. Mr Vik must have known that Mr Brügelmann had no access to Mr Said's figures on the GEM website, since he had never been given such access. All Mr Brügelmann could do in the ordinary way was to obtain figures from someone else for Mr Said's FXPB trading and pass them on to Mr Vik.

1056. On this occasion, there were particular reasons for the meeting on 7th May. As shown by the documents, the meeting was organised so that Mr Vik could meet Mr Schiraldi of the PIC Desk who would be executing Mr Vik's FX trades from then on and so that Mr Vik could talk about trading strategies with knowledgeable persons at DBAG. From Mr Brügelmann's perspective there were other issues which he wished to cover but the first, as he mentioned in an email to Mr Schiraldi, was the need to update Mr Vik about the progress made in relation to setting him up with an FX and/or FI PB account and the difficulties represented by the VaR/NOP issue in that context. The second arose as the result of his conversations with FXPB personnel on 2nd May, which was the question of reviewing the VaR parameters under which Mr Said operated if he was to continue on VaR, because of the concern expressed by Mr Spokoyny and CRM personnel. The two issues were linked because, if SHI was to have two sub-accounts for FXPB trading, DBAG required them to be on an NOP basis, because of the configuration of DBAG's systems. NOP was DBAG's favoured system for capturing the risks because Mr Spokoyny and others considered that the VaR model did not protect DBAG sufficiently. Mr Brügelmann was mandated to explain to Mr Vik that the risks inherent in the FXPB account margined under VaR were greater than the current VaR methodology suggested, given the type of positions that he had and recent changes in volatility, in the hope of persuading Mr Vik that, if he wanted to have an FI and FX PB account himself, Mr Said's trading would have to be moved from VaR to NOP, which would probably mean that more collateral would be required. The perceived "gap risk" in the VaR parameters currently applied to Mr Said might thus be overcome.

1057. An agenda email shows a series of meetings arranged with various DBAG personnel with whom Mr Vik would discuss trading strategies, finishing with a meeting with Mr Brügelmann at 4 pm. Mr Brügelmann's handwritten notes of action points made in advance of the meeting refer to the need to get Mr Vik to sign off on payments which he had authorised orally earlier, "cash for 2005430", "P&L Klaus" and "Alex NOK swaps".

1058. Mr Gehlfuss sent Mr Brügelmann in advance of the meeting a copy of the Trade Details (Outstanding Trades) screenshot from GEM for Mr Said's FXPB account which showed the MTMs for SHI's cash and options positions, which may explain the reference to "P&L Klaus". Amongst the options positions there are eight entries for Resurrecting Faders representing two EDTs which appear to be EDTs 1 and 2, although by this stage EDTs 3 and 4 had also been concluded. Mr Brügelmann also prepared a sheet headed "Sebastian Equity Position" which showed the assets held by SHI in Geneva and London. This sheet followed the same format as that supplied to

Mr Vik at Meribel in March 2008 and the format he was to use when providing information to Mr Vik at the later meeting in London in October. The only reference to the FXPB account was under the heading "Geneva" where the total sum standing to the credit of the Pledged Account was set out.

1059. Although the evidence was confused and counsel for SHI and Mr Brügelmann adopted the inverse stance to that which might have been expected, I conclude that the only document handed over by Mr Brügelmann at the meeting was the Sebastian Equity Position sheet and a list of cash balances and not the hard copy of the screenshot from GEM which, in order to be readable, has to be printed off in a way that extends over several pages. Although Mr Brügelmann had this to hand, he would not have been able to comment about any aspect of it. At the most, he could have handed it over, telling Mr Vik that it was a screenshot of Mr Said's outstanding trades.

1060. In his first witness statement, Mr Vik stated that he was told that, given the volatility in the markets, the collateral requirements for Mr Said's accounts might have to be calculated in a different way to that currently being used and that this would better reflect the risk in Mr Said's portfolio. It was correct that Mr Brügelmann told him that DBAG might wish to change the formula for calculating his collateral but he said there was no suggestion that the exposure was greater than the US$35 million allocated, nor that there were EDTs that were not included in the analysis.

1061. Mr Brügelmann's evidence, in his witness statement, was that, as a result of what he had learned in his telephone call from FXPB personnel, he informed Mr Vik that the margin terms on the FX account and the amount of collateral held were not adequate due to the deviation in Mr Said's investment pattern, compared to that at the time when the FXPB account had been established. Mr Vik's response was that this should be taken up with Mr Said, which is what Mr Spokoyny subsequently did. Mr Brügelmann said that he did not refer to the debate about different margining methodologies, as between NOP and VaR. There was no need to do so as the issue about sub-accounts was resolved by a discussion on that day between him and Mr Said. One or other of them came forward with the suggestion that Mr Vik could have a separate FXPB account from Mr Said in the name of a different company, which solved the technical difficulties of setting up sub-accounts in DBAG's systems with different margining methodologies. Moving Mr Said off VaR, to which he was known to be resistant, could no longer be suggested by reference to this problem but, on the evidence, I have no doubt at all that there was a reference to DBAG's view that the collateral for Mr Said's account was considered insufficient because this was a prime purpose of the meeting and Mr Vik's response was that this should be discussed with Mr Said, as it later was. In such circumstances, it does not seem to me likely that Mr Brügelmann would have told Mr Vik that Mr Said's trading was going well and I accept his evidence to that effect. Insofar as margin was referred to, it could only have been referred to in the context of the need for some adjustment. In his deposition Mr Brügelmann had said that he pointed out to Mr Vik that calculations performed by DBAG personnel on a preliminary basis might point to a shortfall in collateral but that there was no discussion of the amount of the potential shortfall. In his evidence on cross-examination, Mr Brügelmann said that he left Mr Vik with a strong message that there was a problem with the US$35 million as there was a bigger risk in the portfolio, whether he mentioned a number or not. He also told Mr Vik that

it was because Mr Said was trading differently from when he first began. It is common ground that Mr Vik told Mr Brügelmann to talk to Mr Said about any change in calculating his margin.

1062. DBAG's note of the meeting (made, I think, by Mr Brügelmann) referred to its main purpose as that of introducing Mr Schiraldi but stated that the other important topic covered was the risk exposure in the FXPB account managed by Mr Said. The note continued: "On the subject of FX risk, the client took note of the disparity in results between stress-tested risk calculation and the results produced by the VaR methodology, but demanded that we have that discussion with Klaus Said rather than with him. He has allocated a US$35 mio risk budget to Klaus and he wants to await the outcome of our discussion with Klaus before deciding whether to explicitly support an increase in his line."

1063. In a telephone conversation on 9th May 2008, Mr Brügelmann informed Mr Giery and Mr Quezada that what he had tried to tell Mr Vik was that he had a trader who had a US$35 million line of credit but that it was thought that the true exposure was more than US$100 million and that Mr Said had to come off VaR. In cross-examination, as I have said, Mr Brügelmann could not say whether he had mentioned any figure and it was suggested to him that he was reporting to FXPB something that had not happened, particularly as a solution had been reached to the issue of an FXPB account for Mr Vik which meant that there was no longer any need for Mr Said's account and Mr Vik's proposed account to be subject to the same margining methodology, namely NOP. Whilst it may be that in that telephone conversation Mr Brügelmann overstated the position as to what he had said to Mr Vik, the effect of the note of the meeting and the undisputed elements in the evidence of the two protagonists leads me to the clear conclusion that Mr Brügelmann did express DBAG's concerns about margin requirements for Mr Said's FX trading, although there was no reference to unbooked EDTs or to "funky transactions" as such or to problems in valuation and margining of which Mr Brügelmann was unaware. If he had not done so, there would have been no reason for matters to be taken up with Mr Said in relation to margin.

1064. In these circumstances, whatever else Mr Brügelmann might have said and whatever documents were handed over, Mr Brügelmann could not have said that Mr Said was doing well or implied that his trading was currently within and had always been within the US$35 million figure. What was being expressed was DBAG's doubts as to whether the US$35 million figure was enough.

1065. Equally, there is no room for the implication of a representation that all Mr Said's transactions had been booked correctly and accurately and that each of them was included in DBAG's margin calculations. Mr Vik could not have understood that Mr Brügelmann was making any representation of that kind. The thought would simply not have crossed the mind of either at the time, particularly as Mr Vik knew that Mr Brügelmann was a client representative for PWM clients at DBS and was not part of DBAG's FXPB team. There was no discussion of booking of particular transactions and nothing which could have led Mr Vik to think that Mr Brügelmann was telling him anything about such matters. Their conversation proceeded on a much more general level with regard to the totality of Mr Said's trading and changes in its nature, of which in fact Mr Vik was aware because of his email exchanges about OCTs and EDTs with Mr Said.

1066. Moreover, in this context, as in the context of the other representations alleged, it would be extremely odd if such a claim by SHI could succeed. In circumstances where Mr Said, as the authorised agent of SHI, waived any obligation by DBAG to book and report MTM and margin calculations and agreed that reporting of the MTM on EDTs should not take place, because he knew it could not be done accurately, it would be anomalous if a misrepresentation made to another authorised representative of SHI that such duties had been performed could give rise to a different result. There is a logical distinction between a waiver of an obligation and a representation that the obligation had been performed and different authorised individuals were involved, but the inconsistency involved is apparent and issues of corporate reliance would arise.

1067. In fact, Mr Vik relied on Mr Said to give him information about his trading, rather than DBAG. Mr Vik had little interest in the details of margin or margin calculations and specifically referred Mr Brügelmann to Mr Said to deal with such issues. When Mr Said, in emails referred to DBAG's systems' problems, Mr Vik did not react and when asked about this in cross-examination, accepted that his reaction to comments of this type was to leave it for Mr Said to sort out.

<u>22(b) The second alleged misrepresentation arising from emails relating to the withdrawal of cash from the FX account</u>

1068. On 28th June 2008, having been told by Mr Said that there was excess cash in his FX trading account which Mr Vik should take out, Mr Vik emailed Mr Brügelmann suggesting that there was surplus cash there and expressing the assumption that Mr Brügelmann was converting it into NOK and taking it out of the account, by which he meant transfer to an SHI account at DBS. The following day, Mr Brügelmann responded to say that Ms Enger would take care of the balances on Mr Said's account and asked her to ascertain what the figures were which she duly did. On 1st July Mr Vik instructed Mr Brügelmann expressly to take all excess cash out of Mr Said's trading account and Ms Enger gave instructions that day to effect a transfer. The FX margin team had reported balances on the trading account of nearly €10 million and just over US$66 million. On 3rd July the total US$ figure and the sum of €6,678, 275.71 was transferred from Mr Said's trading account in London to an SHI account with DBS in Geneva.

1069. I can see no basis in this sequence of events for any implication of any representation of the kind alleged. All that was being done here was to respond to Mr Vik's request to transfer part of Mr Said's profits out of his trading account to an SHI account in Geneva, although it ought, under the provisions of the FX CSA, to have been transferred into the Pledged Account and then only released from that by agreement between SHI and DBAG. Nothing was being said about Mr Said's FX trading being within any limit, about booking of his transactions or the calculation of margin. All that Mr Brügelmann and Ms Enger and DBAG did was to transfer cash on Mr Vik's instructions (albeit without regard to the terms of the FX CSA).

1070. It appears that neither Mr Brügelmann nor Mr Vik knew how much money had actually been transferred at the time and Mr Vik cannot have understood Mr Brügelmann to have been saying anything about booking or margining of transactions. No reasonable person in Mr Vik's situation could have thought so and in the absence of any express representation, it is impossible to see how any implication of the kind alleged can arise.

22(c) The third alleged misrepresentation on 6th October 2008

1071. Following the meeting on 8th September between Mr Said, Mr Quezada and Mr Spokoyny in New York, where the subject of changing the margin calculation was raised in the light of the stress-tests carried out by Mr Spokoyny, where no new terms were agreed, there was a conference call on 30th September between the same individuals where Mr Quezada proposed 3 x 10 day VaR plus liquidity add-on, which would have increased the margin figure shown on ARCS VaR from US$21.8 million to US$50 million. Mr Said objected to this increase of 150% and, whilst accepting that his existing margin requirement was too low, thought he could do a lot better, by which Mr Spokoyny understood him to mean that he could go elsewhere for a better offer. Mr Spokoyny then produced a rough idea as to what margin terms of 2.5 x 10 day VaR would produce and Mr Said said he would be happy with a formula that effectively doubled the current collateral requirement, but wanted an historical analysis to ascertain what the effect of the new parameters would be on his portfolio.

1072. By 6th October, both Mr Vik's FX trading and Mr Said's FX trading were in considerable difficulty as the email exchanges between them show (see sections 16 and 19 of this judgment). The email exchange between DBAG and Mr Said on the subject of margin was short and to the point. DBAG proposed margin terms of 2.5 x 10 day VaR plus liquidity add-on, stating that on Mr Said's current portfolio the new requirement would give rise to margin of US$40 million as compared to the current requirement of US$21 million. DBAG invited further discussion should Mr Said wish it. Mr Said's response was simply to say: "That seems fair. I can live with that", which DBAG rightly understood to be an acceptance of the proposal.

1073. In his email to Mr Vik that day concerning these new margin terms, Mr Said not only stated that he had negotiated DBAG down but that this was a small amount of collateral for the positions he had.

1074. The express statement in DBAG's email to Mr Said was that the current margin requirement on Mr Said's existing portfolio on the basis of 2 x 5 day VaR was US$21 million and that the margin requirement on the proposed 2.5 x 10 day VaR plus liquidity add-on would be US$40 million. Mr Said, however, was aware that these calculations on his "current portfolio" still did not take account of the EDTs because he had been told at the 8th September meeting that DBAG was still working on a way to book the EDTs and he knew that this had not been resolved. In consequence, the position remained exactly as before, namely that DBAG could neither value the EDTs nor include them in its margin calculations.

1075. Although therefore there was a representation by reference to the "current portfolio", Mr Quezada, Mr Spokoyny and Mr Said all knew that this did not include the EDTs and the representations to Mr Said have to be read subject to that qualification. Any representation made to Mr Vik by passing the email on was a representation by Mr Said, not DBAG.

1076. By this time Mr Said knew of MS' MTM figures of US$103 million on three of his BRL EDTs and knew that his "free ride" was still continuing, although he was himself concerned about the position and sleeping badly in consequence. As appears from other parts of this judgment, over the next few days, as set out in section 15 of this judgment, the email exchanges between Mr Said and Mr Vik show that neither of

them could possibly have considered that a figure of US$21 million or US$40 million included variation margin for the EDTs, let alone the full margin to which DBAG was entitled. Mr Said knew that the free ride continued until DBAG began to wake up on 9th October in the light of MS' demands for collateral. His emails of 9th and 10th October reveal his state of mind and the impossibility of his reliance upon any representation as to his portfolio margin from DBAG (as does his Timeline). Likewise, in the light of those exchanges, Mr Vik could not have relied upon any representation, knowing that many of Mr Said's trades were under water and that unwinding everything would cost hundreds of millions of dollars. Not only is it inconceivable that Mr Said or Mr Vik could have relied upon any representation made, but it would in any event have been too late to do anything beyond what they did, namely to review the position on each of Mr Said's trades and decide what was to be done about them, namely whether to put up further margin, close out the trade or work towards closing at the most judicious time.

22(d) The fourth alleged misrepresentation at the 7th October 2008 meeting

1077. The same points hold good for anything said at the 7th October meeting as for the 6th October representation. There is no way in which Mr Vik could have relied on anything Mr Brügelmann said about Mr Said's FX trading because he knew far more about it than Mr Brügelmann did. He had received weekly email reports from Mr Said and over the course of the preceding few days had exchanged emails which described to him the increasing difficulties which Mr Said's trading had encountered. Moreover, one day further on than 6th October, there was nothing to be done about the situation save to do what was actually done, namely to sit down and work out a plan as to what to do with each trade, as was actually done when Mr Vik returned to the USA, obtained the necessary information from Mr Said about his outstanding transactions, including the EDTs specifically and decided on the course of action to be pursued.

1078. Mr Vik's evidence was that at this meeting Mr Brügelmann congratulated him on how well SHI was doing, stating that whilst everybody else was struggling, SHI had around US$1 billion in assets in the bank including US$67 million in the Pledged Account. He stated that there was specific discussion about Mr Said's account, that Mr Brügelmann stated that Mr Said was doing well and was up by tens of millions and that there was nothing to worry about.

1079. In his statement Mr Brügelmann said that Mr Vik had requested that, before the 7th October meeting, he present to him a summary of the balances of the various cash accounts and the current open positions for the FXPB account. He contacted Ms Greenberg of FXPB and asked for a screenshot of the balances of the various cash accounts as well as a summary of the current open positions. What he received from Mr Walsh was a sheet headed "Assets on deposit" and a document headed "Cash Flow Summary". Those documents were handed over to Mr Vik together with Mr Brügelmann's now standard format of the "Sebastian Equity Position".

1080. Mr Brügelmann said that he did not recall much of the detail of the meeting but believed that the call report which he produced on 24th October, after the major panics were over, was accurate. The major purpose of the meeting had been for Mr Vik to discuss recent trends in FX and interest rates markets with knowledgeable individuals at DBAG. This was clearly motivated by Mr Vik's long NOK position

which was currently giving rise to substantial losses as against the rising dollar. There was a long discussion about market trends between Mr Vik, Mr Hafeez, Mr Goldberg and Mr Cloete. It was following this that Mr Vik and Mr Brügelmann met on their own. According to Mr Brügelmann's call report he updated Mr Vik on his combined net equity positions at DBS and on the GPF platform where the value was broadly unchanged compared with the position in May if the transfer of the NOK 1 billion DnB Certificate of Deposit was ignored. The losses in Mr Vik's long NOK positions were offset by his gains in his short equity futures. The last main paragraph of the note reads thus:

> "At the request of Alex Vik I had prior to my meeting with him asked for "a screenshot of the various open accounts for Seba[s]tian as well as a summary of the current open positions" from FXPB … I do not have access to the FXPB website myself, and the client had asked me for this type of information on previous occasions, when we met in person. The report I received and left with Alex Vik did not, however contain any information regarding the structured option positions. Very likely these trades were properly booked and were reflected on the TRM FXPB website accessible to his trader, Klaus Said, but for some reason did not appear on the report I received. The resulting margin call starting October 13th was triggered by the structured options."

1081. The print out of the Assets on Deposit screenshot showed a cash position of US$10,279,827 as the total of cash balances for the various currencies in the FXPB account. It also showed the margin held of US$35 million. This said nothing about Mr Said's FX trading.

1082. The print out of the Cash Flow Summary was not a list of Mr Said's current open positions. It set out the premium and settlement amounts due where the cash flows were known on cash transactions and options transactions but did not include any information about Structured Options where the cash flows were uncertain nor any MTM figures on any trades at all. This too gave very limited information about Mr Said's FX trading account. Mr Vik could not have thought otherwise.

1083. The sheet headed Sebastian Equity Position was divided, in the usual way, between assets in Geneva and assets in London, with nothing referring to the position in New York. Under the assets in Geneva, the Pledged Account figure appeared at US$67.438 million. Under London assets appeared Mr Vik's unrealised FX losses of 1.783 billion NOK. Once again there were no figures for unrealised profits or losses (MTM) on Mr Said's FX trading and in particular any figures for the EDTs. That was apparent on the face of the document.

1084. From the terms of Mr Brügelmann's report it is apparent that he did not understand the contents of the screenshots that he had received but anybody with knowledge of FX trading and of the trades which Mr Said was involved in would have appreciated that there were no MTM figures shown on Structured Options and Mr Vik was, by reason of his email exchanges with Mr Said, only too aware of the problems which Mr Said was facing in that connection. The fact that the Sebastian Equity Position showed a total asset figure of just under 6 billion NOK (approximately US$1 billion)

upon which Mr Brügelmann may well have commented, could not have led Mr Vik to believe that Mr Said's trading position was satisfactory. The figures as set out are recognised to be substantially accurate.

1085. The production of these documents to Mr Vik could not amount to a representation of anything other than what appeared in them. Mr Brügelmann was not in a position to explain further or to comment on Mr Said's trading.

1086. In its closing submissions, SHI submits that Mr Vik was entitled to assume that he had been given a complete and accurate report of Mr Said's overall position. I cannot accept this since the figures provided to him included nothing in respect of Mr Said's open transactions and their MTM in circumstances where Mr Vik knew there was a significant problem.

1087. Both Mr Brügelmann and Mr Vik knew, because they had each been told, that Mr Said had reached agreement with Mr Quezada and Mr Spokoyny on new margin parameters. Mr Brügelmann's evidence was that he told Mr Vik that the discussions within the FX Prime Brokerage team in respect of amendments to the margin calculation had concluded and that new terms had been agreed between them and Mr Said. There was no discussion of the details of these terms. In cross-examination he said that, following their meeting in May where he had indicated to Mr Vik that there was a discrepancy between the risk calculations performed and the capital provided, he told Mr Vik that closure had been reached on that subject. His evidence was, both in his second statement and under cross-examination, that he could not have made any comment about Mr Said's trading because he had no visibility over the FXPB account. He was able to comment about Mr Vik's trading about which he knew, because he had been executing Mr Vik's instructions and Mr Vik was clearly troubled by the losses which he had been incurring. Mr Brugelmann specifically denied that he had said that Mr Said was doing well and said he could not possibly opine on that subject. He would hand over printed sheets but he would never comment to Mr Vik on any other person's trading, whether it be that of Mr Bokias, Mr Hanssen or Mr Said.

1088. It is inherently unlikely that there could have been any real discussion about Mr Said's trading account because of the knowledge that Mr Vik had about the dire position in which it stood and Mr Brügelmann's ignorance on the subject. Mr Brügelmann knew nothing save that no margin call had been made and that new margin parameters had been agreed. This is borne out by Mr Brügelmann's email that evening to Mr Halfmann saying that, having met with Mr Vik that day, Mr Vik was working on the assumption that the risk in the portfolio managed by Mr Said was now captured adequately with the new margin terms. It also may explain the email that he sent to Dr Koch on 16th October in which he told him that he had handed over figures to Mr Vik at the meeting and had said that the account was "in good order from a margin viewpoint".

1089. Mr Vik did not give evidence that Mr Brügelmann had said that Mr Said's account was in good order from a margin viewpoint and that was not a pleaded allegation. I have set out Mr Vik's evidence as to what was said by Mr Brügelmann, which Mr Brügelmann denied.

1090. I cannot conclude that there were implied representations to the effect submitted. Furthermore, if anything had been said about Mr Said's trading being within the US$35 million figure, Mr Vik would have known that this was not the case as a result of his email exchanges with Mr Said and would not have believed it. He could not therefore have relied on it and over the course of the next few days that position was reinforced by all that Mr Said told him. On the experts' calculations, the collateral requirement of Mr Said's portfolio was of the order of US$650 million on 6th October 2008. Mr Said and Mr Vik may not have realised the size of it in absolute terms but they both knew that the MTM figures on the MS BRL EDTs alone gave rise to figures way in excess of US$35 million. Mr Vik could not have relied on anything Mr Brügelmann said about Mr Said's margin in these circumstances where he was in discussion with Mr Said. Moreover, Mr Brügelmann knew nothing of booking, valuing or margining problems at this stage whereas Mr Said did. Mr Brügelmann would have had no reason to think that anything that he did say about Mr Said's trading by reference to the figures on GEM was wrong, but Mr Said would have known and Mr Vik was in receipt of information from Mr Said about the problems he was having.

1091. It is also worth pointing out that the print outs of screenshots contained a disclaimer of liability for errors or omissions in computing or disseminating valuations and for any loss or damage whether incidental or consequential which might arise from the valuations provided.

1092. The terms of Part 5 of the FX Schedule contained acknowledgements by SHI that it was not relying upon any communication by DBAG in the context of entering into any transaction. SHI's complaint is that it continued to allow Mr Said to enter into transactions because of communications made in the shape of implied representations, but it does not allege that these constituted investment advice or recommendations to do so. Nonetheless, in the FX ISDA Schedule, it acknowledged that no communication from DBAG could be deemed an assurance or guarantee of the expected results of that transaction and specifically that DBAG made no representations whatsoever as to the effect, consequence or benefit of any transaction, which would include its impact upon the overall valuation of its trades and margining of its portfolio. Specifically, SHI also acknowledged that it was not relying upon any view of DBAG with respect to any transaction or the FX ISDA itself and that transactions concluded under it were the result of arm's-length negotiations between the parties. In these circumstances it is hard to see how any of these complaints, even if well-grounded in fact, could succeed in law.

23. The GEM Terms and Conditions of Use

1093. The GEM Terms and Conditions of Use, to which reference has been made earlier in the section of this judgment dealing with New York law, contained the following provisions: "Use of this fxmarkets Trading website (the "Website") is subject to the following Terms and Conditions of Use." There follows the limitation of liability Clause which appears at paragraph 237 of the judgment.

1094. The Rome Convention is applicable to determine the question as to the proper law of any separate contract between SHI and DBAG arising in respect of the GEM terms and conditions but in my judgment the provision of information to SHI on the GEM

website was part and parcel of DBAG's obligations under the FXPBA and I have found that a term is to be implied into the FXPBA to that effect.

1095. The FXPBA was governed by the law of New York and the provision of information on the web related to the totality of transactions affected thereunder and the overall position under it. Although FXPB individual transactions were governed by English law under the FX ISDA, the essential relationship upon which SHI's claims are based is, as is recognised, governed by the law of New York. As the GEM reporting function was part and parcel of the FXPBA obligations, they cannot be governed by a different law.

1096. Furthermore, the very language of the terms and conditions refers to concepts which are familiar to New York law but not to English law – "gross negligence" and "punitive damages" being the most obvious examples. If there was a separate contract for the supply of information on the GEM website, its closest connection would be to the law of New York, both by virtue of its connection with the FXPBA and also by reference to the reinforcing language used. It was so clearly connected to the FXPBA that it would necessarily share the same governing law.

1097. SHI does not take issue with the facts and matters set out in Deloitte's letter of 13th May 2013. Any user of the GEM website could not fail to be aware of the disclaimer of liability to which reference was made on the Home Page, the Help Page and on a number of reports. That disclaimer stated that "[t]he information furnished to you on these pages and the service pursuant to which these pages are provided are subject to the disclaimers and related statements which were displayed at the time of your initial use of this service". The word "disclaimers", when displayed on the Home Page or the Help Page, contained a hyperlink to a disclaimer page which set out the GEM terms. Ms Rahl accepted that there were always terms and conditions for the use of such reporting systems and, given the common fallibility of computer systems and the humans who input material into them, combined with Mr Said's particular knowledge of the inability of DBAG's systems to cope with exotic options (or off-line trades, as he called them) he could not have expected anything else, when making use of the GEM system.

1098. There is no direct evidence of Mr Said's acceptance of the terms and conditions and the Clause excluding or limiting liability but the existence of those terms was brought sufficiently to his attention for SHI to be bound by them under the law of New York, whether or not he chose to peruse them.

1099. Mr Said's authority extended to acceptance of reporting functions on this basis because of the wide terms of authority given to him by the Said Letter of Authority which covered "any documentation related to the execution of … FX and Options Transaction[s], including, without limitation, ISDA master agreements, schedules, confirmations, credit support annexes" and the like. SHI specifically agreed to be subject to the terms and obligations of and liabilities contained in any "related Documentation executed by the Agent" on its behalf to the same extent as if it had directly executed such documents.

1100. SHI accepts that its tort claims, other than the misrepresentation claims, are governed by the law of New York and accepts that it is New York law which will apply in determining the effect of the exclusion/limitation of liability Clause on those claims. I

have already found that the misrepresentation claims were also governed by the law of New York, but even if the claims were governed by English law, the effect of contractual terms in excluding liability for tortious claims must be governed by the proper law of the contract as applied to the nature of the claims analysed in accordance with the proper law that governs them.

1101. The question then arises as to whether the exclusion of liability would be effective to exempt DBAG from breach of the alleged implied terms, tortious duties or for any negligent misrepresentation. In that context the question arises as to whether or not DBAG could be said to be guilty of "wilful misconduct or gross negligence".

1102. The limitation of liability Clause makes it clear, on its face, that any user would rely on the information provided on the website, and specifically valuations, at its own peril. The terms and conditions were, as I have already found, governed by the law of New York and absent wilful misconduct or gross negligence, DBAG could be under no liability for errors in reported information.

i) Liability for all damages suffered was excluded.

ii) Specific reference was made to indirect or consequential damages.

iii) Specific reference was made to damage suffered which was directly or indirectly attributable to the use of or inability to use the website.

1103. If the terms and conditions are effective and there was no wilful misconduct or gross negligence on the part of DBAG, they have the following consequences:

i) Liability is excluded in respect of any failure of the GEM web system to report details of the trades for which there were inadequate fields in the RMS or ARCS system which fed through to the GEM website.

ii) Liability is excluded in respect of losses flowing from the system's inability to report on the MTM value of OCTs or EDTs.

iii) Liability is excluded in respect of losses flowing from the system's inability to report on the margin requirements of the portfolio with the OCTs and EDTs included.

iv) Liability is excluded in respect of errors in reporting on the trade details or the MTM valuation or margin requirements in respect of the OCTs and EDTs.

1104. Moreover, damages were excluded which were indirectly attributable to the use or inability to use the website with the result DBAG was exempt from liability in respect of any representations made by DBAG both on the website itself and by way of information based upon it.

1105. The terms and conditions therefore operated in the absence of wilful misconduct or gross negligence to exclude liability for breach of contract, breach of tortious duty and negligent misrepresentation by reference to information found on the website or lack of information which ought to have appeared on it.

1106. DBAG's inability to margin some of the OCTs and all of the EDTs in conformity with the terms of the FX ISDA, Schedule and CSA and its failure to book the EDTs accurately (or in some cases at all until the time of the margin calls) because its automated systems could not cope with them, had the result that there were no accurate MTM valuations for some OCTs and none for the EDTs on the website until the time of the margin calls, let alone valuations which were updated every 15 minutes in accordance with the Pitch Book. No margin requirements were set out which included these trades until the margin calls were made and, as appears below, those margin calls included approximate figures for the EDTs which were not calculated in accordance with the contractual provisions, although in fact they amounted to less than the amounts which the experts now agree DBAG could have called, had they calculated margin with the use of the computer programmes now available to their experts.

1107. It is the fact that some EDTs were booked as "Resurrecting Faders". This nomination was used as a placeholder but did not capture the terms of the trade nor give rise to appropriate MTM calculations or margining. A good number of TPFs were not booked at all until they "knocked out" and the realised profit or loss could be booked for settlement purposes, with the result that there could be no interim MTM or margining calculation. A further number of EDTs were not booked until shortly before the time of the margin calls because of the same booking problems and because they had not knocked out before that. Thus they were not the subject of MTM figures or margin calculations reported to Mr Said or reported at all at any time before the margin calls of October 2008. It is clear that Mr Walsh, Mr Quezada, Mr Kim and Mr Spokoyny were, to a greater or lesser extent, aware of these problems, even if others were not.

1108. As Mr Said agreed to the course of action taken by DBAG and by Mr Walsh in particular, in the light of its system's inability to cope with the EDTs and many of the OCTs, SHI can have no complaint. There was either no breach of the implied terms or there was a waiver of such breaches. Equally, even if what Mr Said did did not amount to an agreement or a waiver, the effect of his known acquiescence would, in my judgment, inevitably mean that there was no wilful misconduct or gross negligence on the part of any personnel at DBAG or of DBAG considered as a corporate body.

1109. In the absence of agreement, waiver or acquiescence, a deliberate decision to book a form of transaction in a system which is not capable of booking that transaction because of its complexity, to book as if it were a different transaction that did not share the same characteristics or to postpone booking of it until its conclusion would not, in my judgment, be exempted by the limitation of liability Clause. Even if those concerned lived in the hope that an alternative method would be found of valuing and margining the trades in question, the fact is that, over a period of many months, the trades did not appear as they should have done in the web reporting system and were not the subject of any alternative reports on valuation and margining. If SHI had not been told of DBAG's inability and failure to value and margin, the reporting default would amount to gross negligence if not wilful misconduct. A deliberate choice not to book transactions according to their terms, whether by using an unsatisfactory proxy or by not booking them at all is culpable negligence if not a wilful breach of contract. It would amount to intentional wrongdoing with reckless disregard for

SHI's rights. It is different in nature from mistakes made in reporting attributable to carelessness in entering trade details or computer errors, because of the deliberate nature of the course of action adopted, with knowledge of the system's inability to cope with the trades in question. It is the fact that SHI was informed and knew of the inability properly to book, value and margin the trades in question and waived any obligations of DBAG to do so that makes all the difference. Absent such agreement, waiver, knowledge or acquiescence, in my judgment a wholesale failure to record and report the information, whether on the website or otherwise or to tell the trader the position would fall foul of the limitation provisions.

1110. In the circumstances set out in this judgment in which information was allegedly provided to SHI, whether to Mr Said or to Mr Vik on the four occasions of which SHI complains (namely the meeting of 7th May 2008 between Mr Brügelmann and Mr Vik, the acceptance and execution of the payment instruction to transfer profit on Mr Said's FXPB account in June 2008, the email of 6th October 2008 stating that the current margin requirement was US$21 million and would, under the new margin parameters amount to US$40 million and the meeting of 7th October between Mr Brügelmann and Mr Vik) insofar as any information was given it was based on details which appeared in GEM and on the website. Mr Brügelmann, Mr Spokoyny and Mr Quezada relied on the figures which appeared in DBAG's systems and in particular on the GEM website, when giving information to Mr Vik.

1111. It cannot be said that there was wilful misconduct or gross negligence on the part of Mr Brügelmann, Mr Spokoyny or Mr Quezada because each believed that any information which they did give was accurate, being based upon DBAG's GEM web system. Insofar as Mr Quezada or Mr Spokoyny had any knowledge of the failures to book, value or margin and report on it, they knew of Mr Said's knowledge of the position, even though the significance of this appears to have escaped Mr Spokoyny at his meeting with Mr Quezada and Mr Said on 8th September 2008. There was no wilful or intentional misstatement and no reckless disregard for SHI's rights. The knowledge of Mr Said that EDTs could not be booked, valued or margined properly meant that any statement about current and projected margin requirement was made on the common understanding of DBAG's system's inability to cope with the EDTs and there was no gross negligence on the part of Mr Quezada and Mr Spokoyny. The fact that the email was passed on by Mr Said to Mr Vik cannot affect this issue.

1112. Even if the governing law to be applied were English law, I would take the view, in agreement with Andrew Smith J in *Camerata Property v Credit Suisse* [2011] EWHC 479 (Comm) that gross negligence has to mean something more than negligence. It is a question of degree and the expression may, as he held, include serious disregard of, or an indifference to, an obvious risk, but something more than casual negligence is required. For the reasons given above, on the facts, DBAG would not be guilty of wilful default or gross negligence under English law either.

1113. In the context of the FXPBA and the duties owed thereunder; in the context of a trader who would be expected to (and did in fact) keep his own records of trading and made his own risk assessment; in the context of the nature of reporting on computer systems, had it been necessary I would have found that such a Clause would be reasonable under Unfair Contract Terms Act.

24. Inducement of Breach of Contract

1114. SHI claims damages in tort from DBAG on the ground that it induced Mr Said to breach his contract with SHI (the Said Contract) by entering into the EDTs/OCTs and transactions in excess of the Said trading limits ($35 million and/or the PAL) and by concluding non-vanilla trades. There were no such limits in the Said Contract and Mr Said was not therefore in breach. Whatever the reasons for putting forward a claim for inducing a breach of the Said Contract in addition to the claims against DBAG for breach of the various collateral contracts and/or implied terms and claims in tort, these claims for inducement can fare no better. There were no additional restrictions in the Said Contract above and beyond those set out in the FXPBA and the Said Letter of Authority and the latter, for the reasons given by Justice Kapnick, as upheld by the New York Appellate Division, and for the reasons given earlier in this judgment, provides an additional defence to DBAG.

1115. Furthermore, Mr Said made his own decisions about the trades he wished to conclude in direct communication with the counterparty banks and the circumstances in which he persuaded Mr Quezada and Mr Walsh to accept the EDTs and OCTs in pursuit of his own trading objectives are set out elsewhere in this judgment.

1116. In short, there was no breach of contract on the part of Mr Said, no knowledge on the part of DBAG of any limitations on Mr Said's trading above and beyond those which appeared in the FXPBA and Said Letter of Authority and no inducement on the part of DBAG personnel. DBAG had no knowledge of any further restrictions and was under no duty to enquire.

1117. Mr Said did not act "in serious and repeated breach of his contractual and fiduciary duties owed to SHI" and did not "facilitate the misappropriation … of SHI's assets" by DBAG as alleged in SHI's defence. No question of constructive trusteeship therefore arises on the part of DBAG. DBAG was entitled to treat Mr Said as if he were SHI, under the terms of the Said Letter of Authority and did so. Its personnel had no knowledge of any breach of contract, breach of duty or breach of trust.

25. The FX Margin Calls

1118. DBAG's case originally was that the FX margin calls were all caused by market movements, as set out in its Reply. The inability to margin OCTs and EDTs did not emerge until February 2012, it being contended in the Further Information of 4th August 2011 that DBAG had correctly calculated margin at all times.

1119. There were five margin calls made on successive days between Monday 13th and Friday 17th October in respect of Mr Said's FX trading, although the third was subsumed in the fourth because funds were sought from sales of other SHI assets with DBAG in the GPF account. It is accepted by the forensic accountants for both parties that none of these margin calls exceeded the amount to which DBAG was contractually entitled by way of margin on a VaR basis, although it has taken construction of computer models to calculate the figures.

1120. Because of my findings on SHI's other complaints, the issues which arise are relatively discrete, although as always, SHI raises every conceivable argument (in this case nine separate contentions) in its closing submissions.

1121. In fact, as will be seen, the second to fifth margin calls all contained two distinct elements in consequence of SHI's decision to close positions, namely premium payable to close those positions, which were loss making, and margin in the ordinary sense of collateral for extant positions.

1122. I have already referred to the decision taken by Mr Vik over the weekend of 10th-12th October to close down positions in an orderly fashion and to put up the margin necessary to achieve the best results in the circumstances by judicious action. It was this decision which led to the agreed script for Mr Said's conference call with DBAG personnel on the morning of 13th October in which there was agreement to work together to close those positions whilst additional margin was being put up. This was a deliberate choice on the part of Mr Vik after lengthy consideration and Mr Said's original pitch to hold onto the positions and put up margin as required until the market improved. The actual amount to which DBAG was contractually entitled was not known to anyone at DBAG at that time, let alone to Mr Said or Mr Vik, because the necessary calculations were complex and the DBAG systems were incapable of making them. As I have found, Mr Vik, by this stage, was well aware of DBAG's inability to margin the EDTs and was not deceived by the attempts of its personnel to cover up this deficiency.

25(a) The Ninth Argument

1123. I can dispose of SHI's argument of duress without further ado. It was one of the more preposterous of SHI's arguments. As the documents reveal, Mr Said considered that DBAG was behaving very gently in the circumstances, at least until 22nd October and the idea that SHI, in the person of Mr Vik, paid US$511 million in premium and collateral over a period of five days as a result of duress exercised by Mr Brügelmann, as Mr Vik suggested, is risible. Mr Brügelmann, as I have said, was a man who stood in awe of Mr Vik and his prodigious skill at money-making. He was a Relationship Manager whose gifts lay in being politic and diplomatic and who tended, if anything, to smooth over problems and avoid confrontational issues. The notion that margin calls were paid by reason of a threat of unlawful action or illegitimate pressure by Mr Brügelmann is not tenable.

1124. In Mr Vik's witness statement, he said that Mr Brügelmann had said that SHI had to pay "or else" and, if payment was not made, DBAG would be able to take all the assets that SHI had with DBAG and DBS anyway, which meant that non-cash assets would be liquidated as the bank saw fit. This was simply not Mr Brügelmann's style and I accept his evidence and reject that of Mr Vik on this subject, insofar as it was maintained.

1125. In cross-examination Mr Vik appeared to say that the threats were the effect of the email exchanges between them and that it was Mr Said who was telling him that this was what DBAG would do (in language of rape and pillage of SHI's accounts). As Mr Said was telling him in emails how gently DBAG was approaching the matter and because the telephone transcripts show the agreement of DBAG to work with SHI in allowing closure at SHI's pace, subject to putting up margin, this makes no sense. Neither the emails sent by DBAG, nor the recorded telephone calls, nor Mr Said's emails to Mr Vik lend any support to any suggestion of duress. SHI can bring itself nowhere near satisfying the test for illegitimate pressure set out by Dyson J (as he

then was) in *DSMD Subsea Ltd v Petroleum GEO-Services ASA* [2000] BLR 530 at paragraph 131.

1126. Mr Vik accepted that the first margin call was different to the others and was in fact paid prior to any conversations he had with Mr Brügelmann. Mr Vik in cross-examination also said that when paying the first margin call he did so on the assumption that the VaR element in it (some US$43 million out of the US$98.8 million call) would be recovered once the positions had been closed down. He was therefore, on his own evidence, willing to pay this call.

1127. Mr Brügelmann denied any suggestion that he insisted on Mr Vik signing any transfer instruction or made any threat of any kind. If he had been asked about the consequences of not paying a margin call, he would not have said that DBAG would seize all SHI's assets. He would have known in general terms of DBAG's contractual right to declare an Event of Default and of the cross-default position under the 2008 Agreements but it was not his way to make threats, even if they were threats of lawful action which DBAG was entitled to take. It was always a matter for Mr Vik whether to produce margin, to reduce positions or both and whether assets should be supplied from his GPF account or elsewhere, although there was insufficient in the Pledged Account for the pledge to be increased by much by reference to it.

1128. Quite apart from the absence of any threat of unlawful action, any suggestion of duress is falsified by:

i) The voluntary nature of the payments made following the decision of Mr Vik to close out positions in an orderly way and to pay the margin required to do so in the meantime, by agreement with DBAG.

ii) The fact that much of the payment was for premium to close out positions.

iii) The choice available to Mr Vik to pay cash from the GPF account and to generate further funds in that account from which to pay the margin calls by sale of assets or to fund margin from SHI's other available assets, in order to avoid closing out positions.

iv) The absence of any protest at any stage in respect of payments made or closing of positions on the GPF platform and the absence of any assertion of any of the defences now put forward by SHI.

v) The knowledge of Mr Vik, imparted to him by Mr Said, that closing out positions would cost hundreds of millions and that the first call, anticipated to be US$90 million at the stage when that view was expressed, was much less than it could be.

vi) The seeking of legal advice by Mr Vik from Mr MacDonald of Wilmer Hale on 15th October, however limited that advice was.

vii) The agreement reached on 16th October to which I refer below.

viii) The honest belief on the part of DBAG personnel involved in making the calls that DBAG was entitled to ask for margin as requested.

ix) The entitlement of DBAG to declare an Event of Default and an Early Termination Date with all the consequences that might follow.

x) The hard-nosed business acumen of Mr Vik, a billionaire with experience of litigation. Although he was undoubtedly stressed during the week of the margin calls and required medical attention, Mr Said with whom he met and talked each day knew nothing of Mr Vik's trip to the hospital and considered that Mr Vik, though under pressure, was at all times calm, focussed on finding a solution and acted like a professional.

xi) Mr Vik's enquiries of Mr Brügelmann on 13th October about SHI's different accounts with DBAG, which I conclude were made with a view to seeing which of SHI's assets were exposed in respect of Mr Said's FX trading – "how are the existing accounts separate legally and in function?"

xii) The steps taken by Mr Vik to transfer SHI's assets beyond the reach of DBAG from 9th October onwards.

1129. All these elements show a man who was exercising his own business judgment and was not being subjected to unlawful pressure by DBAG to make payments. Mr Vik was the sort of man who was well able to fend for himself and to argue his corner. I conclude that the only reason for the duress argument is that, without it, the payment of over US$500 million to DBAG is so inconsistent with SHI's other defences that it was appreciated that they were most unlikely to succeed. The duress argument is a vain attempt to explain away the reality of the situation which was that, at the time Mr Vik authorised these payments, he knew that SHI had been receiving a free ride on collateral for a year, that DBAG had been unable to value or margin the EDTs accurately, if at all, and that Mr Said's authorised trading had brought about huge loss-making positions in the once in a century market which had emerged in October 2008.

1130. Running alongside the duress argument is the allegation that payment was made under a mistake of fact or by reason of misrepresentations by DBAG. If, as I have held, all SHI's arguments as to breach of authority or breach of contract fail in relation to the EDTs, the OCTs and trading limits, DBAG was entitled to call for margin in respect of all the outstanding transactions and the sums owing by way of margin or closing premium constituted contractual debts.

1131. It is said however that the payments were made under an operative mistake of fact as to the amount of available cash in the GPF account by reason of the Russell Multiplier Error (which was only discovered on 16th October) and the Ignored Payments Error (which was discovered on 22nd October). The first operated for a day before correction and had no material impact. The second when discovered and disclosed to Mr Vik led him to assert falsely that SHI had no other funds to pay.

1132. DBAG had requested, processed and permitted transfers from the GPF account by sending transfer instructions to Mr Vik which he then signed. It is said that by sending such instruction forms for signature, DBAG represented that there were sufficient funds in the GPF account to pay the calls when, as a result of the system's two errors, there were not. In practice it was Mr Brügelmann who was calculating what needed to be sold to raise the funds for the calls and obtaining Mr Vik's

instructions as to what to sell in order to arrive at the sums needed. He continued to sell until the money ran out.

1133. It is impossible to see how these mistakes on the part of DBAG, albeit involving massive amounts, could either vitiate payments made by SHI or impact on debts which were due from SHI. What actually happened was that SHI's GPF accounts were debited with sums which were then credited to SHI's FXPB trading account, thereby creating a deficit in the GPF account which would otherwise have been a deficit in Mr Said's trading account. The sums debited were sums owing from SHI to DBAG on the findings that I have made and in those circumstances there can be no question of unjust enrichment. The mistake on SHI's part was, at best, a mistake as to the assets available to it in the GPF account. It was not a mistake as to the nature of the payment, the nature of transactions under which the payments were made or as to the amount owing. Whether or not a request to transfer sums and the forwarding of instructions to be signed in order to effect that transfer can amount to a representation of available sums in an account, there is no suggestion of any detrimental reliance or alteration of position by SHI other than the signing of the instructions which had the effect, supposedly, of paying money that was owing to DBAG. Mr Vik has said in evidence that SHI will pay whatever sums are found to be due and owing to DBAG and there can be no relevant damage caused by any implied misrepresentation and no basis for saying that DBAG had been unjustly enriched. Notwithstanding the width of dicta in *Barclays v Simms* [1980] QB 677 and more recent decisions, there is no basis for a restitution claim and no claim for damages will run either.

1134. There are three further mistakes alleged by SHI in its closing submission:

i) Mr Vik understood that SHI's net assets with DBAG exceeded US$750 million on 14th October 2008 based on what Mr Brügelmann told him on 7th October.

ii) Mr Vik was induced to believe that SHI was liable in respect of the FX margin calls under the Equities ISDA and the Equities PBA.

iii) Mr Vik made payments in the mistaken belief that each margin call (taken with its predecessors) represented the total amount of SHI's liability to DBAG on the date on which it was made.

None of these alleged mistakes can affect the position.

1135. As to the first, the sheet which Mr Brügelmann handed Mr Vik on 7th October headed "Sebastian Equity Position" included figures for assets held in Geneva and London. It included the sum of US$67,438,318 for the Pledged Account but contained no trading figures for Mr Said's FX trading. By contrast, it not only set out the cash and other assets in Mr Vik's GPF account in London but also referred to his trading position and the unrealised loss of 1.7 billion NOK. This sheet was substantially accurate. I set out elsewhere my conclusions as to what was said at that meeting, but at that stage, Mr Vik knew far more about Mr Said's trading than did Mr Brügelmann as the email exchanges between Mr Vik and Mr Said make clear.

1136. More importantly, however, by the time Mr Vik came to make the margin payments, he knew of DBAG's problems in valuing and margining the EDTs and was under no

illusion as to the hundreds of millions required to close down the positions. He was also aware of SHI's other available assets which he had started to transfer elsewhere. Over the weekend prior to 13th October he decided to pay the premium and margin necessary to close out positions in a judicious way. Nothing said by Mr Brügelmann on 7th October could have had any causative effect in relation to the making of margin payments or the closing out of positions on the GPF account.

1137. As to the second alleged mistake, Mr Vik did not think and could never have thought that SHI was liable to pay FX margin calls in respect of Mr Said's FX trading under the Equities ISDA and the Equities PBA. He knew that Mr Said's FX trading was conducted under the FXPBA and the FX ISDA with its Schedule and CSA. (Indeed, on his own case he thought that his FX trading was conducted under those agreements too, although I have found against him on this). He asked Mr Brügelmann on 13th October about the different accounts that SHI had and their separate legal identity and was told of those in the GPF account in London and of the two FXPB accounts, one of which was for Mr Said's FX trading and the other, the Beatrice account, was for his own FX trading though it remained unopened.

1138. He then asked Mr Brügelmann for copies of the agreements for all the various accounts "so I can thoroughly understand how it works". Mr Brügelmann sent him the copy agreements and statements that he had available the next day, which related to Mr Vik's trading under the title "DB London Equity Prime Brokerage Account – Agreements and Statements" and "DB London NOK Swap Position". The enclosures were the Equities ISDA and CSA, the listed F&O Agreement, the Equities PBA and the Master Netting Agreement. There was no suggestion at all that the margin calls were being made under those agreements which had been forwarded, and the FXPBA was not enclosed as Mr Brügelmann did not have an electronic copy available and did not acquire one until virtually the end of the month. It seems from an email disclosed by Mr Vik (without those surrounding it) that in the preceding days Mr Vik had been perusing copies of the Agreements which he had, including an incomplete draft of the FXPBA which he contrasted with the more recent agreements with DBAG on the GPF account. Whatever documents Mr Vik then supplied to Mr MacDonald of Wilmer Hale for advice, Mr Brügelmann had not told him, and no-one else had told him, that margin was being demanded under the terms of the Agreements which had been sent to him. Mr Vik's suggestion that a misrepresentation was made to him is fanciful and this constitutes another spurious allegation supported by false evidence on his part.

1139. The third mistaken belief is again one which I find that Mr Vik did not have and could not have had at the relevant time. The second to fifth margin calls included a requirement for the payment of premium to close out positions as well as requests for collateral. Mr Vik wanted positions to be closed out by Mr Said on a daily basis and knew that was taking place. He knew that premium would be payable in respect of each day's closures. Moreover, collateral requirements would, as he knew, change from day to day with movements in market prices so that, as long as any positions remained open, there was always the possibility of further margin calls being made, whatever amount was required in the first call on 13th October. Mr Vik knew that the first call was not going to be the last.

1140. More importantly however, Mr Vik knew that DBAG had not called the full amount of margin to which it was entitled because of its problems in valuing and margining

the EDTs and because the first and second margin calls were recognised by Mr Said as being insufficient by some distance and/or contained obvious errors. Furthermore, on 16th October Mr Vik and Mr Said, prior to payment of the third/fourth margin calls, in a telephone conference call with DBAG personnel, made it plain that, as always, they were looking to pay less margin. They sought and obtained the agreement of DBAG to such lesser margin inasmuch as DBAG agreed not to charge margin on anything other than an MTM basis, foregoing any entitlement to VaR or liquidity add-on. They therefore knew, in relation to each margin call, that DBAG was not pursuing its full contractual entitlement.

1141. Additionally, there is, contrary to Mr Vik's evidence, no reason to believe that if the calls had been made for the full contractual entitlement on each day, Mr Vik would not have paid them. SHI paid five margin calls totalling US$511 million because Mr Vik knew that he had no good reason not to do so, being bound by Mr Said's trading activities. It mattered not whether the requirements were expressed in one call, two calls or five calls and in reality both Mr Said and Mr Vik not only sought to reduce margin to the minimum but were pleased when successful in that. A failure to pay would have constituted an Event of Default with all that followed from that which Mr Vik was keen to avoid in order to close out positions in the manner that he and Mr Said thought best. He would not have decided to default on the calls and let DBAG close out the positions immediately because he had decided over the weekend of 10th-12th October to put up margin so that he and Mr Said remained in control of the decision making on unwinding the loss making positions.

1142. It was not in fact until DBAG revealed its computational inability and the mistakes amounting to US$430 million on the GPF platform that Mr Vik's approach seems to have changed. When presented with a request for payment on the GPF account, in consequence of the Russell Multiplier Error and the Ignored Payment Error, no further payment was forthcoming. Until then Mr Vik paid the margin and premium required to close down Mr Said's unprofitable trading. There is no reason to think that he would have adopted a different approach had the figures been larger as the forensic accountants say they should have been, since Mr Vik had taken an express decision on Sunday 12th October to wind down the trades in the best way possible, putting up whatever margin was required in order to do so.

1143. There is therefore nothing in the arguments about duress, misrepresentation or mistake in relation to the margin payments, which together constituted the ninth argument raised by SHI in relation to the margin calls.

<u>25(b) The First Argument</u>

1144. I turn then to the first argument made by SHI which is that DBAG was obliged, if it was going to demand margin, to demand the full amount to which it was entitled on the date of demand.

1145. I have previously set out in this judgment my conclusions as to the proper construction of the FXPBA, the FX ISDA, its Schedule and the CSA. Under the express terms of these instruments, DBAG had no obligation to calculate, notify nor demand margin, in the shape of a "Delivery Amount" although it had the right to do so. If DBAG chose to exercise that right, then it was obliged to calculate the Delivery Amount in accordance with the contractual methodology and notify SHI of an

increase in the Allocated Portion of the Pledged Account and/or demand a transfer of the Delivery Amount into the Pledged Account in order to increase the size of the Allocated Portion. I have also held that there was an implied term in the FXPBA that DBAG would provide a web reporting service which set out details of the trades concluded, the MTM valuation placed upon those trades by DBAG and the margin calculations relating to the SHI portfolio as a whole, subject to the GEM terms and conditions.

1146. Where "Structured Options" were concerned, the prior consent of DBAG was required before they could become Accepted Transactions. DBAG was entitled to decline to accept any such trade or to accept it on any terms agreed with SHI. As set out elsewhere in this judgment, the EDTs were accepted expressly on the basis that they would not be the subject of accurate reporting of their MTM, and by necessary implication would not be included in the margin calculations which were reported. By both words and conduct Mr Said agreed that nothing need be done about these transactions until knock-out or maturity when they could be cash settled. Mr Said had the necessary authority from SHI to do this as set out in the Said Letter of Authority. Moreover the reason for Mr Said's agreement to waive any requirement that DBAG report accurate MTMs and margin calculations of various EDTs and the Structured Options was that he knew that DBAG's systems could not cope with them. He knew that was why they were provided for in the FXPBA in the way they were, as appears from his Timeline.

1147. When DBAG was faced with the margin demands of MS and the Trade Desk became conscious of its exposure to SHI on the direct TPFs, it raised the question of margin with Mr Said who could not object and did not object, knowing that he had had a free ride for a year as a result of the DBAG systems' inability to handle the EDTs.

1148. Since the implied term with regard to reporting on the web service was waived, the express terms of the FXPBA, the FX ISDA and the CSA must apply. As I have already held, the provision which entitles DBAG to call for margin is for its own protection. Paragraph 2(a) of the CSA requires SHI to transfer Eligible Credit Support at a value equal to the applicable Delivery Amount, upon a demand made by DBAG. The paragraph goes on to define what is the applicable Delivery Amount by reference to the difference between the Credit Support Amount and the value of the Credit Support Balance (the Allocated Portion of the Pledged Account). There can however be no reason in law why DBAG should not demand a sum less than its full entitlement. As DBAG would be entitled to waive its entitlement to demand any sum at all, so also it is entitled to waive its right on any day to demand its full contractual entitlement. This carries with it no obligation to explain that the sum sought is less than the full contractual entitlement for that Valuation Date but, having once waived the right to call for more than the figure demanded on that valuation date, it would not be open to DBAG to ask for more on the same day. It would however be entitled, on the following day to demand its full contractual entitlement or, once again, less than that if it chose to do so. This is consistent with DBAG's entitlement to call for additional collateral under the terms of Part 1(l)(iii) of the Schedule to the FX ISDA where, if DBAG should "for any reason deem that there are insufficient Eligible Assets held pursuant to the terms of the [Pledge Agreement] to satisfy SHI's obligations" to it, it could give notice and [SHI]'s would then be obliged within two

business days to deliver additional collateral assets into the Pledged Account or in some other form satisfactory to DBAG.

1149. It is obvious, in my judgment, that a demand for less margin than the full contractual entitlement does not invalidate the margin call itself. If, as DBAG points out, for any reason DBAG could not calculate margin on a particular transaction, this would not have the effect of debarring it from making a margin call in respect of the balance of the portfolio unless the transaction had an offsetting effect. Moreover, even if there was a breach of some kind in calling for less than the full contractual entitlement, it would not be possible, in the ordinary way, for the party on the receiving end of the call to show that any loss had been suffered. In this case, as demand could also have been made under Part 1(l)(iii) of the Schedule to the FX ISDA and I reject Mr Vik's evidence that he would have acted differently if a demand had been made for the full contractual entitlement under paragraph 2(a) of the CSA, there is no loss suffered at all.

1150. As to SHI's argument that the consequence of the approach of DBAG is that it could demand small and seemingly random amounts every day without SHI ever knowing the extent of its potential liability, this point is met by the need for calculations made by DBAG to be made "in good faith and in a commercially reasonable manner" under paragraph 9(b) of the CSA, which represents the second argument made by SHI in this regard.

1151. If DBAG had demanded excessive margin, then the demand for the surplus would have been invalid and SHI would not have been obliged to pay that surplus. A failure, however, to demand the full margin to which DBAG was contractually entitled simply meant that it lacked the collateral for which it was entitled to call and left itself exposed in the event of any default by SHI. That can hardly be a ground for complaint by SHI.

25(c) The Second Argument

1152. The requirement to effect calculations "in good faith and in a commercially reasonable manner" set out in paragraph 9(b) of the CSA imposes an additional obligation over and above that which applies to the exercise of any contractual discretion which has, as a matter of necessary implication, to be exercised in good faith and rationally in the sense of Wednesbury reasonableness – see *Socimer Bank Ltd v Standard Bank Ltd* [2008] Bus LR 1304 per Rix LJ at paragraph 66 and *Barclays Bank Plc v Unicredit Bank AG* [2012] EWHC 3655 (Comm) per Popplewell J at paragraph 63.

1153. The requirements of good faith and commercial reasonableness look essentially both to a subjective and objective test. Neither criterion, in my judgment, is likely to impinge upon DBAG's entitlement to call for margin, or to waive its entitlement in full or in part, save in unusual circumstances. Paragraph 9(b) cannot be read as a condition precedent to the validity of a margin call but, once again, to the extent that there is any breach, damages would follow, if any were suffered, which in most situations will be unlikely. I cannot see how any damages could result here since it is accepted that the margin calls were for less than the full contractual entitlement and I have found as a fact that it would have made no difference to Mr Vik had the full amount been demanded, because he had already decided to wind up the trades and get

out of the loss making positions as economically as possible, whilst putting up margin to do so in the meantime.

1154. SHI points to the figures which the forensic accountants have calculated as DBAG's contractual entitlement in October 2008 if VaR is included. Mr Inglis' figure for the Delivery Amount on 13th October was over US$900 million. As compared with this figure, the first margin call on 13th October was for US$98,879,941. On 14th, 15th, 16th and 17th October the margin calls were for US$202,625,201, US$124,513,350, US$175,087,929 and US$34,886,361, although the fourth margin call on 16th subsumed the third margin call of the previous day.

1155. As at 13th October 2008, Mr Said still had eighteen EDTs outstanding, two of which were direct trades with DBAG, five with CS, six with GS and five with MS.

1156. As appears in the section dealing with the history of Mr Said's FX trading, in a telephone conversation on 9th October, Mr Said told Mr Quezada that he was going to reduce his positions, particularly with MS where a loss would probably be incurred, that there would be some restructuring and hedging and that if there was margin to post, Mr Vik would sort it out. Mr Quezada talked of matters being "under the radar screen" but if MS kept on pressing he would have to press SHI.

1157. At around noon on Friday 10th October however, Mr LaScala, DBAG's Head of Currency Trading in North America, with his business manager, had a face-to-face meeting with senior members of the FXPB team, Mr Gunewardena, Ms Liau, Ms Serafini and Mr Spokoyny. Mr LaScala told them that the two direct EDTs were "underwater" and Mr Spokoyny then discovered that these two direct trades were not to be found in GEM at all. There were no large losses which appeared there and no trade details or similar trade details to the trades as described by Mr LaScala. Investigations began in order to see what else there might be in SHI's FXPB account. In the late afternoon of 10th October, in a telephone conversation between Mr LaScala, Ms Liau and Mr Spokoyny, Mr LaScala said he had the RMS ID of one of the direct EDTs and gave details of EDT 31. Mr Spokoyny could only see Resurrecting Fader options in GEM and when Mr Geisker joined the call he said that DBAG had been doing these options for a year and that Mr Quezada was aware of the issue. It seems that Mr Quezada then joined the call and said that the "structures" did not fit nicely into any system and the issues of booking and margining were then identified for direct and indirect TPFs. When Mr Walsh was brought into the picture he confirmed that he booked indirect TPFs as Resurrecting Faders and that he thought that direct trades were booked with a Generic Sales Ticket ("GST") which he guessed did not feed into GEM. Mr Walsh confirmed that the booking as a Resurrecting Fader did not capture the trade and that DBAG did not necessarily have the correct product type to book it which was why a placeholder was used. During the course of the Friday Mr Spokoyny came to appreciate that valuation and margining was an issue and sought guidance from Mr Avery in an email. The intention expressed by Ms Liau on the Friday was to call for an additional US$40 million of margin after the Trade Desk had done a manual calculation for the direct EDTs, which it seems it probably did that day. The revised margin parameters of 2.5 x 10 day VaR were implemented in GEM on that day but liquidity add-on did not feature in GEM so it would have to be the subject of a manual calculation.

1158. Mr Quezada spoke to Mr Said on Saturday morning 11th October and then sent the email requesting a conversation on Monday about increasing the collateral in the light of the make up of the portfolio and recent market events. I have earlier referred to the continuing discussions between Mr Said and Mr Vik over the course of the weekend in which they decided what action SHI would take and the approach to be adopted with DBAG in the telephone call on the Monday.

1159. At the time of the telephone call on Monday 13th October with Mr Said, DBAG did not know what sort of figures to ask for by way of margin. Mr Spokoyny was looking for figures from CMV on the indirect TPFs and from the Trade Desk on the direct TPFs. Mr Spokoyny said that there were no MTMs on the indirect trades on any system, notwithstanding bookings as Resurrecting Faders.

1160. In the telephone call with Mr Said, in which Mr Said detailed SHI's decision to close down trades and provide margin, Ms Liau gave him a ballpark figure of US$40-60 million margin, tending towards the upper end. In the call she said that the two direct TPFs had not been included in Friday's margin position but said nothing about any booking, valuing or margining problems on the EDTs generally. By this time it was known to senior management that the direct TPFs had not been margined but the position with the indirect TPFs was still uncertain. There was no logical basis for Ms Liau's figure of US$40-60 million.

1161. It was in these circumstances that Mr Spokoyny sought to check the position with Mr Costa-Santos in London, knowing that Resurrecting Fader options appeared on the list of trade types that ARCS VaR could handle, but not appreciating how different TPFs were and thinking that Resurrecting Faders might represent a rough approximation for VaR purposes. Mr Costa-Santos said he did not think that ARCS VaR could handle these trades and they needed to be dealt with in DB Analytics. On being asked if he would produce MTMs, he said that he would need the trade confirmations and it was a decision for his office to make as to whether or not to provide figures.

1162. In this situation Ms Liau asked Mr Spokoyny to produce some figures ("a rough approximation") for the first margin call, knowing there would be no MTMs for the indirect TPFs while including US$41 million for the two direct TPFs on the basis of figures supplied by the Trade Desk through Mr Geisker.

1163. Ms Liau was insistent that the first margin call be produced before London and Switzerland closed for the day and Mr Spokoyny's evidence was that he did the best he could with the available information. The margin call statement included a negative MTM figure of just over US$103 million. This was produced by combining the MTM on the Trade Details (Outstanding Trades) Report on GEM of US$62 million with the figure of US$41 million provided by the Trade Desk for the two direct TPFs. The VaR figure which appeared did not take into account direct or indirect TPFs and came from the system. The liquidity add-on was his own calculation but included nothing for the TPFs or non-TPF Options. By an email sent early the following day, Mr Said asked how the CMV amount of US$103 million plus was calculated because in the Collateral Summary in GEM Web Reporting, it was US$31.8 million. He understood that US$41 million was ascribed to the valuation of the TPFs (which he knew were not on the system) and wanted to know about the US$30 million discrepancy. From this it appears that the Trade Details (Outstanding Trades) Report on the GEM web system showed a different MTM figure from that in

the Collateral Summary Report on the same system. Leaving aside a timing difference, the only explanation would appear to be that, in some way, the Collateral Summary Report did take into account the Resurrecting Faders in producing MTM numbers, which appears to be a repetition of the problem that Mr Said had long since picked up.

1164. During the afternoon and evening of 13th October, Mr Costa-Santos reverted to Mr Spokoyny telling him that he thought the MTMs on the indirect TPFs could be as much as US$250-$350 million. He explained that the explicit notional had to be multiplied by the number of fixings to ascertain the true notional which, on the TPF they were discussing was actually US$770 million. Based on another document which they were discussing which Mr Spokoyny could not identify, Mr Costa-Santos suggested that DBAG should be requesting US$150 million. Although Mr Spokoyny said that DBAG began to obtain MTMs from Counterparty banks after the first margin call, he said he did not know that Mr Walsh had sent an email to Mr Said on 9th October with the MS spreadsheet including an MTM for five TPFs amounting to US$150 million. The same day, Mr Spokoyny received confirmation from Mr Avery that ARCS VaR did not value Resurrecting Fader options or timers with a very large number of fixings, the very same information as had been given to Mr Walsh and Mr Quezada earlier in the year.

1165. FXPB was reluctant to tell others in the bank about the late booking, margining and valuation problems encountered with the EDTs. In a phone conversation with Mr Brügelmann and Mr Halfmann an explanation was given for the margin calls and the margin requirement shooting up from US$35 million to US$100 million between Thursday and Friday of the previous week. It was said to be because Mr Said had concluded two very sizeable pivot options where the market moved quickly against him and he was down US$50 million on those trades. By the end of 13th October, if not before, it must have been plain to all those concerned in the FXPB investigations that both indirect and direct TPFs had never been margined by ARCS and that the indirect TPFs had been incorrectly booked as placeholders, but there was a reluctance to admit this to DBS. Mr Walsh, Mr Quezada and Mr Kim had known the position for a long time and once they were brought into the picture, notwithstanding, it would appear, some posturing by Mr Quezada, and Mr Kim, Ms Liau, Mr Spokoyny, Ms Serafini and Mr Gunewardena all came to appreciate the position. They remained unwilling to speak openly of this or to tell DBS the true position.

1166. On 14th October Mr Vik paid the first margin call by instructing a transfer of funds from his GPF account with DBAG. This payment was greeted with relief by Ms Liau. Mr Walsh travelled from the New Jersey back office to the front office at 60 Wall Street with a view to rebooking the EDTs, presumably by using DB Analytics but, whether because of the impossibility of producing VaR figures or otherwise, the exercise seems to have been abandoned. Mr Gunewardena berated those responsible to him, whilst he himself was the subject of criticism by a yet more senior bank employee. Ms Liau and Mr Kim berated Mr Walsh and it does not appear that Mr Kim and Mr Quezada owned up to the agreement that they had reached between them in June 2008 as to acceptance of the TPFs, whether or not they knew of the total numbers which remained unbooked until October. Everybody was saying that the trades should not have been taken on at all. Whilst Mr Walsh said that there had been misunderstandings as to how the approval process for the EDTs was meant to work

and that he and Mr Quezada really did not realise the huge risk on the trades until he had received MTM figures on them the previous week, he admitted when discussing the matter privately with Ms Ng, that he, Mr Kim and Mr Quezada were all going to be in a lot of trouble.

1167. Very shortly after the first margin call was paid, Ms Liau told Mr Brügelmann that there was to be a further margin call of US$212 million which he had trouble understanding and thought that Mr Vik would have trouble understanding. He said that he had been on the phone to Mr Vik and had told him that Mr Said had put on two option trades at the end of the previous week which had blown up immediately, which was simply passing on what he had been told the previous day. Mr Brügelmann was not to know that what he had been told was untrue and that Mr Vik himself would have known that it was untrue when it was passed on to him because of his extensive exchanges with Mr Said, his investigation of Mr Said's outstanding transactions and his knowledge of the bank's inability to value or margin the EDTs. Ms Liau then explained that there were three reasons for a further margin call of US$202 million, on top of the US$98 million requested the previous day. The first was the change in the VaR parameters which had been implemented. The second was that there were two big options that Mr Said had done the previous week which were not booked until the current week. The third was that there were eleven other pivot options which had drastically moved against him. She said that most of the required figure was attributable to the MTM and not to initial margin. Whilst Ms Liau was doubtless seeking to cover her own back and protect FXPB from internal criticism within DBAG and DBS, it must now have been obvious to her that what she said to Mr Brügelmann might well be passed on to Mr Vik and/or Mr Said who would know at once that there was no truth in what was being said. It was therefore not only dishonest but stupid.

1168. The second margin call was sent seeking further collateral of US$202,625,201. In a telephone call between Mr Said, Ms Liau, Mr Spokoyny and Mr Quezada, Mr Said asked if, after this call had gone out, DBAG was comfortable with the figures, absent moves in the market. Ms Liau said that she was but the numbers that were changing were all mark to market numbers. She said that he had conducted a lot of indirect trades and they were looking at the MTMs received from the Counterparty banks and to a large extent were relying on them. Mr Said stated that their marks were pretty accurate and Ms Liau then admitted that she did not have GS' or CS' marks for the day and Mr Spokoyny said the marks received represented the position at the end of Friday though there were more recent marks from MS. The margin call was therefore based on an estimate.

1169. There is no doubt in my mind that Mr Said realised that DBAG was still operating in the dark in seeking to assess margin. He knew that the first margin call was well short of the hundreds of millions of dollars that were needed to reflect the true mark to market situation in the light of the MS figures he had received earlier. He also appreciated when he received the second margin call that it was riddled with errors. As admitted by Mr Spokoyny in cross-examination the effect of various errors he made was that the margin call was understated by US$197.4 million. From the terms of the telephone conversation following the margin call, Mr Said knew that DBAG had no MTMs of its own on the indirect trades and had to get them from counterparty banks. He knew that Mr Spokoyny had made an estimated adjustment on the MTMs

received from such banks which were not up to date whilst more recent MTMs were used in respect of the MS TPFs.

1170. In evidence Mr Spokoyny said that he did not believe that MTMs provided to DBAG by CS and GS were in fact used to produce the second margin call and the MTMs included were merely approximations on DBAG's part. On a spreadsheet which Mr Spokoyny sent Mr Costa-Santos, after sending out the second margin call, upon which he set out the numbers used for the call, three of the five MS TPFs had MTMs provided by MS but the other two had zero MTMs because they were being closed out. Mr Spokoyny said he made an assessment of the open TPF positions by looking at intrinsic values based on a projection of what the settlement amounts would be in the future with possible cross-checking against the MS MTMs. On the spreadsheet which accompanied the margin call five items appear as positive MTMs when they should be negative, which would have turned the negative MTM of US$111 million into negative US$309 million approximately for the structures included in it. The indirect TPFs were not included in any calculation of VaR though there was a manual calculation of VaR for the two direct TPFs. There was no liquidity add-on for any TPF or other options in the second call, merely liquidity add-on for the cash transactions. Mr Spokoyny did not know why there was a difference between the figures in the first call and second call for liquidity add-on. As he accepted, the only correct figures in this margin calculation sent to SHI were the first two, for the on-deposit amount and the pending premium. The remaining six lines were all wrong.

1171. There were no systems within the bank that could incorporate the TPFs in a portfolio VaR margin calculation. If DB Analytics had been used, it would merely have resulted in trade level pricing which could be put into RMS and thence into Sentry which merely aggregated figures. It would not have been possible to feed figures through to the ARCS VaR engine.

1172. In an exchange with Mr Vik, Mr Said was later to say that these figures were not even remotely right, referring to the wrong sign on the structures which gave rise to impossible figures which were readily seen to be wrong.

1173. Mr Vik raised with Mr Brügelmann his amazement that "when all Klaus had was a base capital of 35 million" such risks could have been accepted by DBAG. There was no suggestion of any trading limit and what Mr Vik was driving at was DBAG's inability to margin, of which he knew but which DBAG was not admitting. In the same email he told Mr Brügelmann that he had instructed Mr Said to close out all positions as the opportunities to do that presented themselves, especially the positions that had turned into forwards (showing that he fully understood the nature of the range trades and what had happened to them). It is clear also from exchanges of emails with Mr Said that he was keeping a close eye on the way Mr Said was closing out positions that day. From the terms of his conversation with Mr Quezada, Mr Said was in regular discussion with Mr Vik ("we talked about these things nineteen times today") and he specifically referred to the EUR/NOK position which they had been talking about because it had become effectively "just a straight cash position". He said that Mr Vik knew what the positions were, not only from him but from the spreadsheets and that he understood the structures.

1174. The third margin call was preceded by a telephone call between Mr Spokoyny, Mr Quezada and Mr Said in which the figures were discussed, including the US$140

million which was required as premium for the transactions Mr Said was closing. Mr Spokoyny said that "on the models that we ran … yesterday … versus now … we're seeing a mark to market decrease of about 40-50 million". He then said that with nine structured options still open another US$40 million was required based on VaR calculation. On being questioned about this by Mr Said Mr Spokoyny said that he would forward a spreadsheet showing the figures. Mr Spokoyny's evidence was that the MTM figures for the remaining open TPFs were based on DB Analytics pricing for the first time and the reference in the telephone call to a model being run the previous day was untrue. The basis of the MTM figures for the TPFs was entirely different on 14th and 15th October. The spreadsheet which accompanied the call showed sixteen TPFs with a total negative figure of nearly US$300 million, with six left blank, one knocked-out and five closed out with premium due of US$141 million. The premium due for the three trades closed the previous day was not included, amounting to US$106 million, which should have appeared either as a reduction in the on deposit amount or as an increase in the pending premium figures. Mr Spokoyny said he was given the figures for these items by Mr Kim or Ms Liau. He thought the US$40 million VaR for the TPFs was his estimate for the nine outstanding trades, at US$5 million each, rounded down. The end result was a third margin call of US$124,513,350.

1175. The US$106 million pending premium missing in the third margin call had in fact been included in the pending premium figure contained in the previous margin call and it is highly likely that Mr Said would have realised this, even though Mr Spokoyny, in his haste, had not done so. As he said in evidence, this was a frantic week, not just for SHI but for DBAG and its other customers. Five errors made in the second call had however been corrected. It is also likely that Mr Vik knew what the position was because the documents show that he was in regular detailed discussions with Mr Said about the trades to be closed and the resulting figures, including those in the calls and spreadsheets.

1176. Internal reports from Mr Halfmann and Mr Brügelmann to DBS and PWM management attribute the calls to market movement in option positions which had been recently concluded, being ignorant of any difficulties in valuation and margining that FXPB had.

1177. On 16th October Mr Vik asked Mr Brügelmann to provide information on all the trades that DBAG had accepted from Mr Said and how they had been margined every day. He asked for a report as soon as possible. Mr Vik, of course, knew that this was not possible because DBAG had not been margining the EDTs for the previous year, as he had been told so by Mr Said. This became an ongoing theme of the conversations between Mr Vik and DBAG who studiously ignored the request and continued to maintain the position that everything had been properly valued and margined, in circumstances where Mr Quezada and Mr Walsh knew (even if no-one else did) that Mr Said was fully aware of DBAG's systems' inability to cope with the EDTs and it would it be logical to think that Mr Vik knew too. From the terms of conversations between Mr Quezada and Mr Said on the telephone, it seems that Mr Quezada was not at all sure how much Mr Vik knew, and Mr Said maintained that Mr Vik was not interested in talking to Mr Quezada, when the latter suggested that he might speak directly to him.

1178. Mr Vik continued to press Mr Brügelmann by email for the margining information and Mr Brügelmann forwarded this to Mr Gunewardena and Ms Liau, stressing the importance of it to Mr Vik. In a conversation later that day Mr Vik expressed his lack of understanding as to how these giant amounts of money could arise in the course of three days but said that all that he now wanted was for DBAG and SHI "to work together to just sell down these positions in an orderly way as we are doing". He confirmed that SHI was going to sell all its positions save perhaps the EUR/NOK position which he wished to retain. There was insufficient cash left in the GPF account to pay the margin calls, so Mr Vik and Mr Brügelmann discussed which assets should be sold in that account to meet the calls.

1179. In mid-morning EST, there was a conference call between Mr Gunewardena, Ms Serafini, Mr Brügelmann, Mr Vik and Mr Said. Before Mr Vik and Mr Said joined in the call, Mr Brügelmann explained that Mr Vik and Mr Said would be outlining what they were going to do to reduce SHI's positions but wanted to understand the evolution of the negative MTMs on the nineteen EDTs that were extant prior to the margin call. Mr Gunewardena said they could give him a high level answer and a much more detailed analysis later to make him comfortable that there was nothing untoward. He said that the problem was the exotic options which became negative very quickly over the last week, that they were priced on a weekly basis and that there was a big move the previous Friday.

1180. The call is important. Mr Vik opened by asking how, when US$35 million security had been allocated for Mr Said's trading, there had been no margin demands of any kind before the weekend in the light of the figures now being requested. Mr Gunewardena said that DBAG would be happy to provide the details. Mr Vik said that with his better understanding of what had happened, SHI was in the process of shutting down as many positions as quickly as possible, without throwing out the baby with the bathwater. Mr Said then explained the course of action that he was adopting and stated that what had made the TPFs so unbelievably costly on an MTM basis was the utterly unprecedented rise in implied volatility so that even TPFs that were likely to knock out in five or six days still had a large negative value. He said he understood options valuations and was not saying that DBAG was wrong. What he was saying was that they needed "to work out some time" between them in order to close out trades in any sensible way. He said that SHI had no intention of taking more risk and was reducing it aggressively. Mr Gunewardena pointed out that DBAG had about US$255 million of premium payments to make on behalf of SHI to settle positions which Mr Said had closed and, subject to checking the marks received from Counterparty banks, it appeared there was around another US$180 million MTM variation margin due, including a trade which had just closed out. The cash hedges and other options had a further MTM negative value of around US$88 million. The effect of all this was that, as against US$346 million posted and US$125 million more to come on the third margin call, there was still a shortfall of another US$45 million approximately.

1181. It was then that Mr Vik and Mr Said made a case for reduction in margin (as they had done in a previous call with Mr Brügelmann). Mr Said suggested that the VaR element should not be included because SHI was in the process of closing down the trades. In those circumstances since VaR was there to provide for potential losses in liquidating positions, it was not appropriate that it should be charged on positions

which had closed, even if settlement had not been made. Mr Gunewardena was sympathetic to this. He said that the numbers that he had been giving them thus far did not include initial margin, but that adjustments could be made "to our VaR model" to exclude the closing out trades so that risk was assessed only on the open positions. Mr Gunewardena pointed out that US$45 million was still owing without any element of VaR (assuming the US$125 million was paid on the third margin call). He said that he was seeking to reach a result which protected DBAG in a rational way but achieved an optimal result for SHI. He then explained that, from "a thirty thousand foot level" there had been unprecedented moves of implied volatility and distress the previous week. There then followed an exchange about Mr Said losing US$500 million when Mr Vik had put aside US$35 million for him to play with, whilst Mr Gunewardena and Mr Brügelmann made the point that there was no way in which a Foreign Exchange book could be limited to a US$35 million exposure. Mr Gunewardena said he would investigate the position further.

1182. Mr Said said that SHI was not saying that the MTMs were wrong but asked if the margin calls reflected real risk or was there room for reduction. He agreed that all the individual trades were fairly marked and that was not the issue. Mr Vik said that they were looking for a solution in which DBAG was lenient in its marking because the implied volatility in the MTM did not reflect the real risk. At this Mr Gunewardena said the risk was that DBAG had to go out and liquidate the account on SHI's behalf, which was not something he would wish to do, but that because of the increased implied volatilities, DBAG considered that the cost of such liquidation would be US$524 million. He agreed that the figures were being driven by the implied volatilities on the open trades and then said he was happy not to allocate any risk capital (VaR and Liquidity Add-on) provided that the MTM variation margin was paid and the closed out trades were being settled. On that basis the figure required, including the outstanding margin call of US$125 million would be US$175- 178 million.

1183. Mr Said and Mr Vik then had a private chat whilst the others waited on the conference call and Mr Vik then agreed to work on that basis, saying that DBAG should send over the MTM figures sheet and SHI would keep selling.

1184. In this telephone conversation there was therefore agreement between SHI and DBAG that the only element to be charged as margin would be the MTM (Variation Margin) without any VaR or liquidity add-on. Mr Vik and Mr Said had thus achieved their objective which was to obtain a reduction in the margin demands of DBAG, despite the contractual entitlement. No-one at DBAG was admitting margining failure and Mr Gunewardena talked of adjusting the VaR model to exclude trades that had been closed but not settled, whereas there was no VaR model at all which could include the TPFs. The impression obtained is of two parties jockeying for position and neither adverting to what the other knew, namely that DBAG's systems had never been able to value or margin the EDTs. The end result was satisfactory to both DBAG and SHI, namely further margin calls by reference to MTM alone, which was the basis upon which DBAG was being charged margin by its Counterparty banks.

1185. Ms Serafini who was present on the call was asked why Mr Vik was not told about the absence of margining on the trades and said it was not her call to make. She thought that conversations were happening at senior levels at that time, giving guidance as to what and what not to communicate. She doubted that the decision

rested with Ms Liau and Mr Gunewardena and that it must have come from one or more people higher up the chain. No doubt the reason why DBAG was not straightforward about this was that it considered that it might impact on Mr Vik's willingness to pay the margin calls, although, in fact, it did not, because Mr Vik knew the position and was seeking to make capital out of it to SHI's advantage. Mr Quezada was not on the call but Mr Said was and, for the reasons which I have already given, he not only knew the true position but had told Mr Vik of it.

1186. Mr Vik and Mr Brügelmann had two further telephone conversations about raising the funds to meet the third margin call, including the transfer of US$30-35 million from Geneva, whilst raising other funds from the sale of futures. Mr Vik gave his approval.

1187. The fourth margin call was for the sum of US$175,087,929 and the figures set out included no element for VaR nor liquidity add-on, in accordance with the agreement reached on the telephone that day. Mr Spokoyny said that he used DB Analytics to arrive at the figures and the pending premium included the US$106 million omitted in the third margin call.

1188. It was on that day that the Russell Multiplier Error was discovered, which meant that more assets had to be sold in the GPF account to meet the margin calls but Mr Vik was not then told of the error.

1189. The fourth margin call subsumed the third but as the only available cash at the time was US$75 million approximately, transfer instructions for that sum were sent to Mr Vik who signed them. As with all the FX margin calls, the transfer was made into the FXPB trading account at DBAG in London.

1190. In his statement Mr Vik said that Mr Brügelmann had, prior to the payment of the fourth call, told him that if SHI did not pay, it would be in default and all of its assets with the bank would be liquidated and taken. Mr Brügelmann's evidence was that at some stage during the course of the week he was asked by Mr Vik what would happen if he did not pay and in response he told him that a failure to meet a margin call would be a breach of the agreement with the bank and that such a breach could result in the bank initiating close out procedures. That would be no more than informing Mr Vik of contractual consequences. Given the relationship between the two of them, the personalities involved, the email exchanges between them and the inherent unreliability of Mr Vik as a witness, I accept Mr Brügelmann's evidence on this and reject that of Mr Vik.

1191. On Friday 17th October Mr Vik again chased Mr Brügelmann for the report on the history of Mr Said's FX trading and margin history. Mr Brügelmann told him that New York was working on this and he had informed them of the urgency, whilst forwarding the email from Mr Vik to Ms Liau and Mr Gunewardena asking when the information could be produced. The matter was the subject of a telephone conversation between Mr Brügelmann, Ms Liau and Ms Serafini that morning in which Ms Liau said that it was very difficult to re-run VaRs and portfolios and produce historical figures. Mr Brügelmann was told to ask Mr Vik to bear with DBAG on the point.

1192. A further transfer instruction for US$100 million was then sent to Mr Vik for the balance of the fourth margin call which he duly signed. Later that day the fifth

margin call for US$34,886,361 was sent. As with the fourth call, this included no element for VaR or liquidity add-on and the MTM was calculated with the benefit of the DB Analytics pricing tool.

1193. Transfer instructions for the fifth margin call were sent on Tuesday 21st October and were duly signed and returned.

1194. Thus it is clear that a number of DBAG personnel made dishonest statements about past margining and the VaR model, but it cannot be said that the making of the margin calls was effected with an intention to cause SHI harm or to deprive it of its rights or in wilful or reckless disregard of SHI's rights. All the DBAG personnel involved in the making of such calls considered that DBAG was entitled to make calls, for at the very least the amounts for which the calls were made. They were right in this because DBAG's contractual entitlement far exceeded the amount called for.

1195. The basis upon which the fourth and fifth margin calls were made was, as set out above, the subject of express agreement between Mr Vik and Mr Said for SHI and DBAG in the course of the telephone conference call of 16th October. There is no suggestion that the MTM figures on which these calls were based were wrong and previous errors had been corrected. There can be no sensible complaint about these calls on that footing. They were calculated both in good faith and in a commercially reasonable manner in accordance with the agreement reached.

1196. As the third margin call was not paid and was subsumed in the fourth margin call, about which no complaint can properly be made, there is no need to consider it further. The DB Analytics pricing tool had been used for MTM but the element of VaR attributable to the TPFs was simply guesswork and there was no liquidity add-on for the TPF or non-TPF options. The failure to take into account US$106 million by way of premium payable in respect of three trades closed the previous day was careless.

1197. Whatever might be thought about the third margin call, it is the first and second calls which attract the most criticism. Making every allowance for the state of the market and the volume of work involved for those at DBAG in relation to other clients, as well as SHI, the extent of the mistakes and omissions made in those two calls is breathtaking.

1198. Ms Liau asked Mr Spokoyny, on his evidence, to produce a rough approximation in a hurry for the first margin call on 13th October before closing time in London. At a time when DBAG had received a margin demand for US$103-150 million from MS in respect of three or five TPFs alone, when there were fourteen other outstanding TPFs at the time and when the two DBAG direct TPFs were known to be underwater, it is hard to see how DBAG could have produced a margin call that required only the sum of US$98.88 million approximately. US$41 million of the US$103.182 million negative MTM figure was attributable to the Trade Desk calculation for the two direct TPFs but there was no MTM for the other TPFs and no liquidity add-on for any of them at all.

1199. As to the second margin call, I have already set out the details of the many errors within it which, if corrected, would have resulted in a margin call of US$400 million and not US$202.625 million. Apart from the MTM figures received from MS on

three of the five TPFs (zero appeared for two because they were being closed out) and the MTM values received from Mr Costa-Santos in respect of the two direct TPFs, the MTM for the other open TPFs consisted of Mr Spokoyny's estimate of intrinsic values with some cross-checking against the MS figures and the Trade Desk figures. There was no element of VaR in respect of the indirect TPFs and only his manual calculation in respect of the two direct trades. There was no liquidity add-on for any TPFs or non-TPF options, as with the first call.

1200. Although DBAG has no obligation to make margin calculations or to demand it, if it was going to do so, it was bound to do so in accordance with the contract.

1201. I cannot see how the calculations for these two margin calls could be considered "commercially reasonable". The commercially reasonable course to adopt in a situation where it was impossible for DBAG to effect proper margin calculations in accordance with the contract, whether because of deficiencies in DBAG's systems, the peculiarities of particular trades or for any other reason, would be carefully to produce figures by reference to the best available information and to inform the client of the difficulty with a view to sitting down and negotiating sensible margin figures. Bearing in mind DBAG's entitlement under Part 1(I)(b)(iii) of the Schedule and Mr Said's/ Mr Vik's knowledge of the position, it is probable that agreement would have been reached. Instead of this DBAG produced hopelessly inadequate figures whilst representing, initially, implicitly, and later explicitly, that calculations had been done on its system. To the extent that there was deceit involved in this, it appears to me that DBAG personnel could not be said to be acting in good faith, although in practice no-one was deceived.

1202. If DBAG had acted as it should however, the margin demanded would have been much higher and no doubt, in relation to the TPFs, would largely have represented the MTM figures that the counterparty banks were putting forward, subject to negotiation, which was effectively what was agreed in the telephone conversation of 16th October. In my judgment therefore, whilst the bank behaved dishonourably in this respect, no loss resulted from this breach. DBAG's actions did not constitute an Event of Default under the FX ISDA or the FXPBA. SHI in the persons of Mr Said and Mr Vik were not misled by any representations by DBAG as to past margining and SHI's agreement to pay further margin on an agreed basis on 16th October rules out any ground for complaint.

25(d) The Third Argument

1203. The third argument which arises in relation to these margin calls is the dispute about the agreement to amended VaR parameters.

1204. I can take this issue very shortly because there is no doubt that Mr Said agreed to the new VaR ratio of 250% on a ten day basis with liquidity add-on. Not only did he have authority to do so under the Said Letter of Authority, but Mr Vik had specifically told SHI to deal with Mr Said on the subject.

1205. The Independent Amount Ratio is defined in the CSA as a "number being determined and notified by [DBAG] to [SHI] from time to time and initially being 200%". SHI's agreement is therefore not required. Notification is sufficient.

1206. As to the liquidity add-on, this was not truly an amendment to the VaR methodology but that too could be changed in accordance with paragraph 11(h)(xi) of the CSA which allowed DBAG to change it at any time and by which DBAG agreed to provide a description of it, if asked.

1207. On 30th September Mr Said, Mr Quezada and Mr Spokoyny had a telephone discussion with a view to agreeing an amendment to the margin terms following the meeting on 8th September. Mr Quezada suggested 3 x 10 day VaR plus liquidity add-on and Mr Said, as was his wont, looked for a reduced level on the basis that the suggested amendment would increase the margin on his existing trades by 150%. A discussion took place as to what the result would be of applying a multiplier of 2.5 and Mr Said said he wanted it back-tested over the preceding two years but he could probably live with a 100% increase in the current requirement. He said he would discuss the matter with Mr Vik, who, he thought, would want to increase the cross pledge. Mr Said accepted that the compromise figure would be closer to DBAG's number than the current one.

1208. On 6th October 2008 Mr Spokoyny sent Mr Said an email stating that he had approval for 2.5 x 10 day VaR plus liquidity add-on and set out the effect of that as being an increase in the current requirement from US$21 to US$40 million. He requested Mr Said to let him know if he wanted to discuss the matter. Attached was a document setting out the way in which the liquidity add-on methodology worked. Within a matter of minutes Mr Said replied: "That seems fair. I can live with that", which DBAG took as SHI's agreement and implemented the new system with effect from later on that week. Later that day Mr Said told Mr Vik about these discussions, informing him of the effect of the alteration and how he had negotiated DBAG down from its initial reasonable suggestions, remarking that the previous terms had been way too generous. In the light of the other exchanges between them at this time, he talked about the need for Mr Vik to increase the collateral position because he had taken cash out of the account, showing that he was aware that DBAG's new margin requirements were still inadequate for the portfolio. This could only be because he knew, from his past conversations and the meeting of 8th September, that DBAG had still not solved its problems with booking the EDTs and consequent valuing and margining, and because he was aware of the MS MTM of US$100 million plus on three TPFs.

1209. Mr Vik's evidence was that he would have agreed to these changes if he had been asked but he was not asked. This is irrelevant since Mr Said had actual authority to agree the terms in any event. Moreover Mr Said's email of 6th October to him invited discussion and there is not a semblance of any objection by Mr Vik to the new terms in any email and no objection raised at his meeting with Mr Brügelmann the following day, whatever was said about margin at the time.

1210. SHI takes the technical point that any notice given under the FX ISDA should, in accordance with Part 4 of the Schedule, be sent to SHI's address in the Turks and Caicos Islands. If a notice is sent elsewhere, whilst that may be a breach of the Clause, no damage is suffered if it is received and there is not the slightest doubt that in this case it was received. SHI was therefore bound by the new margin terms.

25(e) The Fourth Argument

1211. The fourth argument raised in relation to the margin calls is that SHI had no liability to pay DBAG any sum at all because section 2(a)(iii) of the FX ISDA provided that any obligation to make payments under section 2(a)(i) (payment obligations for transactions) was subject to the condition precedent that no Event of Default or Potential Event of Default with respect to the other party had occurred and was continuing.

1212. SHI alleged that DBAG's breaches of the FX ISDA constituted Potential Events of Default under sections 5(a)(ii) and 5(a)(v) of the FX ISDA. As set out earlier in this judgment, section 5(a)(ii) referred to any "failure by the party to comply with or perform any agreement or obligation" under the agreement, if such failure remained unremedied on the thirtieth day after notice of failure was given. Section 5(a)(v) referred to disaffirmation, disclaimer, repudiation or rejection, in whole or in part of a Specified Transaction which, in accordance with the definition in the FX ISDA meant any transaction between the parties of a specified kind including foreign exchange transactions, currency options and Prime Brokerage or margin lending transactions or other similar transactions or any combination of them. It is further alleged that, from the date of DBAG's first breach of the FX ISDA, on each date that a payment was made under any Transaction, there was an Event of Default under section 5(a)(iv) of the FX ISDA. Section 5(a)(iv) provided that a misrepresentation constituted an Event of Default if it proved to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated. The relevant representation is said to be that under section 3(b) under which each party represented to the other every time a transaction was concluded that no Event of Default or potential Event of Default had occurred and was continuing.

25(f) The alleged Events of Default or potential Events of Default

1213. As alleged by SHI, the key breaches of the FX ISDA committed by DBAG were the failure to calculate MTM and margin and to notify and demand margin. SHI submitted that DBAG was under an obligation to calculate the margin requirements and the Allocated Portion and to notify SHI of this on each business day. SHI also alleged that DBAG had an obligation to call for margin/collateral/the Delivery Amount, whenever circumstances arose which entitled it to do so.

1214. SHI's pleading is rife with allegations of breach said to constitute Events of Default. It is however important first to focus on the terms of section 5(a)(ii) because it is only a failure by one of the parties to perform an obligation "in accordance with this Agreement" which can constitute an Event of Default and it only becomes such if it remains unremedied for thirty days after notice of such default has been given. Similarly, regard must be had to the definition of a Specified Transaction because the only relevant form of transaction there referred to is a "prime brokerage or margin lending transaction". Neither definition encompasses the FXPBA.

1215. The representation case relies on the presence of an Event of Default or Potential Event of Default, where a Potential Event of Default means any event which, with the giving of notice or the lapse of time or both, would constitute an Event of Default.

1216. With this in mind, I turn to the raft of allegations of breach said to be Events of Default or Potential Events of Default.

1217. The first is the alleged breach of the Said Letter of Authority, the Said Agreement, the Capital Limitation Agreement, the FX ISDA and/or the FXPBA by permitting Mr Said to trade EDTs and OCTs and exceeding the trading limits. I have already found that there was no such breach and that there was no collateral oral contract to the effect alleged. Additionally, any such actions by DBAG would not have constituted a breach of the FX ISDA under section 5(a)(ii). Any trade conducted outside the scope of Mr Said's authority would simply not be binding upon SHI.

1218. Similar points apply to the alleged breach of the PAL. There was no agreed limit, and even if there had been, it would not be a term of the FX ISDA.

1219. SHI made a series of allegations of breach of either the FXPBA or the FX ISDA based upon DBAG's alleged obligations to book, record, value, margin and report transactions, in particular the EDTs and OCTs. I have rejected SHI's submissions about breach, holding that there was waiver of any implied terms in the FXPBA in relation to reporting. Mr Said expressly agreed to waive such reporting in consideration of DBAG accepting the relevant Structured Options as Accepted Transactions. Furthermore, any alleged breach of the FXPBA would not qualify as a breach of the FX ISDA and the implied terms alleged could only be implied into the FXPBA and not the FX ISDA, with reporting subject to the GEM terms and conditions.

1220. I have rejected SHI's submissions about the existence of the Capital Limitation Agreement and the Collateral Warning Agreement. Each of those was alleged to be a freestanding agreement and a breach of them would not amount to an Event of Default under section 5(a)(ii) of the FX ISDA.

1221. Earlier in this judgment I have set out my conclusions as to the proper construction of the FX ISDA, the Schedule and CSA and rejected SHI's submissions as to the obligation to calculate the Allocated Portion on each business day, to calculate margin requirements in good faith and in a commercially reasonable manner and to notify them accordingly. Insofar as any reporting obligations were not fulfilled, SHI agreed to this and waived the implied obligations which fell to be implied into the FXPBA and not the FX ISDA.

1222. I have rejected the allegation of implied terms in the FX ISDA that DBAG should give a risk warning to Mr Vik before permitting Mr Said to enter into EDTs or products for which an NPA process had not been fulfilled.

1223. In short, there are no breaches of the FX ISDA which could give rise to Potential Events of Default or actual Events of Default. Furthermore, Clause 4 of the FXPBA provides that it is only breaches of the FXPBA by the Agent, namely SHI, which can constitute an Event of Default under the FX ISDA. Nor, in consequence of this provision, is there any room for any additional implied condition precedent of the kind alleged in paragraph 115(2) of the RRRADC.

1224. Moreover, there are other difficulties with SHI's arguments because the effect of section 2(a)(iii), as has been held in *Lomas & ors v JFB Firth Rixson Inc* [2012]

EWCA Civ 419 at paragraphs 25 and 28, is to suspend the obligation to make payment while an Event of Default or Potential Event of Default is continuing. The suspension lasts until the Event of Default is cured or the Potential Event of Default ceases to exist. The underlying obligation remains in existence until termination when the calculation of loss is performed on the assumption that each applicable condition precedent has been satisfied. If, during the period of suspension, a party who is not in default wishes to enforce payment obligations, credit must be given for what is due in the opposite direction by reason of the netting provision in section 2(c).

1225. The event which has the suspensory effect must have occurred and be "continuing". It is hard to see how this can apply to one off events. It is not just a question of a breach which cannot be cured, since the whole point of section 5(a)(ii) and section 2(a)(iii) is to provide an opportunity to remedy the failure which gives rise to the Event of Default or Potential Event of Default. The relevant Event of Default or Potential Event of Default must be continuing at the date when any obligation to pay falls due, as held by Flaux J in *Marine Trade SA v Pioneer Freight Futures Co Ltd BVI* [2009] EWHC 2656 (Comm) at paragraph 58.

1226. Many of the breaches alleged by SHI can properly be termed one-off breaches which could not be seen as "continuing" after the date upon which the relevant event constituting the breach occurred (e.g. permitting an unauthorised trade in breach of trade type, trading limits, the PAL or breaches of the CLA, CWA, or duty to warn Mr Vik). Equally, failure to do something on each business day, whether in terms of booking, recording, calculating or reporting on the day in question, is not a continuing breach beyond the end of that day.

1227. The alleged breach of section 5(a)(v) of the FX ISDA is posited on the basis of a disaffirmation or repudiation of DBAG's obligations under the FXPBA in respect of each transaction by failing to book, record, value or margin transactions properly and failure to report the same.

1228. On the basis of my earlier findings, there was no disaffirmation or repudiation by DBAG, whether in whole or in part, of its obligations under the FXPBA.

1229. I have held that the calculations for the first two margin calls were made in breach of the FX ISDA because they were not made in a commercially reasonable manner. Those breaches were however not continuing breaches and the calls were for lesser sums than DBAG was entitled to claim and therefore did not require to be cured. There could be no continuing default as each day's figures differed by reference to premium to be paid and collateral to be put up and no criticism can be made of the fourth and fifth margin calls where MTM Variation Margin alone was requested, in accordance with the agreement reached on 16th October.

1230. Moreover, the sums which were paid, in response to the margin calls, were all ultimately used to discharge SHI's indebtedness to DBAG. Further sums remain owing, subject to SHI's other arguments. SHI claims restitution, no longer on a gross accounting entries basis which totalled US$103 billion, but by reference to the sums actually received by DBAG. The condition precedent cannot apply in this situation since the effect of section 2(a)(iii) of the FX ISDA is to suspend the obligation to pay the debt which remains in existence for the purpose of mutual accounting, whether there is termination or not. The FX ISDA has now been terminated. The failure of

the condition precedent cannot provide a basis for the recovery of payments which have been made which had the effect of discharging that indebtedness. DBAG is not unjustly enriched in receiving a debt due to it.

25(g) The Fifth Argument

1231. Although this is said to be a yet further critical matter in relation to the FX margin calls, I am unclear what its impact was suggested to be. Reference is made to "the bank's various breaches made in making the FX margin calls which underline its complete disregard for the agreed contractual scheme".

1232. SHI refers to paragraph 11(h)(ii) of the FX ISDA CSA which provided that, where a transfer obligation arose under paragraph 2(a) of the CSA, namely upon a demand made for a Delivery Amount, "any Eligible Credit Support transferable … shall be transferred into the Pledged Account." Although paragraph 3 of the CSA provided that any transfers of Eligible Credit Support should be made "into one or more bank accounts specified by the recipient", the contractual hierarchy provided that the terms of paragraph 11 should prevail over other provisions in the CSA.

1233. There was a consciousness on the part of personnel at PWM CRM that this is what the FXPBA provided but it seems that practicality ruled the day. FXPB needed money in its account to pay the premium to settle the transactions which Mr Said was closing pursuant to the strategy agreed by himself and Mr Vik with DBAG on the morning of 13th October. Paying sums into the Pledged Account in Geneva and designating the Allocated Portion, as well as the Delivery Amount before realising payments from that Pledged Account to pay premium would all have taken time. FXPB were keen to have the money in hand and paid little or no regard to the contractual requirements.

1234. The fact remains that transfer instructions were sent to Mr Vik for payment into DBAG's London FXPB account and Mr Vik voluntarily signed such instructions and payments were made between 14th and 23rd October. No loss was suffered by anyone as a result of this breach by SHI as payer and by DBAG in not applying the receipt to the Pledged Account. The sums in question were used to discharge the indebtedness of SHI to DBAG, even though the transfers, when originally made, included collateral as well as premium.

1235. SHI also refers to DBAG's failure to send the margin calls to SHI at its address in the Turks and Caicos as provided by Part 4 of the Schedule. As SHI submits, the terms of the provision are plain in requiring notices to be sent either to the address set out for SHI in Part 4 of the Schedule or to such other address as it might by notice provide to DBAG.

1236. Once again, this was a breach by DBAG with no consequences since emails to Mr Said and Mr Vik reached their destination much more effectively and efficiently than if notice had been sent to the name plate registered office in the Turks and Caicos Islands, from which it would have to be forwarded to Mr Vik or Mr Said in the USA.

25(h) The Sixth Argument

1237. This relates to the bank's "zero VaR" case. Quite what the effect of such a calculation would be on the margin calls is as yet unknown.

1238. It is common ground now that, at the time of making the margin calls, DBAG was not capable of producing a VaR calculation for the entire portfolio because of the inability of its systems to cope with EDTs and OCTs. In these circumstances, DBAG submits that it was entitled to call for margin with a zero figure for the VaR component.

1239. In accordance with the FX CSA, the Credit Support Amount was made up of DBAG's Exposure plus a Independent Amount. As set out earlier, the Exposure essentially means the MTM and the Independent Amount was defined by paragraph 11(b)(iii)(A) as the product of VaR multiplied by the Independent Amount Ratio which was given elsewhere as 200%. Paragraph 11(h)(i)(D) of the CSA defined VaR as:

> "… the maximum potential change in the value of a portfolio of financial instruments over a specified time period and within a specified confidence level, as determined by [DBAG] in accordance with the methodology determined in its discretion which it customarily uses with its counterparties. The Value at Risk shall equal the aggregate of such potential changes for each currency pair in which there are outstanding FX Transactions or Currency Options Transactions under this Agreement."

1240. Thus VaR was to be calculated on a portfolio basis by reference to each outstanding transaction. DBAG did have a customary methodology for the calculation of VaR, by the use of its ARCS VaR engine, but its customary methodology could not, without the building of a new computer model, such as that created by Mr Millar or Dr Drudge, calculate VaR on a portfolio basis which incorporated the EDTs or many of the OCTs. Consistent with the contractual requirement for all transactions to be included in the calculation, the contractual calculation had to be a portfolio calculation and it would not be permissible to carry out a VaR calculation which excluded the EDTs or OCTs. Moreover, however unlikely, the effect of not including them might be to decrease the overall margin requirement for the portfolio rather than increase it which, it appears from the evidence, would usually be the case. Whilst it would be open to DBAG to waive its entitlement to the entire VaR element of a margin calculation where the effect of incorporating it would be to increase the margin requirements, or to waive part of it, the calculation itself could only be made on a portfolio basis. DBAG could not calculate VaR on something less than the whole portfolio.

1241. To calculate Margin with zero VaR or to waive payment of part of the Portfolio VaR could not, per se, be said to be commercially unreasonable particularly in circumstances where it is clear that the Counterparty Banks, with whom Mr Said had traded in DBAG's name under the FXPBA, looked for margin from DBAG, and provided margin to DBAG, in sums representing the MTM alone without any element of VaR. This appears clearly from the Counterparty Agreements and Counterparty Notices (thus the figures of US$103 million and US$153 million which featured in the margin requirements of MS were MTM figures). It would not however be the calculation for which the contract provided.

25(i) The Seventh Argument

1242. SHI alleges that the margin calls were invalid inasmuch as DBAG asked for payment into the FXPB account and not into the Pledged Account and did not send the margin calls to its address in the Turks and Caicos Islands.

1243. DBAG submits that SHI waived its right to insist on funds being paid to the Pledged Account, alternatively varied the FX CSA to permit it or acted in such a way that it is estopped from claiming that funds should have been paid into the Pledged Account. As I have found elsewhere, there was no element of duress and nothing which vitiated the payments which Mr Vik made, voluntarily, into the London accounts of FXPB. He therefore was responsible for making payments to the incorrect account, even though he had been encouraged to do this by the sending of transfer instructions to him which had that result. It was SHI which had the transfer obligation and SHI was in breach in not paying the sums into the Pledged Account, a solution with which DBAG was entirely happy and a breach which it waived. Equally insofar as DBAG was in breach, SHI waived it too. What was done was done by mutual assent.

1244. DBAG also contends that Mr Vik notified it, by his conduct, that he was willing to accept notification by email of margin calls, that there was some variation of the agreement by conduct to permit it or that SHI was estopped from insisting that notice should be given to the specified address in the Turks and Caicos. I can see no basis in law or fact for this argument. The notices were sent to Mr Said and/or Mr Vik and they received them and the sums were paid. It was a breach but there was no loss.

25(j) The Eighth Argument

1245. This represents DBAG's "no loss" case. As already mentioned in other parts of this judgment, I accept DBAG's submissions that where I have found breaches by DBAG, no loss was caused and in most instances, none was alleged.

26. The Equities Margin Call

1246. At 6.35 pm London time on 22nd October 2008, Ms Carroll sent an email to Mr Vik at his email address which was amvik@xcelera.com, with copies to Simon Kempton, Thomas Brügelmann and James Orme-Smith. It was expressed thus:

> "Alex,
>
> Please be advised that the Sebastian account is on call for NOK 2,007,534,737. Please advise cover accordingly.
>
> Kind regards,
>
> Erica."

1247. SHI denies having received this email and I have to decide whether, on the balance of probabilities, it was or was not received. The NOK figure was the equivalent of approximately US$291 million.

1248. Mr Vik's evidence was that he did not receive the email and that the first time that he saw it was in February 2010. SHI has not disclosed a copy of it and Mr Vik told the Court that he asked his email provider Mirror Image to search for all emails from Erica Carroll in order to trace its receipt and none was found.

1249. This evidence is not compelling in the light of the other evidence available. It is clear that the email was sent following a telephone call that had taken place earlier in the day in which Mr Vik was informed by Mr Brügelmann and Mr Gunewardena of the deficit on the GPF account as a result of an overpayment out of the Equities PB account into the FX PB account. The nature of the Ignored Payments Error was not explained but Mr Vik was told of what was seen as a deficit of around US$300-350 million. He was told that "these guys have been extending cash and they have been counting things, possibly slightly incorrectly because obviously the numbers … are doesn't make sense … We see that there is a deficit of around US$300 million." Mr Vik's response was to say that a miscalculation of that size was insane and to say four times that SHI could not pay the deficit because it did not have the money. When asked if the company had assets elsewhere than at DBAG he confirmed that SHI had nothing or that "pretty much" everything that the company held was at DBAG.

1250. Ms Carroll's email was received by Mr Brügelmann, Mr Kempton and Mr Orme-Smith. Both Mr Brügelmann and Mr Kempton forwarded the copy received by them to other people, Messrs Halfmann and Singh. The email was sent by Ms Carroll to Mr Vik at an operative email address which he used all the time and Ms Carroll did not receive any delivery failure message.

1251. SHI suggests that there is a difference between emails sent within DBAG and DBS on the one hand and emails sent externally on the other. The issue is however, to my mind, concluded against SHI by the events which followed the sending of the email and which show that Mr Vik must have received it.

1252. First, there is a telephone conversation between Mr Orme-Smith, Mr Brügelmann and Mr Byrne (amongst others for DBAG and DBS) and Mr Vik. In that conversation Mr Orme-Smith referred to the earlier telephone call about the deficit and said he was seeking an open conversation as to how to remedy the situation and sort the problem out, given the unfortunate circumstances. Mr Byrne then referred expressly to the current situation where "you have a fairly large margin call at the moment". DBAG wanted to get his latest views on how that could be funded and what other assets or cash could be made available. Mr Vik expressed his incredulity once again as to what had happened, including the incurring of such high losses when he had allocated US$35 million to Mr Said's account, asking whether the risks were not supposed to be limited to that figure.

1253. Mr Byrne's response was to ask whether Mr Vik was saying that he did not see "any way of making that margin call" and asked Mr Vik if he was correct in surmising that. Mr Vik responded to say that whatever money there was in the Equities account was all there was and that was all the money that SHI had. When questioned about transfers out of SHI's accounts in the last month, Mr Vik said that he did not think they should talk about that. As appears elsewhere in this judgment, SHI had, in the preceding two weeks, made a series of transfers of its assets out of DBAG's accounts, including substantial sums to Beatrice and to himself. Not only was he coy in this call about such transfers but Mr Vik also lied in saying that he had not discussed the FX margining position with Mr Said.

1254. In that telephone call, Mr Byrne referred expressly to SHI being subject to a margin call and Mr Vik made it plain that SHI had no more money to pay. The references to the "margin call" cannot be sensibly seen as a reference to the earlier telephone

conversation about a deficit on the GPF account. They can only be seen as a reference to the email which had been sent. If Mr Vik had not received the margin call, he would inevitably have asked what it was that Mr Byrne was talking about and what figure was being sought. Instead, Mr Vik stated that SHI had no funds to pay it.

1255. The next day, 23rd October, DBAG sent a letter by courier to SHI's address in the Turks and Caicos Islands and by email to Mr Vik at the same email address to which the margin call had been sent. In that letter DBAG made express reference to the margin call issued on 22nd October 2008 via email to Mr Vik and stated that the failure to comply with the terms of that Margin Notice constituted an Event of Default under Clause 6.2 of the Equities PBA. That letter, which was admittedly received, did not provoke any response from Mr Vik to say that he had received no notice of any margin call the previous day which would be the immediate reaction of someone who had not received it.

1256. It was not until some two weeks later, on 6th November 2008, that Mr Vik wrote a letter to DBAG, sent by courier and email, acknowledging receipt of the letter of 23rd October, and rejecting any alleged failure on SHI's part. The letter continued in the following terms: "We also note that we have yet to receive the "notice" of 22nd October 2008 referred to in your letter." The significance of the inverted commas around the word "notice" in that letter can be seen from the argument that SHI has put forward that the email did not constitute a margin call under Clause 4 of the Equities PBA. If the position had been that the email had not been received, not only would the point have been taken at once, following receipt of the letter of 23rd October, but the response of 6th November would have said so in terms.

1257. The absence of a copy of the email in SHI's disclosure does not establish that the email was not received by Mr Vik. As appears elsewhere, SHI's disclosure has been deficient in a number of respects but, regardless of that, Mr Vik's own evidence was that he deleted emails when he was "done with them" and his deletion box was subject to an automatic deletion function. This is the reason that SHI has put forward for disclosure of so few emails received by Mr Vik (see the seventh witness statement of Mr Leslie at paragraph 42).

1258. In the circumstances, I find that Mr Vik's evidence is not to be believed and that he did receive the email of 22nd October.

1259. The second point taken by SHI is whether the email constituted a valid demand under the Equities PBA because it was sent by email. SHI relies upon Clause 27 of the Equities PBA which states that "[all] notices and other communications should be sent [in the case of SHI] to such address as is notified to the Prime Broker … or in the absence of such notification, to its last known address for correspondence".

1260. The Equities PBA, in setting out the parties to it, referred to SHI and its address in the Turks and Caicos Islands. Unlike the Listed F&O Agreement and the Master Netting Agreement of the same date, there was no address specifically provided in the Equities PBA for service of such notices or other communications. Clause 17.2 of the Listed F&O Agreement specifically gave the Turks and Caicos address as the address for all notices, instructions and other communications (or such other address as might be specified to the other party in writing). The Master Netting Agreement stated that all notices should be subject to the provisions of section 12 of the Equities ISDA

which provided that notices or communications could be made in a number of different ways, setting out the date of deemed delivery applicable to each. That included email, as one of the means of communication. The Schedule to the Equities ISDA gave the address for notices to SHI as the Turks and Caicos Islands address.

1261. Clause 23.1 of the Equities PBA provided that instructions could be given to the Prime Broker in writing by email, fax or in any other form of communication acceptable to DBAG but this Clause has no reference to the sending of notices or communications to SHI. Clause 10.1 of the Equities PBA also provided that SHI might at any time by Notice instruct DBAG to settle a transaction concluded between SHI and a third party or to enter into a transaction with SHI for the sale or purchase of Securities. The definition of a Notice for this purpose was given as "a notice (which unless the Prime Broker requires otherwise shall be sent by the Electronic System) containing details of Sale Transactions and/or Purchase Transactions". It can be seen therefore that email is a recognised means of communication under the Equities PBA.

1262. If Clause 27 meant that a notice could only be sent by post, there is only one possible qualifying postal address which is the Britannic House address in the Turks and Caicos Islands. If an email communication is sufficient, then the last known address for correspondence by email could, equally, only be that of Mr Vik at amvik@xcelera.com. Occasional emails were sent to the address alex@vik.org but, on Mr Vik's evidence, that was effectively an alias for the "amvik" address and went to the same email box.

1263. It is true to say that Mr Vik's emails from that email address were largely concerned with trading instructions but a good number of emails from DBAG to that address relate to matters of significance in relation to the Equities PBA, both before and after execution of it. Communications about transfers of the existing DB Suisse positions and the transfer of collateral from DBS to the GPF account were made by email. All of the written requests by Mr Vik for SHI to Mr Brügelmann for updates on the GPF account and the responses from Mr Brügelmann were equally sent and received by email. Not only were Mr Vik's instructions for trading on the GPF account sent by email but so also were Mr Brügelmann's responses. In each case the email address used was amvik@xcelera.com. Prior to the conclusion of the 2008 Agreements, the documentation sent to SHI in advance of the 14th November 2007 meeting for the purpose of discussion of the GPF account, the pricing proposal and the draft legal documents were all sent to Mr Vik at his email address, as were the execution documents.

1264. In the absence of any notification to DBAG by SHI of an address for all notices and other communications under the Equities PBA, the question therefore is what SHI's "last known address for correspondence" was.

1265. In the context of Margin Requirement for any Business Day, assessed on a T + 1 basis (as explained to Mr Vik at the meeting on 14th November 2007) and the provision that such Margin Requirement was payable on demand, there is obviously a need for speedy communication. Communication by post or courier to the Turks and Caicos Islands address (doubtless a nameplate office) would require forwarding, presumably by email to Mr Vik with whatever delay that entailed. The parties' habitual method of correspondence was by email and demands or margin notices, no less than any other communication or notice, would be expected to be given in this way. I cannot see

therefore that SHI's "last known address for correspondence" must be taken exclusively to refer to the postal address in the Turks and Caicos Islands, as opposed to the last known address for email correspondence which was undoubtedly the "amvik" email address. Whilst emails can go astray, so also can letters in the post, although there are of course means of ensuring delivery by courier/registered post/special delivery. This does not however mean that an email address cannot be a last known address for correspondence: nor is there anything in the Clause to say that there can only be one last known address for correspondence, as opposed to more than one, depending on the means of communication adopted. In a modern commercial context, an email address is capable of being a "last known address for correspondence" and the "amvik" email address qualifies for that description.

1266. SHI points to the letter of 23rd October which was specifically sent by courier to the Turks and Caicos Islands address as well as by email to Mr Vik at the "amvik" address. This takes the point no further however as it merely illustrates the two main addresses which would qualify as the last known address for correspondence for each method of communication.

1267. The third objection taken by SHI is as to the substance of the demand made. The objection is that the "Margin Equity" included the negative value of Mr Vik's FX positions that could not properly be called "Securities" within the meaning of Clause 4.2 of the Equities PBA. Of course, over the preceding months, the FX transactions had always been included in the overall margin calculations under the Equities PBA, the Listed F&O Agreement and the Master Netting Agreement, incorporating all positive and negative valuations within that. For the reasons given elsewhere, that was the basis upon which the parties proceeded and to which they agreed by words and conduct and "Securities" was a term apt to include FX Transactions when the parties so agreed.

1268. The fourth objection raised by SHI is that DBAG failed to calculate the Margin Requirement in good faith and notify SHI before making a margin call. The House Margin was NOK 1,305,141,507. There was no positive Margin Equity, in consequence of the correction of the Ignored Payments Error. Instead there was a deficit of NOK 702,393,229. The total sought was the aggregate of these two figures, the equivalent, as already mentioned, of US$291 million approximately.

1269. The Margin Requirement was notified to SHI in the 22nd October email which sought payment from SHI of the sum in question. Neither Clause 4.1 nor 4.2 require any particular format for notification or demand. The Global Prime website, in any event, set out the relevant figures after correction of the Ignored Payments Error so that the make up of the sum demanded was available to SHI. Although Mr Vik did not apparently ever avail himself of the opportunity given to him to log into the website, and it was always open to Mr Vik, in any event, to ask for details of the calculations in question. In fact he did not do so because he had already told DBAG in more than one telephone conversation that SHI had no assets and was not in a position to meet any margin calls.

1270. I have already dealt with the question of construction of the Equities PBA and the meaning of "Margin Requirement" in the section of this judgment relating to the 2008 Agreements and in consequence find that the pre-conditions for making a demand set out in Clause 4.2 were satisfied and the email of 22nd October did constitute a valid

demand to cover the shortfall (by either the deposit of securities or the transfer of cash).

1271. There is a yet further objection by SHI on the basis that the wording of the email is said to suggest that there was an existing call prior to the email itself, by reason of the wording used. It is said that the email did not purport to constitute either a "margin call" or a notification of a Margin Requirement under the Equities PBA or a demand for payment in respect of such a requirement. As with many of SHI's contentions, this submission is not grounded in reality, particularly bearing in mind that the situation was discussed in the telephone conversations to which I have referred. Any person receiving this, with the knowledge that Mr Vik had of the background to the email would have understood this email to amount to a margin call.

1272. It is further submitted by SHI that the Equities Margin Call was not calculated in good faith inasmuch as DBAG failed to take in account a short EUR/NOK position of EUR 450 million which had been closed out by the time that the email was sent at 6.35 pm London time.

1273. Under Clause 4.1 of the Equities PBA, margin was to be calculated by DBAG "in good faith … in accordance with its procedures". There is no issue that DBX calculated margin on a T + 1 basis, which meant that it was the figures as at close of business on the preceding day which were used for the calculation. SHI's complaint is that the figures utilised in the 22nd October email failed to take into account the closure of the EUR 450 million EUR/NOK position which had not been effected at close of business on 21st October but was achieved by 9.41 London time on 22nd October 2008 when Mr Brügelmann sent an email confirming that this had been done. There is no issue between the parties that the closure of this position was not reflected in the data in DBX as at close of business on 21st October 2008, and that the margin call on 22nd October treated the position as being open, which had a very significant effect on the amount of margin demanded. SHI also appears to complain that other positions were closed out during the course of 22nd October prior to 6.35 pm London time which ought also to have been taken into account.

1274. SHI prays in aid not only the requirement of Clause 4.1 that the Margin Requirement should be calculated in good faith, but the provisions of paragraph 9(d) of the Equities CSA which required calculations to be carried out in a commercially reasonable manner.

1275. Mr Singh and Ms Carroll were both cross-examined about this margin call. On the latter's evidence, DBX could not be "refreshed" so as to bring into account, for margining purposes, transactions which had not been closed out by close of business on the previous day. In consequence, if positions closed out since the previous day were to be taken into account, this would have to be done by carrying out manual calculations based on figures produced during the course of the day for each of the various trades which closed that day, including the large EUR/NOK position. Mr Singh was not at all happy with this as an idea. It would require him to take into account "multiple trades done with multiple brokers" and to incorporate figures in a manual calculation, taken from a number of different systems. Whereas the system could be adjusted to take into account the Ignored Payments Error by unmapping the F&O Equities Account from the Finance Account and Roll-Up Account and it was possible to "refresh" the system to ensure that all trades completed by close of

business the previous day were properly taken into account, there was no mechanism by which it was possible to update the margin calculations in respect of trades conducted since close of business the previous day.

1276. There was therefore nothing irrational about the approach which DBAG took when it used the figures on DBX as at close of business on 21st October, subject to the correction of the error in those figures which existed at that time. It would indeed have been irrational to produce figures which did not take account of the known Ignored Payments Error, just as it would have been irrational to calculate figures on anything other than the T + 1 basis in accordance with its usual procedures. Furthermore, SHI's pleaded case is that the EUR/NOK position should have been taken into account but none of the other positions closed out during the course of 22nd October, although in its closing submissions it appeared to recognise the illogicality of this.

1277. Once the Ignored Payments Error had been put right on DBX, the appropriate figures appeared on the Global Prime website and could be utilised by Mr Singh to calculate the margin call which, on his evidence, he then did. That was a genuine good faith calculation made of the position as it was known to be at close of business on the preceding day and the approach adopted by Mr Singh was entirely rational in the circumstances. There would have been real difficulty in trying to ensure that all trades effected during the course of 22nd October prior to the sending of the email were properly taken into account because DBAG's systems operated on a T + 1 basis. To move from that basis with ad hoc calculations based on information as it came in, risked inaccuracy and would have led SHI to criticise any margin call made on that basis, if it saw any advantage in doing so.

1278. Equally, it cannot be said that it was commercially unreasonable to make such a margin call. It is always the case that a margin call made on one day and complied with, may on the following or succeeding days, give rise to a margin surplus by reason of market movements or the conclusion of other trades. There is no doubt that, on 23rd October, the margin requirement based on the position at close of business on 22nd October would have been different from that on 22nd October based on the position at close of business on 21st. That is however, as Mr Singh said, exactly how margin provisions work. Security is put up in respect of the Prime Broker's exposure, as calculated by it at a particular point in time, and the client must produce margin in accordance with the contractual requirement. As circumstances change so there may be a surplus which is then recoverable by the client from the Prime Broker. "If there is excess available the next day because of all the risk reducing trades they have done, they can take the money back again. That is how it works."

1279. Moreover, once the margin call is made, there is a contractual debt which requires to be paid and, if it is not paid, the contractual consequences may follow in the context of an Event of Default, regardless of the position the following day and any margin surplus which might arise. In practice, margin is often the subject of negotiation so that if a margin call is made on a particular day when trades are being closed out, a discussion may take place between the Prime Broker and the client and agreement may be reached as to what an appropriate level of payment might be, regardless of the contractual entitlement. If however the client, as SHI did in the present case, indicates that, whatever the size of the margin call, no payment will be made, there is no room for any such negotiation, nor room for the Prime Broker to take a more

lenient approach. In these circumstances, DBAG's calculations of margin cannot be said to be made in bad faith, nor to be irrational nor to be commercially unreasonable.

1280. In connection with this SHI submits that DBAG was obliged to produce a calculation of the Margin Requirement on 23rd October 2008, based on the position at close of business on 22nd October. In fact, it did so since the DBX system produced the figures on the Global Prime website for SHI to see, but in any event this could make no difference to the accrued rights and obligations flowing from the valid demand made the previous day. In fact, as at 23rd October 2008, on a T + 1 basis, there was still a margin deficiency of NOK 1.5 billion according to the forensic accountants engaged by SHI. Nor, on 23rd October, despite receipt of the letter of that day stating that an Event of Default had occurred by reason of SHI's failure to put up margin, did Mr Vik make any approach to DBAG about payment of any sums owing as at that date. If Mr Vik had chosen to pay what was due on 23rd October (or procure SHI to do so by one means or another) it is hardly likely that DBAG would have followed through with its notice of an Event of Default and terminated the Equities Agreements on 4th December.

1281. As the demand made on 22nd October was a valid demand and as no payment was made, SHI was in default within the meaning of Clause 6.2 of the Equities PBA. Clause 7 came into operation and DBAG was entitled to declare a Termination Date.

27. Termination of the Contracts

1282. As set out above, following the failure of SHI to comply with the Equities PBA margin call of 22nd October, DBAG sent a letter of 23rd October notifying SHI of an Event of Default under Clause 6.2 of that Agreement but expressly not terminating it under Clause 7.1.

1283. On 24th October 2008, following closure of all Mr Said's FX transactions, DBAG sent a letter to SHI terminating the FXPBA under Clause 11 with immediate effect. That Clause provided for immediate termination if an Event of Default or Additional Termination Event had occurred under the FX ISDA. At this point SHI had complied with the margin calls made under the FXPBA and FX ISDA and SHI contends that it was not in breach, so that such notice was invalid.

1284. The notice said that the termination applied to all counterparties trading under the FXPBA and stated that DBAG would no longer accept trades entered into by [you] or any counterparty, while stating that nothing should affect any outstanding transactions and that the provisions of the FXPBA should continue to apply until all obligations had been fulfilled. In the letter of 4th December 2008, referred to below, DBAG referred to all transactions governed by the FX ISDA as terminated between 14 and 30th October, but no notice was served to terminate the FX ISDA at that time. It was not until 14th May 2013 that DBAG sought to terminate that agreement itself.

1285. Under Clause 11 of the FXPBA, DBAG was entitled to give immediate notice of termination if an Event of Default or an Additional Termination Event occurred under the FX ISDA. Section 5(a)(vii) of the FX ISDA provides that acts of bankruptcy constitute Events of Default. If a party "becomes insolvent or is unable to pay its debts or fails or admits in writing its inability generally to pay its debts as they become due" this constitutes an Event of Default. Such an Event of Default had

occurred inasmuch as DBAG had made a valid margin call on the GPF account on 22nd October 2008 which had not been met and had also written on 23rd October notifying an Event of Default under the Equities PBA and Equities ISDA.

1286. As appears elsewhere, Mr Vik had informed Mr Gunewardena and Mr Brügelmann on 22nd October, when told of the Ignored Payments Error and the deficit on the GPF account, that SHI could not pay the deficit, did not have money like that and that practically all of its money was with DBAG. Mr Vik made a similar statement to DBAG personnel on the GPF account on the same day (to Mr Byrne and others). On 23rd October Mr Vik informed Mr Gunewardena again that SHI had no more money to post margin. SHI was saying it was unable to pay its debts as they fell due and, by 24th October had indeed failed to pay the debt constituted by the margin call. These were bankruptcy Events of Default within the meaning of section 5(a)(vii) of the FX ISDA.

1287. There was also an Additional Termination Event under the FX ISDA which also entitled DBAG to terminate the FXPBA with immediate effect. Under paragraph 1(l)(ii) of the ISDA Schedule there was in the reasonable opinion of DBAG a material adverse change in the financial position or credit standing of SHI by virtue of the losses incurred on Mr Said's trading, the margin calls, the transfers of funds out of SHI (as to which see below) and the statements by Mr Vik of SHI's inability to make good the deficit owing.

1288. Furthermore, under section 5(a)(iii)(4) "the exercise in whole or in part of the Security constituted by the Credit Support Document" [the Pledge Agreement] is also an Event of Default. Approximately NOK 130 million was transferred from the Pledged Account on 17th October, constituting the exercise of security within the meaning of this provision. There is an issue as to the transfer of the NOK 130 million because SHI contends that it was wrongful, but in all other respects, on the findings I have made, there was undoubtedly an Event of Default under the FX ISDA and Additional Termination Events under its Schedule and CSA.

1289. On 4th December 2008 DBAG sent a letter to SHI terminating the Equities PBA under Clause 7.1 and nominating 4th December as the Termination Date thereunder. The effect of the Event of Default under the Equities PBA was also to give DBAG a right to notify SHI of a Master Termination Date under the Master Netting Agreement and, by the same letter, on 4th December 2008, DBAG gave notice of that date as the Master Termination Date. The effect of such notice was to deem an Early Termination Date under the Equities ISDA and a Liquidation Date under the Listed F&O Agreement as at 4th December 2008.

1290. I have found that there was a valid margin call under the Equities PBA which was not met. SHI was provided, on 15th November 2008, with Schedules showing the sums due in respect of the GPF account and asking for Mr Vik's intentions about meeting the debt. The debt remained unpaid as at 4th December and there was an Event of Default under the Equities PBA with the result that the termination of it and the nomination of the Master Termination Date was also valid on 4th December 2008

1291. Furthermore, DBAG was entitled to nominate a Termination Date on 4th December on a number of additional grounds. On 22nd and 23rd October 2008, Mr Vik had, more than once, stated that SHI was unable to meet the equities margin call and for

the reasons given above that constituted a bankruptcy Event of Default under section 5(a)(vii) of the Equities ISDA. Furthermore, for the self-same reason, there was an Event of Default under Clause 14.1(d) of the Listed F&O Agreement and this would also have constituted an Event within Clause 14.1(k) of that Agreement which DBAG could properly consider as having a "material adverse effect upon [SHI's] ability to perform any of [its] obligations under this Agreement". Additionally, Clause 14.1(l) provided that an Event of Default in relation to any other Agreement between DBAG and SHI was to be an Event of Default under the Listed F&O Agreement.

1292. Furthermore, SHI's refusal to pay DBAG further sums due under the FX ISDA (as set out hereafter) and the Equities ISDA must constitute a repudiation of both Agreements, although it was only by the letter of 14th May 2013 that DBAG, by serving a Notice of Early Termination, appears to have accepted any repudiation of the FX ISDA. Whilst it matters not for current purposes, it does not seem to me that the Additional Termination Event referred to in that letter could have occurred after 24th October 2008 because there could be no VaR calculation once the portfolio of financial instruments had ceased to exist. Thereafter the Net Collateral Value (the Credit Support Balance/Allocated Portion of the Pledged Account) could not be equal to, or less than, the VaR multiplied by the Close-Out Ratio of 100%, because there was no VaR. Nonetheless, to the extent that it is relevant, by sending this letter DBAG must be treated as bringing the FX ISDA to an end.

28. Wrongful transfers from SHI's accounts

1293. There are four transfers which are the subject of dispute, namely:

i) a transfer of NOK 70 million from SHI's account number 2005340 with DBS on 17th October 2008.

ii) NOK 130 million from the Pledged Account, also on 17th October 2008.

iii) NOK 285 million from the Pledged Account on 29th/30th October.

iv) NOK 896,801,773, which was converted into US$125,743,378 and appropriated by DBAG on 4th December 2008 in reduction of SHI's FX shortfall.

1294. The first two transfers of NOK 70 million and NOK 130 million which were transferred to the FXPB account on 17th October 2008 were, together, the equivalent of US$28,179,333 as at 28th October 2008, according to SHI's forensic accountant. The immediate instructions for transfer of these sums came from Mr Brügelmann and Mr Halfmann respectively on the morning of 17th October. The background to these transfers is to be found in the third and fourth margin calls of 15th and 16th October 2008. It will be recalled that the fourth call of 16th October subsumed that of 15th October, the total being US$175 million. It will also be recalled that, in order to meet these calls SHI made two sequential payments of US$75 million and US$100 million because it did not have the necessary funds to pay the total in one lump sum. Mr Brügelmann was in discussion with Mr Vik as to the assets to be sold on the GPF account and the putting together of the necessary funds to pay the call.

1295. I have no doubt at all that the payment of these sums was authorised by Mr Vik as part of the process of putting funds together to meet the call even though the calls were ultimately met by separate transfers. SHI makes great play of the fact that Mr Brügelmann originally relied on the general instruction given to him on 12th February 2008 relating to the transfer of funds from DBS to DBAG to provide collateral for Mr Vik's trading on the GPF account and only later sought to rely upon specific authority given to him by Mr Vik on the telephone. The reason for this is not hard to see. It was only during the course of disclosure that a transcript of a telephone call between Mr Brügelmann, Mr Gunewardena and Mr Halfmann at 15:30 GMT on 16th October was examined. Within it was recorded an interposed telephone call between Mr Brügelmann and Mr Vik. Whilst only Mr Brügelmann's part of that call with Mr Vik is recorded, he makes specific reference to "around 35 million in cash in Geneva" as part of the funds that he is seeking to free up to meet the call. Mr Brügelmann's evidence was that he was given express authorisation in that call to use the sums in Geneva by Mr Vik for this purpose. In an internal telephone call at DBAG later that day, Mr Brügelmann referred to the sum of US$30 million in a Geneva account held in NOK and at 21:01 GMT, Mr Brügelmann again conversed with Mr Vik on the means by which the margin call was to be met, referring to the sale of futures, to US$10 million in the United States and saying "we're going to get another 30 million roughly from Geneva so I need to probably be … selling a little bit or covering a little bit more tomorrow in Europe". To this Mr Vik replied "OK".

1296. Mr Brügelmann did not need written authorisation from Mr Vik for the transfer of the US$30 million because Mr Vik had signed a "Request and Waiver" form on behalf of SHI by which SHI unconditionally requested DBS to execute all instructions relating to its account transmitted by telephone as soon as possible after receipt and without waiting for written confirmation, declaring that SHI would approve all transactions carried out by DBS on the basis of such instruction. Mr Brügelmann also referred to these standing instructions in cross-examination.

1297. Mr Vik did not accept, in cross-examination, that he had given consent in these telephone calls, stating that he did not recollect the conversation and stating that the "OK" was just noting Mr Brügelmann's comments. In the context of the conversations, this is untenable. Mr Vik was expressly giving consent to Mr Brügelmann making use of the US$30 million that he had in Geneva.

1298. If reference is made to the "Sebastian Equity Position" document handed by Mr Brügelmann to Mr Vik on 7th October 2008 and a comparison is made with an email from Mr Brügelmann to Mr Vik on 20th October 2008, it can be seen that transfers have been made about which Mr Vik made no contemporaneous complaint. From the "Alex" account in Geneva, approximately US$12 million was transferred and from the Pledged Account approximately US$29 million was transferred, reducing the balances on the former account to US$2 million and on the Pledged Account to US$38 million. No complaint and no explanation for these transfers was sought by Mr Vik which included the two transfers of which complaint is now made.

1299. The first challenge made by Mr Vik to the transfers came on 8th January 2009. Mr Brügelmann immediately rejected the challenge on the basis of instructions given by Mr Vik.

1300. These sums have been taken into account in the balances now claimed by DBAG.

1301. The third transfer of NOK 285 million ($43,244,069) was made on 29th October. DBAG claims that it was entitled to make this transfer under article 9 of the Pledge Agreement which provided that "[i]n the event that the Debtor/Pledgor is in arrears with the fulfilment of the Claim or is in default with regard to any of its obligations towards the Bank, the Bank is automatically entitled (but not obliged) to realise the Assets forthwith at its discretion". Article 6 stated that the pledged assets were to serve as "collateral to the Bank for all claims that the Bank has and/or will have against the Pledgor … from any existing and future credit facilities/agreements, including all due, current or future interest and commissions". Contrary to the stance adopted by SHI, DBAG was therefore entitled to realise the assets in the Pledged Account if SHI was in default under the Equities PBA, which, by failing to meet the margin call of 22nd October, it was. Furthermore, as appears later in this judgment, SHI had not paid sums due to DBAG in respect of the closure of Mr Said's FX trades. Once again, credit is given by DBAG in its claims for this sum.

1302. The fourth transfer on 4th December took place in the context of the termination of the GPF account on that date. Upon such termination DBAG was entitled under Clause 7.1.2 of the Equities PBA to the value on that date of "any sums standing to the credit of the Cash Account" with the value to be determined in US$. The sum in question was converted into US$ and applied to reduce SHI's FX trading shortfall. It has once again been taken into account in DBAG's claim.

1303. All these sums went therefore to discharge part of SHI's indebtedness to DBAG and on the findings I have made there can be no basis for any recovery by SHI by way of damages or restitution.

29. FX Close Out

1304. DBAG contends that there was a consensual close out of Mr Said's FX transactions between 14th and 31st October 2008. Its case is that, by agreement between DBAG and SHI, his positions and exposures governed by the FXPBA were closed out and SHI's assets held by DBAG applied against amounts owing by SHI to DBAG under the terms of the FXPBA and FX ISDA. SHI, in its closing submissions accepts that it had decided to close out all positions and communicated that decision to DBAG. What it does not accept is that there was an agreement that DBAG would take over any positions and charge SHI for the costs of doing so. What actually took place after 22nd October is very much in dispute between the parties. The primary issue is whether or not there was agreement between Mr Said and DBAG's representatives that DBAG would take over Mr Said's outstanding trades on 22nd/23rd October and agreement to the prices to be paid by SHI where it did so.

1305. SHI makes much of the fact that Mr Gunewardena was involved in the close out of these transactions and has not been called as a witness by DBAG. Mr Said, equally, has not been called by either party. The surest guide as to what happened is to be found in the contemporary documents.

1306. There can be no dispute about the position between 13th and 22nd October 2008 in relation to the closure of Mr Said's FX transactions. On 13th October, following a script which he had agreed with Mr Vik, Mr Said told DBAG representatives on the telephone of SHI's intention to close down his positions in an orderly way whilst

providing the necessary margin in the meantime. On 15th and 16th October Mr Vik confirmed this with Mr Brügelmann.

1307. On 16th October Mr Vik and Mr Said told Mr Gunewardena, Ms Serafini and Mr Brügelmann that SHI intended to close out all Mr Said's FX positions and, in circumstances referred to elsewhere in the judgment, agreement was reached that, in these circumstances, DBAG's margin calls would not include any element of VaR or liquidity add-on as opposed to MTM variation margin. In consequence, the fourth and fifth margin calls on Thursday 16th and Friday 17th October 2008 included only that element and the price/premium agreed by Mr Said with counterparties for the close out of transactions.

1308. On Monday 20th October 2008, in response to Mr Brügelmann's request for an update for Mr Gunewardena from the 16th October telephone conversation, Mr Vik said that SHI was "closing positions in an orderly way" and that SHI was "[l]ooking for opportunities to close all positions that Klaus had". At this stage, because a number of positions remained open, including in particular EUR/NOK trades, DBAG personnel were contemplating making a further margin call of US$50 million although their concerns were somewhat alleviated by Mr Brügelmann's view that SHI would be paying the fifth margin call, as in fact it did.

1309. It was on 22nd October that the telephone calls took place with Mr Vik in which he was faced with the impact of the Ignored Payments Error and the large deficit on the GPF account. Mr Vik's response was that, with a deficit of around US$300 million, SHI could not pay but wanted to close down all transactions.

1310. Whilst the exact sequence of events is not clear, it is plain from internal telephone conversations at DBAG, the exchanges between Mr Said and Mr Vik relating to a draft email which Mr Said later sent to DBAG and from that email itself that a decision was taken on the morning of 22nd October in conversations between Mr Vik and DBAG personnel that SHI's remaining transactions should be closed out to crystallize the loss. The draft emails and the actual email referred to "the decision … to close out and crystallise the loss on all remaining positions" which had been taken that morning. From the terms of internal telephone conversations at DBAG, it appears that Mr Gunewardena had spoken to Mr Vik to say that unless he was willing to post new margin of US$50 million, he had to close everything down that day, including all of the FXPB options including "the Pivot Options". In consequence "the client has advised that everything should get, everything will get closed down today …". Whilst Mr Vik was not prepared to accept this in cross-examination, the email sent by Mr Said, after the presentation of drafts of it to Mr Vik and the internal discussions at DBAG, show this to be the case. Whilst SHI submits that no such conversation ever took place between Mr Gunewardena and Mr Vik, in my judgment it is clear that it did, although no transcript of it has emerged.

1311. There was an urgency about closing out Mr Said's remaining transactions but it is not suggested that DBAG exercised any contractual powers of sale. SHI was not prepared to put up margin whether on the GPF account or the FXPB account so it was agreed that the trades had to be closed. The idea was that DBAG and SHI should co-operate to achieve the best results as appears from telephone calls between Mr Said, Ms Liau and Mr Gunewardena. Throughout the period of 13th October to 22nd October, DBAG had allowed SHI to close down its positions in the orderly way that it

wished on the basis of the provision of margin. Contractual margin had not been required, not just as a concession to SHI but because DBAG could not calculate it in any event. By 22nd October however, there was little liquidity left in the assets held by SHI at DBAG, SHI was saying that there were no other assets available and there was a large GPF deficit. Whilst SHI had little option but to close down Mr Said's remaining transactions in the absence of producing further collateral, it had agreed that this should occur forthwith.

1312. The email sent by Mr Said on the afternoon of 22nd October complained to Mr Gunewardena and Ms Liau that he and Mr Vik had expected the USD/JPY trade and the EUR/NOK trades to be closed out during the course of the day at around 99 and 9.01 respectively but that nothing had happened. He said that he had offered all his advice and volunteered a way to get it done but had been told not to do anything save to provide the unwind prices for the options from the Counterparty banks. The complaint was that the market had moved a lot in the interim period prior to the email. I have no doubt, given the contents of other communications to which I refer below, that the wording used in this email was agreed between Mr Vik and Mr Said and represented posturing on their part in circumstances where Mr Said himself had been struggling to close the trades and had asked DBAG for help in doing so. In an email on the afternoon of 22nd October, Mr Walsh reported to others in the FXPB team that Mr Said had just called, saying that he wanted to check all his positions to ensure that he was trading the correct amounts to close them out. He had said that his plans were to execute those trades later that day or the next day. The process of closing was a co-operative one. Even though the EUR/NOK transactions and the outstanding EDTs presented particular problems, by 24th October 2008, with the assistance of DBAG, all Mr Said's open positions had been closed out.

1313. SHI's case is that no agreement was ever reached with DBAG which gave it authority to close out any of Mr Said's FX positions and it puts DBAG to proof that Mr Said instructed DBAG to close out transactions on 23rd October and in particular to enter into hedges at a weighted average rate of EUR 1 to NOK 9.169 for the purpose of closing out transactions. In particular, it is said that Mr Said did not instruct DBAG to close out SHI's EUR/NOK TPFs (EDTs 27 and 38) on 23rd October at the prices charged to SHI.

1314. SHI accepts that Mr Said played some role in assisting DBAG in the close out process on 22nd and 23rd October but maintains that he did not give instructions for the transactions which took place. It is said that Mr Said was expressly told not to deal with counterparties himself but to go through Mr Gunewardena and Ms Liau. Mr Vik's evidence in cross-examination was that Mr Said's concern was that DBAG would close out the positions with SHI at exorbitant prices. SHI relies upon passages in Mr Said's deposition where he said that "at some point" DBAG took the positions over which were then out of his hands. He said that of the last few of his trades, he did some himself, "albeit under a fair amount of duress". If he recalled correctly there was a finite point at which DBAG took over the portfolio and he also executed some trades where he was basically in co-operation and under instructions from DBAG, particularly Mr Gunewardena.

1315. As at 22nd October, it is agreed between the expert forensic accountants that there were six vanilla EUR/NOK positions still open and two substantial EUR/NOK TPFs, namely EDTs 27 and 38 with many other less significant transactions. The currency

exposure on the vanilla trades was approximately EUR 500 million and on the EDTs, EUR 1.2 billion. A further TPF remained extant, namely a USD/JPY TPF (EDT 40) with GS.

1316. In the telephone call of 22nd October between Mr Vik and Mr Gunewardena and others where the GPF deficit and Ignored Payments Error was discussed, Mr Vik twice said in response that all the positions should be closed. Towards the end of the call Mr Gunewardena asked if Mr Said was closing the trades to which Mr Vik replied affirmatively. Mr Gunewardena suggested he should get some prices and then let FXPB know who would then try and work with DBAG's own Sales Desk to see if it could produce a better price. Mr Vik was asked to get Mr Said to call Ms Liau and co-ordinate with her before concluding any deals at the prices offered, in case DBAG could improve on the price.

1317. Very shortly after that call Mr Said telephoned Ms Liau "about closing out everything" and Ms Liau repeated the suggestion of Mr Gunewardena about ascertaining whether DBAG's trade desk could offer a better price than those obtainable from the outside market. Whilst Mr Said doubted that this was possible, he recognised that the quote he had from GS on EDT 27, using a spot rate of 9.01, was unlikely still to be obtainable (the spot rate had already moved to 9.05). He was waiting for a quote from CS on EDT 38. Mr Said's concern was that if he went out in the market with a total spot exposure of approximately EUR 1.5 billion which he needed to cover on the EUR/NOK trades (both vanilla and EDTs) the spot rate would be likely to move 5% or so.

1318. At 11:57 that morning Mr Said provided the quotations he had then obtained from GS and CS based on a EUR/NOK spot rate of 9.01. GS quoted US$80.2 million and CS quoted US$58.9 million, totalling US$139.1 million together as the premium SHI would have to pay. Mr Said said he would call back when he received a quotation from GS on EDT 40 (the USD/JPY TPF). He said he was pretty comfortable getting that one done on the market himself. In a further conversation at 12:17, Mr Said asked if DBAG would take on EDTs 27 and 38 for payment of "not too large a premium" and stated that, if this was done, it was for DBAG to decide "whatever the hell" it wanted to do with them thereafter. In the course of this conversation, Mr Said said that he was worried "about the whole spot thing", by which he must have meant the weakening of NOK if he attempted to sell EUR 1.7 billion worth of that currency. He said the best outcome would be for DBAG to take his positions over for a risk premium.

1319. At 12.51, Mr Said informed Ms Liau of the quotation received from GS on the USD/JPY transaction (EDT 40) and, having provided information about prices on all three EDTs, he asked what would happen next. Ms Liau told him that Mr Gunewardena would speak to some senior people at DBAG to ascertain whether DBAG could offer better prices, upon which he would call back.

1320. At 13:28, Mr Gunewardena called Mr Said and they discussed the quotations which Mr Said had obtained, which were now "totally out of the window", according to Mr Said, because the spot rate had moved from 9.01 to 9.18 and GS would only honour the quote if they could obtain their spot hedge at 9.01. Mr Said said he had a partial hedge on the USD/JPY position but not on the EUR/NOK trades, whether vanilla or TPFs. Mr Said said he had no idea what the best option was in the circumstances,

suspecting that prices had gone up because "someone out there must know we have a lot of Euros to buy". That would not be surprising because Mr Said had been unwinding positions in the second and third weeks of October 2008 and had been requesting unwind quotations from various third party counterparties for his remaining open positions on a regular basis since 15th October. He was to tell Mr Gunewardena that he had asked for unwind prices for EDTs 27, 38 and 40 every day for the previous six days. Mr Said said in terms that he was "fried" and "frazzled" but that unwinding the options was not the hardest part of the exercise. The issue was obtaining the delta hedge. He suggested that either he or DBAG could "just go out and start buying" but the price would end up at 9.30. Mr Gunewardena pointed out that DBAG had been asking for these trades to be unwound for many days now and Mr Said said that they were now getting into "real disaster territory". Mr Gunewardena said that he would discuss matters internally and get back to Mr Said.

1321. He did so at 14:23, when the difficulties were discussed with the spot rate moving. Mr Gunewardena asked if he could speak to Mr Vik and was told that, if he did so, Mr Vik would only tell him to deal with "Klaus". Mr Said was suggesting that Mr Vik was asking why the trades had not been closed that morning, to which Mr Gunewardena responded that DBAG was trying to comply with his directions. There was then agreement that it was not sensible to go out and buy €1.6 billion in bulk because the market would be likely to move to 9.40 if they did so. They thought that there would be some liquidity the next morning and it was agreed that DBAG would buy €1.6 billion in small parcels, seeking not to move the market in doing so. Mr Said thought that obtaining this delta hedge at 9.20 or 9.22 would be an unbelievable outcome because it would mean that the market had not moved from its current position of 9.22.

1322. Of this EUR 1.6 or 1.7 billion delta hedge, as indicated earlier, approximately EUR 500 million was to cover the vanilla EUR/NOK positions and the balance to cover EDTs 27 and 38.

1323. It was at 15:43 that afternoon that Mr Said sent Ms Liau and Mr Gunewardena the email complaining at the delay in closing out the transactions following the agreement/decision of Mr Vik to close out the account and crystallise the loss. There was no logic to this complaint given the difficulties in closing the transaction without acquiring a delta hedge which could only be done in small parcels without moving the market. The complaint then made that the transactions should have been closed out by that time is not the complaint now made, which is that the transaction should not have been closed out until much later and that SHI should have been allowed to retain EDTs 27 and 38 after 23rd October or should be given the benefits of having done so.

1324. At 18:26, Mr Gunewardena called Mr Said again with Ms Liau "to kind of agree what we are all trying to do". He reiterated that on the NOK side DBAG was seeking to cover the delta discreetly and that EDTs 27 and 38 were to be unwound the next day with the delta hedge in place. Mr Said thought that once the delta hedge was in place, the rest was simple. He plainly considered that the hedge was an integrated part of the close out. Mr Said already had a US$300 million hedge in place for EDT 40 but it was agreed that a further US$200 million would have to be added. Mr Said said he had considerable expertise to offer but wanted to be told what to do.

1325. At 20:24 Mr Gunewardena sent Mr Said an email in confirmation of the agreement that Mr Said would execute a further US$200 million delta hedge for the USD/JPY whilst DBAG would cover the EUR/NOK delta with them both working together the following day to close out the EDTs with delta hedges at the best possible levels. Mr Said confirmed the position and said he hoped to buy in the USD hedge in pieces over the next hour or so.

1326. At 08:46 the next morning, Mr Said emailed Mr Gunewardena to ask whether DBAG wanted him to be involved in the unwind process and a little while later, in a telephone call, Mr Gunewardena asked him to get a quotation from GS for unwinding EDT 40 (the USD/JPY trade).

1327. At 10:08 Mr Said telephoned Mr Gunewardena with unwind quotations from GS and MS for EDT 40, stating that he thought he could improve on the GS quotation slightly. At the same time, Mr Gunewardena told Mr Said that a delta hedge of €1.6 billion had been obtained by DBAG for the EUR/NOK positions.

1328. At 10:48, Mr Said telephoned to confirm that he had unwound EDT 40 with GS, having put in place the delta hedge.

1329. At 12:28 Mr Gunewardena and Mr Said discussed pricing for the unwinding of the EUR/NOK trades and the prices which Mr Said thought he could now get from GS and CS. Mr Said said that from an overall risk reduction point of view it was a lot better to tear up the deal with the original counterparty, but Mr Gunewardena said he could probably get a better internal price from the DBAG Sales Desk than the counterparties would offer. Less than half an hour later, Mr Gunewardena told Mr Said that he had closed out the SHI/DBAG legs of EDTs 27 and 38 at better prices than GS and CS were offering and a few minutes later, on being questioned about this, told him that the EUR/NOK positions were concluded at a better level than DBAG could have done in the market. A little later Mr Said confirmed the prices he had obtained from GS and CS at €71 million and €61.3 million although there was some prospect of an improvement of the latter. The total was therefore €132.3 million, whereas DBAG's combined price for the two was €125.5 million. A summary of these competing prices was sent by Mr Gunewardena to Mr Vik and Mr Said that day at 15:16 with confirmation that the transaction had been closed out with DBAG. The email read as follows:

> "As per discussion with Alex, I am forwarding current status of the unwinds.
>
> - Yen pivot with delta at $33.7 million (GS)
>
> - the 2 Euro/Nok pivots with delta closed out at Euro 125.5 million with DB (GS + CSFB combined cost would have been Euro 132.37 million
>
> - Residual Euro/Nok cash closed out at 9.169
>
> - We also have a total amount of payments of $312.38 million to be made on the back of previous unwinds made by Klaus and the above trades.

> Some small residual positions are left to be closed out, but not significant.
>
> Currently we have a deficit of $117,668,882 which needs to be settled with us today. Let's discuss in about 30 minutes."

1330. There was no complaint from Mr Vik or Mr Said about any part of this. The price charged by DBAG was less than the quotations from GS and CS. The delta hedge package for both the vanilla EUR/NOK transactions and EDTs 27 and 38 was achieved at an average rate of 9.169 in circumstances where Mr Said had considered that a rate of 9.2 or 9.22 would be an unbelievable outcome.

1331. The extensive history which I have recorded clearly shows the agreement reached on the telephone and by email that DBAG would attempt to close out SHI's liability under EDTs 27 and 38 for prices better than those offered by the counterparties and to the obtaining of a delta hedge which would enable that price to be offered. SHI has raised a series of different complaints in relation to this process. It is clear however that Mr Said was looking for assistance from DBAG and was pleased to obtain it. He was by no means shut out of the process and the records show that he spoke seventeen times on the telephone with DBAG representatives between 09:00 on 22nd October and 13:00 on 23rd. It was Mr Said who wanted DBAG to take over his EUR/NOK positions because of the difficulties that he found himself in in seeking to get good prices from GS and CS or to hedge satisfactorily.

1332. Any complaint that the trades should have been closed out on the morning of 22nd October was completely unreal. At 09:08 that morning, Mr Said told Ms Liau that he had yet to speak to Mr Vik about unwinding EDTs 27 and 38 because he was still working on unwinding EDT 29. He only obtained a price from GS on EDT 27 at about 11:00 on the basis of the spot rate of 9.01 and the spot rate had already deteriorated. He first spoke to Ms Liau about closing out EDTs 27 and 38 at 11:39 that morning recognising that SHI would not achieve a rate of 9.01, the spot rate then being 9.05. He also recognised expressly that selling EUR 1.6 billion worth of NOK would move the market by 5% or so.

1333. It was not until 14:23 that Mr Gunewardena agreed to secure the delta hedging necessary for DBAG to consider offering a price on EDTs 27 and 28. Between 14:40 that day and 10:08 the next morning, DBAG obtained the delta hedging needed.

1334. Mr Said's complaint was made at 15:43 on the afternoon of 22nd whilst this process was in train, when the spot rate was about 9.3. DBAG managed to achieve 9.169 as a weighted average on the delta hedge.

1335. In short, DBAG had agreed at Mr Said's suggestion to take on the risk in a period of about three hours between 11:39 and 14:23 on 22nd October, which cannot constitute justifiable grounds for any complaint of the kind made at the time. During the course of the various telephone calls, Mr Said recognised that he had created the problems.

1336. It is right that the NOK declined in value on 22nd October 2008 but there was nothing that DBAG could do about this. The market in Scandinavian currencies was very illiquid in mid to late October 2008 and Mr Said said that there had been nothing similar since 1973. 1.6 billion EUR/NOK was on any view a large figure and in that

market represented a substantial block of currency. Additionally, Mr Said had closed out his NOK/SEK TPF (EDT 29) with MS on the morning of 22nd October and in order to do so had entered into a delta hedge to sell NOK 2.1 billion (approximately EUR 233 million). Selling such a significant quantity of NOK would be likely to affect the NOK spot rate.

1337. There is no doubt in my mind that the price charged by DBAG was a better price than anything Mr Said could have obtained in relation to EDTs 27 and 38. He recognised the difficulties he had in effecting the delta hedge necessary, a process which was carried out by DBAG over approximately 19 hours using its New York, London and Sydney trading desks throughout the night.

1338. The real ground of SHI's current complaint is that, having taken over the trades itself, after charging an entirely reasonable price to SHI on 23rd October, DBAG held onto EDTs 27 and 38 until 28th and 29th October when it closed them out with GS and CS for a lesser premium, thereby making a profit of around €69.2 million. That was the effect of market movements. If SHI had been prepared to put up margin it could, of course, have retained these trades and reaped any such benefit of market movement.

1339. The contention that SHI never agreed to pay the price offered by DBAG for EDTs 27 and 38 bears no relationship to reality. Mr Said was looking for DBAG's assistance and agreed that it should seek to better the only prices that he could obtain which it duly did. When DBAG came forward with such prices, he was only too happy to be out of the transactions as the recorded telephone conversations prior to the conclusion of the deal show and as his conduct throughout the whole of 22nd and 23rd October makes plain. Following receipt of the 23rd October email from Mr Gunewardena stating that US$117 million was now owing in consequence of the close out, Mr Said and Mr Vik discussed the email with Mr Said observing that the numbers were large but "that is what they show".

1340. All in all, it is clear to me that SHI and DBAG agreed on 22nd October that the balance of Mr Said's FX trades which were then outstanding should be closed out, crystallising the loss. The way in which these trades were closed out was discussed between Mr Said and Mr Gunewardena, with some input from Ms Liau. The object was to minimise the losses on the trades and there was no disagreement between Mr Said and Mr Gunewardena about the methods used or the results achieved. Mr Said at all times recognised that hedging was a critical part of the exercise if DBAG was effectively to take over the outstanding trades in his FXPB account as he had suggested, thereby closing out the SHI/DBAG legs (the Agency Transactions) of the trades which Mr Said had concluded with Counterparties. If Mr Said had entered into transactions with the Counterparties to unwind the original deals, he would have paid more. By concluding a deal with SHI, DBAG was left exposed to the Counterparties and, as Mr Said fully recognised, it needed to protect itself by delta hedges. The cost incurred in these hedging transactions was therefore part of the price/premium payable to DBAG. At the time of the events in question there is not the slightest suggestion that Mr Said thought otherwise and the sequence of events, as recorded above, on 22nd and 23rd October demonstrates his full agreement to this course of action and his appreciation that it was done in an economic manner.

1341. It seems that there are two issues which arise as to quantum of hedging costs. The first issue relates to the EUR/NOK hedging and the manner in which the average

exchange rate across the hedging trades entered into by DBAG was derived. The contemporaneous correspondence shows that each of the three DBAG trading desks which entered into the relevant hedging trades in New York, Sydney and London recorded average rates which in combination on a weighted average basis give rise to the 9.169 figure.

1342. I can see no basis for looking beyond these figures to apply the average rate calculated on all DBAG's external EUR/NOK trades on 22nd and 23rd October and in these circumstances find that DBAG is entitled to take into account the full figure of US$11.5 million as hedging costs on the EUR/NOK trades.

1343. In addition to the US$11.5 million for hedging the EUR/NOK vanilla trades and EDTs 27 and 38, just under US$1.5 million was expended in hedging costs against US Dollar and Yen exposures to the Euro. DBAG took on sixty-eight FX positions in a number of currencies from SHI on 23rd October but the hedging costs resulting from Dollar and Yen exposure to the Euro arose as a result of DBAG entering into hedging trades on Monday 27th October. The short issue which I have to decide is whether or not the length of time taken to close out these positions was reasonable in the light of the takeover of the trades at close of business on 23rd October. If the trades should have been closed out at the start of business on 24th October, the business day following the trades being taken in by DBAG, the claim for these costs would be effectively reduced to zero.

1344. I have no evidence before me as to the reasonableness or otherwise of the course of action adopted by DBAG. Since the agreement was to take over the trades with immediate effect, I can see no good reason for a delay from the Thursday evening to the Monday, particularly given the 24 hour nature of FX trading on a world-wide basis. No doubt DBAG had plenty else to occupy itself with during this frantic time in the market but, whereas there is material which demonstrates the time required to hedge the EUR/NOK EDTs, there is none to justify the delay in closing out these more ordinary transactions. In my judgment therefore the sum of US$1,461,837 is not recoverable from SHI.

1345. The effect of my decision is that DBAG's FX claim consists of the following:

i) The value of SHI's open positions when taken over by DBAG on 23rd October 2008, which is agreed by the experts to be US$86,027,318.

ii) The recoverable costs of hedging referred to above; namely US$11.5 million.

iii) SHI's cash shortfall of US$21,637,508

iv) less a reduction of US$2,175,208 by reason of delayed conversion of a NOK 200 million transfer on 20th October 2008, a figure agreed between the experts.

30. Equities Close Out

1346. Following DBAG's termination of the Equities PB Agreement on 4th December 2008, nominating that date as the Termination Date under that Agreement and as the Master Termination Date under the Master Netting Agreement, the effect of which

was that a deemed Early Termination Date arose under the Equities ISDA and a Liquidation Date arose under the Listed F&O Agreement on the same date, DBAG set about closing out SHI's equities positions.

1347. DBAG claims US$125,523,086 pursuant to the terms of the 2008 Agreements in accordance with Clause 3.2 of the Master Netting Agreement.

1348. There is a dispute between the parties as to the valuation of stocks held by SHI at 4th December 2008. DBAG ascribed limited value to them and transferred them into its own proprietary account, setting off their calculated value against the sums claimed from SHI.

1349. SHI alleges a breach of Clause 7.1.2 of the Equities PBA which provides:

> "7 SET OFF AND CLOSE-OUT
>
> 7.1 On or at any time after the occurrence of an Event of Default (excluding the events described in paragraphs (iv) and (v) of the definition of Act of Insolvency on the part of either party) in relation to either party (the "Affected Party"), the other party (the "Unaffected Party") may elect by notice to the Affected Party for the following to occur on or as soon as reasonably practicable after the date (the "Termination Date") specified in the notice (being not earlier than the date the notice is given):
>
> 7.1.1 all the parties' obligations under the Agreement which are outstanding (including, but not limited to, all Transactions and financing under Clause 3), and any obligation (save those set out in this Clause 7) to do anything in the future shall terminate immediately;
>
> 7.1.2 the Unaffected Party shall determine in good faith, but at its absolute discretion, the value on the Termination Date immediately prior to termination of:
>
> (i) any Prime Broker Securities;
>
> (ii) any Securities standing to the debit of the Securities Account;
>
> (iii) any sums standing to the credit of the Cash Account;
>
> (iv) any sums standing to the debit of the Cash Account; and
>
> (v) any Transaction which has been effected but in respect of which the Securities concerned have not yet become Prime Broker Securities or been debited to the Securities Account;

and their value shall be determined in United States dollars and less any fees, costs and commissions which might reasonably be expected to be incurred in such conversion or if the relevant Prime Broker Securities or Securities were to be disposed of;

7.1.3 the Unaffected Party shall promptly calculate the net amount of the values determined under clause 7.1.2 above by deducting the aggregate value of sub-paragraphs (ii), (iv) and (v) from the aggregate value of sub-paragraphs (i) and (iii), and the net amount shall be the only sum owing between the parties in respect of all the parties' obligations terminated under Clause 7.1.1 above; …"

1350. It is SHI's case that the values used by DBAG for the shares in question were arrived at in breach of Clause 7.1.2 inasmuch as the discretion exercised by DBAG was not exercised in good faith and on a rational basis.

1351. The values which DBAG ascribed to those shares at 4th December 2008 were valuations based on external quotations for the share holdings but SHI contends that the process by which such quotations were obtained was wholly inadequate. The shares in question consisted of 142,000 shares in Akasaka Diesels Limited (Akasaka), a company listed on the second section of the Tokyo Stock Exchange for smaller and less liquid companies and shares in a number of Norwegian companies involved in the oil or shipping industries, which were referred to at the trial and by the experts as "the Norwegian Securities".

1352. The table below sets out the equity holdings and key data relating thereto:

Equity	Currency	Listed Exchange	Shares held	% of issued capital	Transfer date	Value
Akasaka	JPY	Tokyo SE	142,000	0.92%	17 December 2008	JPY 88
American Shipping	NOK	Oslo Børs	76,100	0.28%	11 December 2008	Nil
Floatel	USD	Unlisted	6,243,281	6.95%	11 December 2008	Nil
FPS Ocean	NOK	NOTC	371,520	4.91%	11 December 2008	Nil
Scorpion	NOK	Oslo Børs	276,638	0.46%	11 December 2008	Nil
Seajacks	NOK	Oslo Axess	208,700	1.59%	11 December 2008	Nil
Standard Drilling	NOK	NOTC	8,056,400	3.89%	11 December 2008	Nil
Thule	NOK	NOTC	5,495,830	8.36%	11 December 2008	Nil
Yantai	NOK	NOTC	4,933,900	1.8%	11 December 2008	Nil

1353. The value ascribed to the Akasaka shares was ¥88 per share at the Termination Date but no value was ascribed to any of the Norwegian Securities at all. The table refers to the exchanges on which the shares were listed. Two of the Norwegian Securities were listed on the Oslo Børs which is the main Norwegian stock exchange. One was listed on Oslo Axess (Seajacks) which is an exchange with less detailed listing requirements and which describes itself as suitable for companies with less than 3 years trading history. Four were members of the Norwegian OCT information exchange (NOTC) which is not a stock exchange but an information system where securities dealers can register a bid or ask for a price for securities on the list. Floatel International Limited was neither listed nor on the NOTC list.

1354. The experts provided market statistics of the exchanges upon which these companies were traded in 2008. The number of companies listed on the Oslo Børs, the Oslo Axess and the NOTC respectively was 224, 35 and 116. 462 companies were listed on the Tokyo second section. This compares with 1,233 companies on the AIM and 1,174 companies on the FTSE. The monthly turnover on the Norwegian and Tokyo exchanges placed the Oslo Børs above the AIM index but well below the FTSE, whilst the Tokyo second section and the Oslo Axess market showed very limited turnover by comparison. The experts produced financial data for the companies to demonstrate the relative sizes of each of them, as appears in the table set out below.

Company	Year Ended	Total assets USDm	Net assets USDm	Total revenues USDm	Profit/(Loss) after tax USDm
Akasaka	31-Mar-08	177.5	70.2	141.9	8.4
American Shipping	31-Dec-08	714.1	81.0	33.3	(74.7)
Floatel	31-Dec-08	208.6	164.0	Nil	(1.3)
FPS Ocean	30-Sep-08	1.7	(105.3)	Nil	(130.6)
Scorpion	30-Jun-08	880.9	332.8	91.2	15.6
Seajacks	31-Dec-08	235.0	96.7	Nil	(6.7)
Standard Drilling	31-Dec-08	64.3	27.5	100.5	30.6
Thule	31-Dec-08	330.5	93.5	11.9	(67.6)
Yantai	31-Dec-08	1,199.6	403.0	629.7	17.7

1355. I was also given data showing the trading in the shares of these companies between 1st January and 31st December 2008 in terms of average daily trading volume and total turnover and the same data in relation to the more limited period from 15th September 2008 to 31st December 2008. Figures were also produced for the turnover in the shares for each of the individual companies as against the total turnover in each of the relevant markets for each month of 2008.

1356. Between 23rd October and 4th December 2008 Mr Brügelmann had been seeking instructions from Mr Vik to market the equities in order to realise sale proceeds to meet SHI's indebtedness to DBAG. In his email of 24th October to Mr Vik he discussed the illiquidity of the Norwegian and Japanese stocks and the possible strategies for obtaining the best prices. He looked for approval from Mr Vik for the presentation of the portfolio to some strategic clients that might find interest in bidding as a block as opposed to liquidating the portfolio in line with the daily volume of trades, which could take several months. Mr Vik did not respond. Mr Hanssen was a specialist in this area of equities but at no time were any alternative suggestions produced by SHI for the realisation of these shares.

1357. DBAG put in evidence in the shape of statements from Mr Singh and Mr Hogan in relation to the Akasaka shares and from Mr Singh alone in relation to the Norwegian Securities and the process of obtaining bids in respect of the shares. Mr Singh was cross-examined about the process involved. I heard expert evidence from Mr Robinson and Mr Davies, who were called on behalf of DBAG and SHI respectively. Mr Singh was looking to produce the market value of the shares to be set off against sums owed by SHI. He was not looking to ascertain the lending value which DBAG might ascribe to them and he did not know about the policy used to value equities in DBAG's books, once transferred to the proprietary account. His evidence was that having looked at the equities portfolio in DBX, he ascertained its illiquidity with a weighted average of 600 days. The decision was taken to obtain four bids in

accordance with the objective ISDA industry standard, to exclude the outriders and take the median of the two left. (The Market Quotation method provided for in the 1992 Master Agreement).

1358. The advice he received from the Special Situations desk was that the liquidation of the portfolio could take several months and that seeking a block sale was more effective than seeking to work the order separately in small amounts on a daily basis. The Norwegian Securities (excluding Floatel) were valued at about €20 million on Bloomberg on the basis of the last traded share price multiplied by the total quantity but some of the shares had not been traded for some time whilst one company's shares had not been traded since July. Since that date there had been the Lehman Brothers collapse and the consequent disruption of the markets. A consistent approach was desired across the board for all the shares, both for the Akasaka shares and the Norwegian Securities, with a desire to get a valuation quickly. On asking whom to approach for help in relation to the Norwegian Securities, Mr Singh was directed to Mr Lowndes of the Nordic Sales Desk. Mr Lowndes approached four brokers who were at the time listed as numbers 8, 11, 12 and 19 according to the size of their turnover and number of transactions conducted. Since the majority of business is in liquid shares, unlike the Norwegian Securities, the brokers' place in that list does not seem to me to be of much relevance. It is not suggested that those brokers were incompetent or had reason not to wish to conclude sales and earn commission on them.

1359. Mr Singh accepted that there may have been some company shares in the portfolio which were more liquid, such as Scorpion, but the portfolio was treated as a whole. He stressed that he did not know what the outcome of the process would be when it was adopted. All the brokers were listed in December 2008 as trading on the Nordic Stock Exchange and/or were active on the NOTC platform. It is clear from internal communications within DBAG that there was doubt as to whether any firm prices would be forthcoming from the brokers at all, because of the state of the market. This fear proved well founded because within about an hour of Mr Lowndes sending his email to the brokers, three had responded with "no bid" and one with "no interest".

1360. SHI submits that there were no "zero" bids: nor did the brokers say that the shares were of no value. The brokers informed DBAG that there was no interest in acquiring the shares in the volumes offered on that date. Mr Singh, to whom these responses were forwarded decided that, in consequence, all the Norwegian Securities should be valued at zero. SHI submit that this decision was not made in good faith and was irrational, pointing to the words of Rix LJ in *Socimer Bank Limited v Standard Bank Limited* [2008] Lloyd's Rep 558 (CA) at paragraph 66 where he said:

> "… a decision maker's discretion will be limited, as a matter of necessary implication, by concepts of honesty, good faith, and genuineness, and the need for the absence of arbitrariness, capriciousness, perversity and irrationality."

It is submitted by SHI that the concept of irrationality is equivalent to "Wednesbury" type unreasonableness, as that notion is deployed in public law. SHI puts forward the test as to whether there was an "error of reasoning which robs the decision of logic".

1361. For completeness however, I set out further paragraphs of his judgment in that case to which I shall make reference later:

> 112. … in the specific context of a default and a forced retention of designated assets, Standard is compelled by its buyer's default to retain what it never sought, save to the extent that it can immediately liquidate the assets on the termination date. The question whether it can sensibly in the interests of either party liquidate on the termination date is part of the complex uncertainties of this emergency situation. If it decides not to liquidate, it is forced to retain. If in that context it has to value the assets, why should it not be entitled to value them at a value which reflects the value of such assets to itself? It may dislike the risk they pose, in terms of the nature of the particular asset, its currency and/or nationality and so on. The decisions have to be taken very quickly, namely "on the date of termination" (see further below). Once the asset is not immediately sold, the risk of retention is entirely transferred to Standard. In theory and sometimes in practice anything may happen the next day, or within the time in which a sale might become possible. The difficulty multiplies if the asset is relatively or entirely illiquid. Then there is no market price by which the value can be set on the relevant day. Who knows at what price the asset can be sold when a buyer appears? In such circumstances, Standard is entitled, it may be said, to consult its own interests, subject of course to the requirements of good faith and rationality. Those factors include both subjective and objective elements, but the essence of that construction is that the decision remains that of Standard, not of the market or the court, and that in coming to its assessment, subject to the limitations of good faith and rationality, it is entitled primarily to consult its own interests.
>
> …
>
> 115. It follows that where there is no buyer on or as at the valuation date, there is an additional difficulty. What is the value to be put on an asset for which there is no buyer? Or for which there is no market? Or for which there is a volatile or illiquid market? Or a market which can only absorb a small amount of stock before the price is affected? The last quoted deal before the termination date may be of little assistance in such a case. The next quoted deal will be of little assistance, because it looks beyond the relevant day. In such circumstances, it might be rational to value the asset at or close to zero: but of course it does not necessarily follow. I do not think that there was any real difference about that, either before Cooke J or Gloster J. What is plain, however, is that where it is not possible to liquidate an asset on the termination and valuation date it is unreasonable that there should be any risk at

> all on Standard. It makes the implication of an objective hindsight valuation an unnecessary and unreasonable imposition.
>
> 116. … [counsel's argument] assumes that Standard is in the position of a neutral valuer, rather than a bank forced by its customer's default to protect its own position in potentially highly volatile and illiquid markets.
>
> …
>
> 122. … Standard's position is governed by its commercial contract, not by the law of equity. This is the world of sophisticated investors, not that of consumer protection. These merchants in the securities of emerging markets have made an agreement which speaks of the need for a spot valuation, not of the more leisurely process of taking reasonable precautions, such as properly exposing the mortgaged property for sale, designed to get the true market price by correct process. …
>
> …
>
> 124. It follows that Gloster J erred in my judgment in construing the valuation sentence as requiring an objective inquiry into the true market value of the designated assets, or as imposing a duty of reasonable care upon Standard."

1362. In submitting that the decision was irrational in the Wednesbury sense, SHI point to the fact that these shares had been traded at a price on previous days and, for lending purposes, DBAG had previously ascribed a value to them. It is said that most of the Norwegian Securities were actively traded on exchanges and had listed market prices which were ignored. It is said that the companies were solvent and were companies which had real assets and that no other steps were taken to see what value could be realised for the shares other than the enquiry of the brokers. No approach was made to the companies themselves to enquire about the repurchase of shares or to other investors in those companies who might have wished to increase their position.

1363. As valued in DBAG's CPORT system on 4th December, for lending purposes, the following shares were marked thus per share: American Shipping Company AS – NOK 42.50: FPS Ocean – NOK 1.00: Scorpion Offshore Limited – NOK 13.10: Standard Drilling ASA – NOK 0.20: Thule Drilling ASA – NOK 3.90. Furthermore, SHI points to the expert evidence as showing that the shares had some value, relying to the extent necessary on the fact that the expert instructed by DBAG, Mr Robinson, whilst according de minimis value to some shares, does attribute value to others.

1364. After the shares were transferred to DBAG's own proprietary account, DBAG attributed positive values to most of the Norwegian Securities, commensurate with their listed prices. The values per share entered into the proprietary account were as follows: American Shipping – NOK 40: Scorpion Offshore – NOK 16.1: Standard Drilling – NOK 0.2: Thule Drilling – NOK 3.9: Yantai – NOK 7.5. The markings in the proprietary account were in accordance with DBAG's pricing policy which

required valuation of listed stock at the last regular trade at the closing price on the day traded, if that was within the previous month.

1365. It is submitted that, in the light of this information, it must have been obvious to anyone who was valuing the shares in December 2008 that they could not be entirely worthless and that the absence of interest shown or bid made by the brokers could not be taken as a true assessment of the value of the shares. The ascription of zero value to the shares in a company has the logical consequence that the company itself is worth nothing at all.

1366. As to the Akasaka shares, DBAG had been selling, at Mr Vik's instigation, small parcels from SHI's original holding in the two weeks prior to 4th December. Parcels of 10,000, 2,000 and 22,000 shares had sold at prices of ¥175 and ¥162 and over the preceding two months, 240,000 Akasaka shares had been sold in small parcels. On 3rd and 4th December parcels of 1,000 shares and 2,000 shares were sold at ¥168 and ¥164 per share. The balance remaining was 142,000 shares.

1367. Mr Singh contacted Mr Donald the DBAG Head of Global Prime Finance in Tokyo on 5th December who obtained a broker's first impression of ¥135 but said there was no real clue as to what would be a fair value. Mr Singh asked him to obtain four independent brokers' quotes, saying that DBAG had to show that it had acted in a commercially reasonable manner. It was suggested by the Japanese desk that a sale in small parcels would yield a more commercial result but there was a need for a quick valuation for set off purposes.

1368. Mr Hogan's evidence was that there were three principal difficulties with obtaining bids for the Akasaka shares, as set out in an email of 10th December.

i) First, market conditions were extremely challenging in late 2008 and buyers were risk averse following the collapse of Lehman Brothers in September. There were thus very few buyers in the market for illiquid shares such as the Akasaka shares. The buyers who were in the market were in a position to secure very deep discounts from anyone who had to sell such shares. A DBAG trader had previously flagged up the point that the Akasaka shares were "already traded at a deep discount to book value", because of the lack of willing buyers in the market. Moreover mid and late December was typically slower than other parts of the year due to the Christmas holiday period and year end.

ii) Second, the size of the Akasaka shares was fourteen times the daily average traded volume. A block trade of this kind would be bound to attract a considerable discount, as compared with sales in small parcels which was the approach which had been adopted by SHI and DBAG up to this point. Normally, a lengthy marketing exercise would be conducted to stimulate interest, and interested buyers identified and/or small parcels of shares would be "drip fed" into the market over a prolonged period. Mr Hogan expressed two reasons for sale over an extended period. The discount or depressive reaction in the market to the sale of a large holding would thus be reduced but there would also be a minimisation of the risk of market participants becoming aware of a large block of shares being sold and then short selling the stock. For that reason he suggested that an "unwind over a period of time" would be

the most commercially reasonable approach. However that approach would have involved taking the risk of adverse price movement during the extended period of which the shares were being sold.

iii) Third, Mr Hogan was conscious that information about the sale of the shares might be leaked into the market and that might give rise to competitors short selling the stock and thereby devaluing the share value.

iv) He then suggested that seeking bids from brokers was not a "smart thing to do" as it "would be tantamount to advertising to our competitors that there is substantial stock for sale". The Head of International Sales Trading in Tokyo said that the safer course, in order to protect against the risk of short selling, was to approach clients rather than broker dealers. Using brokers could result in a lot of leakage to the market whereas, if clients were approached, they would not try to short such an issue.

1369. It was for these reasons that independent bids were then sought for the Akasaka shares by contacting DBAG clients rather than brokers. The Tokyo Head of International Sales approached the portfolio manager of funds and investment companies. He sought a bid from Brendan Bibro (whom he knew personally) saying "Distressed situation. Can be super low". The response was "would have to be real low for that liquidity". He responded "can be rediculously [sic] low". Three bids were obtained at ¥108, ¥105 and ¥50 on 11th December. A fourth bid was needed which was obtained on 12th December, with refreshing of the three earlier bids, giving rise to figures of 108, 101, 75 and 20. By dismissing the outlying two bids, the median figure, which DBAG then used was ¥88. DBAG in Japan and the brokers were displeased that there was no sale but that, so far as Mr Singh was concerned, validated the exercise, demonstrating that these were genuine bids.

1370. Once again SHI states that such a valuation was irrational in the Wednesbury sense. On 4th December DBAG's CPORT system valued the Akasaka shares at ¥163 per share. When taken into DBAG's proprietary account, the valuation in DBAG's systems was ¥215 per share. SHI submits that on the bids obtained, if DBAG had actually been selling the shares, it could have obtained the price of at least ¥108. SHI asks how a figure of ¥88 can then be rational in these circumstances.

1371. DBAG's response in respect of both the Norwegian Securities and the Akasaka shares is to say that it adopted an objective ISDA standard by using a "dealer poll" for all the shares and, having taken the decision to do that, which was entirely rational, logic required that it should accept the results of the bidding process.

1372. The difficulty with this argument is that the end result, so far as the Norwegian Securities were concerned, about which doubtless Mr Singh himself knew very little, was a zero figure for all the shares which, on any view, would be presumed to have some value unless all the companies were in liquidation. At this point, having received no bids, in my judgment it was irrational not to investigate the position further, since the bidding process had failed to produce any result at all in circumstances where it would be natural to think that shares in all 8 companies could not be worthless and valued at zero, even with a consciousness of the factors to which Rix LJ referred in the passage I have cited above.

1373. By contrast, the adoption of a similar process with regard to the Akasaka shares resulted in a figure which, whilst lower than the top figure obtained, and considerably lower than the lending value previously ascribed to the shares by DBAG and the proprietary value ascribed afterwards, on entirely different bases, could not be said to be so unreasonable that it ought not to be accepted. The process and the result of the process which, of necessity involved ignoring the highest bid, gave rise to a median figure which DBAG took as the value. Here there was no error of reasoning which robbed the decision of logic, because Mr Singh had no reason to think that that figure was in any way an unreal valuation of the shares, as a block available for sale on that day.

1374. Because I have held that DBAG's approach on receiving no bids for the Norwegian Securities was irrational and that the rational exercise of discretion would have led to further investigations, this Court has to value the shares on the basis that such further investigations that should have been made were in fact made. This Court has had the benefit of expert advice which, in my judgment, would have been readily available to DBAG had it chosen to avail itself of it albeit in nothing like the same detail, if it had explored matters further with the same brokers or other brokers. At most such further investigations would have delayed valuation by a day or two with such valuation "as of 4th December".

1375. The experts have provided valuations as at 4th December 2008, as at the date of transfer of the shares into DBAG's proprietary account, which in the case of the Norwegian Securities was 11th December 2008 and a valuation as at 31st October 2012, a time related to the time of their first expert reports. This last valuation is referred to as the "current valuation" although it would have to be updated, should SHI succeed in showing that DBAG was not entitled to take the shares into its proprietary account and has effectively converted them to its own use in breach of contract, trust or fiduciary duty.

1376. That argument arises in the following way. SHI submits that an event of default triggered the valuation process under Clause 7.1 of the Equities PBA to which I have already referred. SHI submits that this Clause entitled DBAG to attribute a close out valuation to the shares but not to transfer the shares to its own proprietary account. SHI recognises that it could not be credited with value for the shares and keep them itself but, because DBAG ascribed no value to the shares, it is submitted that DBAG had no entitlement to take them and should have returned them to SHI to do with them whatever SHI pleased, since the shares were held on trust for SHI under Clause 5. This argument however falls foul of the provisions of Clause 7 itself which provides for set off and close out since, by Clause 7.1.1, if the election is made, "all the parties' obligations under the Agreement which are outstanding … and any obligation (save those set out in this Clause 7) to do anything in future shall terminate immediately." The effect of the calculation of the net sum owing with valuations done in accordance with Clause 7.1 is to bring about the termination of any obligation of DBAG to return the Prime Broker Securities to SHI. Although I have held that the discretionary valuation was not rationally exercised, in respect of the Norwegian shares, the calculation was done and the obligation to redeliver the securities ceased. The breach of contract was not in failing to carry out the calculation required by Clause 7.1.3 of the Equities PBA nor to value the Norwegian Securities. DBAG carried out those functions albeit irrationally but the election had been made and so

the close out occurred with the result that there was no obligation to return the shares whether valued appropriately or not.

1377. The only question is therefore what was the appropriate value of the Norwegian Securities on the termination date of 4th December 2008. The value at the date of transfer by DBAG into its proprietary account and the current value of the shares is irrelevant in this context even though it appears that the realised value of the shares when sold later by DBAG (which thereby took the risk of market movement by appropriating the shares) plus the current value of the retained Akasaka shares may exceed US$23 million.

1378. The experts' Joint Memorandum sets out the different values at which the experts have arrived for the Norwegian Securities as at 4th December 2008. There is a basic difference of approach which largely accounts for the different valuations put forward by the two experts in respect of most of the shares. Each criticises the instructions given to the other which governed the other's approach. Mr Robinson's instructions were to assess the market value or range of market values for each of these equities "determined on the basis of the price that would have been paid in the market had a sale of the Equities taken place on 4th December 2008, with no prior marketing period, and in circumstances where the whole of the shareholding in respect of any of the equities was to be disposed of in its entirety as at that date". Mr Davies' instructions were to produce the market value or a range of market values for the Equities on 4th December 2008 which he took as meaning the market value which could be obtained in the ordinary course of business with appropriate prior marketing, without any pressure to sell. He assessed the market value on the basis of "the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably prudently and without compulsion". SHI criticises Mr Robinson's valuation as being effectively on a "fire sale" basis, whilst DBAG criticises Mr Davies' valuation on the basis that it is not a valuation as of the Termination Date and ignores the illiquidity of the blocks of shares for an immediate sale in their entirety.

1379. SHI's contention fails to take account of the remarks of Rix LJ in *Socimer* (*ibid*). Rix LJ envisaged the difficulty involved in valuation as of a particular date where the assets were relatively or entirely illiquid and where there was effectively no market price by which the value could be set on the relevant day. He asked rhetorically what value was to be put on an asset for which there was no buyer, or for which there was no market, or for which there was a volatile or illiquid market or a market which could only absorb a small amount of stock before the price was affected. He envisaged that in such circumstances the last quoted deal before the termination date might be of little assistance (and the next quoted deal likewise because it looked beyond the relevant day). In those circumstances it might be rational to value the asset at or close to zero, but whatever the position it was plain to him that no risk should be taken by the party not in default in making its assessment of value. It was entitled primarily to consult its own interests, subject only to the limitations of good faith and rationality.

1380. I have already held that it was irrational to value the Norwegian Securities at zero on the basis of no bid or no interest from the brokers because the presumption must be that the shares had some value. As appears below, however, the market was very

illiquid for these securities and, contrary to SHI's submission, DBAG was not bound to put itself at risk in respect of market movement by doing anything other than assessing value for the whole block of shares on the termination date. There is no obligation to indulge in prior marketing nor to sell blocks of shares in smaller parcels over a period of time in the hope or expectation of thus obtaining a higher price. It is "the value on the Termination Date immediately prior to termination" of the block of shares which matters, in circumstances where DBAG is forced by its customer's default to protect its own position in a highly volatile and illiquid market. It is thus clear that Mr Robinson's approach reflects the correct position in law and the instructions given to Mr Davis have resulted in his valuation being provided on a wrong basis.

1381. As to the state of the market, there was little difference between the experts, as might be expected. In *Westlb AG v Nomura Bank International Plc* [2012] EWCA Civ 495, Rix LJ stated:

> "1. On 15 September 2008 Lehman Brothers in New York went into bankruptcy and world financial markets, which had been in a fragile state for more than a year, went into free fall. In the liquidity crisis which quickly ensued, the so-called "credit crunch", values became entirely distorted. The best of shares, because they could at least be freely traded, suffered egregious mark-downs in price as their holders strived for liquidity. The worst of shares suffered even more horrendously. Banks, whose transactions had become hugely leveraged and which were in the very crucible of the credit crunch, saw their share price cut to ribbons as they struggled for survival.
>
> 2. This was the market in which a basket of exotic stocks or shares held by a fund, the Global Opportunities Fund (the "Fund"), fell to be valued …".

1382. Mr Davies, the expert appointed by SHI, pointed out that from the start of the year to December 2008, the FTSE dropped 35% whilst the S&P 500 Index fell 42%. Not even the largest and most diversified equity markets were immune to the global crisis in 2008. Norway's equity markets were similarly affected. The Oslo All Share Index's average monthly closing price fell by approximately 48% in 2008, with all of that decline taking place between June and December. Total monthly trade volumes fell by approximately 36%. The Norwegian Securities were all related to the shipping and oil industries. The shipping industry was in dire straits. A fall in global trade was allied with reduced availability of letters of credit required for international shipping, with an overcapacity within the industry. Shipping margins and revenues were under extreme pressure. The Baltic Dry Index fell 92% over the course of the year. Within the oil industry crude oil prices reached a record high of US$146 per barrel in July 2008 but plunged rapidly in August, falling by approximately 61% in the year. Revenues collapsed within the industry with oil majors' revenues falling by an average of 36%. "In summary, 2008 oversaw collapsing credit markets, losses across almost all commodities, plunging equity markets and sharp contractions in global consumer spending. Such anomalous markets create unique conditions in which to provide historic valuations."

1383. The Joint Expert Memorandum notes that in 2008 the Oslo Børs All Share Index, on which American Shipping and Scorpion were listed, fell by 52% between 1st September and 5th December 2008. The price index steadily recovered thereafter rising in January 2011 to the levels seen in 2007. Share volumes traded remained volatile throughout 2008 with a substantial reduction in trading volumes between July and mid-September. The Oslo Axess declined by 68% during the year with a fall of 66% between 6th June and the end of the year. No share volume information is available for this index. For the NOTC, the volumes traded on a monthly basis fell by 62% from January 2008 to December 2008. In December 2008 there were only 693 trades recorded on the NOTC at an average value per trade of NOK 0.23 million as compared with the average in January 2008 of NOK 0.47 million. From December 2008 trading on the NOTC increased but well below the level seen in 2007.

1384. The experts agree that trading in some of the stocks leading up to December 2008 was illiquid and many of them were very illiquid (Seajacks, Thule and Standard Drilling) and it is therefore necessary to reflect the impact of illiquidity and blockage (selling in large blocks) in the valuations of the equities for December 4th. Mr Davies produced figures which had an explicit discount for these factors whereas Mr Robinson adopted a more global approach reflecting what he saw as the state of the market, using a methodology reflecting the actual trading patterns, volumes and values around that date. There are no material differences between them in the share trading data employed (i.e. prices and volumes of the shares sold on a given day). Where there were completed trades on a given day, the experts agreed that the closing price on that day was the appropriate starting point to determine the share price that day. Where there were no completed trades on a given day, there was disagreement between the experts in relation to the use of bid/ask statistics. They of course do not represent an actual transaction but only what a buyer is prepared to pay or a seller is prepared to accept. Furthermore, they do not provide information as to the volume of shares that might be traded. Bid/ask statistics were available only in relation to American Shipping, Scorpion and Seajacks. In Mr Robinson's opinion, where there were no trades and no bids recorded, this was strongly indicative that there was a paucity of buyers in the market for those shares. He also took the view that where asks were shown, that demonstrated sellers wishing to sell and therefore, in the absence of actual trades, the price achievable for the stock would be somewhere below the unfulfilled ask price.

30(a) The American Shipping Shares.

1385. There were 76,100 shares constituting 0.28% of the issued capital. The shares were listed on Oslo Børs. The range of Mr Robinson's valuations ran from US$0 or de minimis to US$430,000 whilst Mr Davies' valuation was US$420,000 - US$470,000. It was a very illiquid stock. In the 3 months prior to December approximately 63% of the days had no trading at all and the median trading volume on days when trading occurred was only 400 shares excluding 11th September when 222,100 shares were traded, a quantity nearly three times that of SHI's holding, when a price of 76 NOK per share was obtained. The last recorded trade prior to 4th December was on the first of that month when a small quantity of 100 shares was traded at NOK 42.50 per share. The recorded bid price on 4th December was NOK 40. There were recorded bids and asks on all days around 4th December although it appears that participants were only interested in small packages of shares and could not reach agreement.

1386. The depth of the market is not readily seen although on 11th December a large holding equivalent to 729.6% of the SHI holding in this stock was traded in an off-exchange transaction where no price is recorded. There is only one further trade in December of 400 shares at a price of 33.50 NOK. The top end of Mr Robinson's range is assessed by reference to the last recorded bid price of NOK 40 on 4th December. The bottom end of his range is based on the depth of the market being 100 shares. Working on this basis the amount of money available for purchase on that date was NOK 4000 (US$600) which, in his words "can be described as de minimis" being equivalent to a price of NOK 0.05 per share. Mr Davies worked off the last traded price and discounted 10% for market liquidity and the general direction of price movements for the lower end of his range.

1387. Whilst I am very conscious of Lord Justice Rix's dicta, it seems that there is an air of unreality in describing the depth of the market as being limited to 100 shares given the existence of a trade of 555,200 shares on 11th December albeit off market and at an unknown price. This suggests that there was some appetite for these shares and that a greater price would have been obtainable on 4th December than Mr Robinson recognises. It is true that there were no trades done on 4th December itself but the bid price of NOK 40 and the ask price of 44 on that day gives some clue as to the price for an unknown quantity of shares. The price of the shares continued to fall from 15th December 2008 onwards down to as little as NOK 2.78 on 31st October 2012 and a mandatory liquidation was set to follow the chapter 11 filing of Overseas Shipping Group, but none of that could have been known at the Termination Date.

1388. I asked each of the experts about assessing market value in circumstances where, because of the state of the markets, the reality was that buyers and sellers were unlikely to reach agreement because the market was so bad that the seller would not be prepared to sell at a price a buyer was prepared to offer. The seller would hold on in the hope of better times. No satisfactory answer was forthcoming. That situation appears to be envisaged by Rix LJ. It does not however apply to the American Shipping shares if regard is had to the transaction of 11th December. A price was obviously agreed for a large quantity of shares, much larger than SHI's holding but the price is unknown. There would probably be some discount for this quantity which amounted to some 2.04% of the total issued share capital. Bids and asks were registered at 34 and 40 NOK respectively that day. Mr Robinson discounted this transaction as being irrelevant to his valuation on 4th December but because it gives an indication of the depth of the market, his approach based on a depth of 100 shares cannot be correct. There was value in these shares and a forced sale on 4th December, with DBAG looking out for its own interests and taking no risk, would have resulted in a price had the relevant buyer of 11th December been identified. To assess the actual price which would have been obtainable had that buyer been located is not realistically possible in the absence of any knowledge of the price paid on 11th December. It must, however, in my judgment, lie within the range of NOK 30-40 in the light of prices obtained and bids and asks registered in the first part of December. Doing the best that I can, it seems to me that, with further investigation, a rational bank in DBAG's position would have arrived at a valuation of NOK 35 per share which gives rise to a total valuation of NOK 2,663,500 which amounts to US$373,363 at the exchange rate utilised by Mr Robinson.

<u>30(b) The Floatel Shares</u>

1389. This was a private company not listed on any exchange at all. The SHI holding was of 6,243,281 shares constituting 6.95% of the issued capital. There were other shareholders with 30% and 19% holdings but no-one with a controlling interest. Mr Robinson assessed a de minimis or zero valuation whilst Mr Davies' valuations range between US$6.24 million and US$12.49 million. Mr Davies' valuation proceeds on the basis of the share price at which Floatel shares were issued in June 2008 in a private placement. The low end of his valuation range reflects a 50% reduction to reflect the general direction of the market movement. He describes Floatel as a Swedish accommodation and construction support vessel operator which was established in 2006 to own and operate modern floating accommodation and construction support vessels in the oil drilling industry. In 2007 it placed turn-key contracts for the building of two vessels in Singapore with delivery dates of 1st May 2010 and 31st December 2010. Of its shareholding of approximately 6.24 million shares, approximately 338,000 were acquired by SHI in the June 2008 placement. The date and price paid for the balance remains unknown.

1390. In June 2008 Floatel issued 12.5 million shares, representing 13% of the post issue capitalisation at a price of NOK 10.11 per share. The placement was of approximately twice the size of SHI's overall holding. Mr Davies' assessment is that there were no material changes in the operations of Floatel between June and December 2008 so that, with a soundly based private company, there should be no material change in the underlying value of the shares. He accepts that the onset of the global financial crisis resulted in significant falls in listed equity prices in that year from June to December and that shipping and related industries were some of the worst affected by the crisis. He recognises the possibility of an increased perception of risk in the Floatel shares which accounts for the lower end of his valuations.

1391. There is a total lack of any evidence of available buyers in the market on 4th December. Selling minority shareholdings in private companies is fairly difficult at the best of times and given the state of the market in December 2008 it is inherently unlikely that there would be any purchasers willing and able to buy this shareholding. It is true that there is always difficulty in producing evidence of available buyers for a private company shareholding, but unlike the situation with American Shipping, there simply is no indication of any interest in these shares at all and had further investigation been carried out by DBAG, there is nothing to show that anything positive would have resulted. Without any opportunity for marketing and with a valuation to be made for the block of shares on December 4th, I do not consider that Mr Robinson's approach can be faulted. Whatever Floatel's net asset position and long term prospects, the sentiment in the market at the time does not suggest that there would have been any buyers available on 4th December and that any value could be ascribed to the shares on that date. It is a classic case of the kind envisaged in my questions to the experts and as contemplated by Rix LJ. Here is an asset for which there is no buyer and no market on the day in question where it cannot be said to be irrational to value the shares at zero even though the shares may have significant value once the market moves.

1392. The company's assets consisted of two contracts concluded before the financial crisis for highly specialist vessels for use in extreme conditions in an industry which was in crisis and which were less than 25% built and due to be completed in between 1 ½ and 2 years time. The company had a net loss of US$1.3 million for the preceding

accounting period and no revenue. A further share issue was contemplated in order to raise further equity which was required, together with some term financing. At this stage therefore Floatel did not have financing in place to complete the construction of the vessels for use in an industry in crisis. Whilst the directors predicted great things for the future in the Report and Accounts, there is no basis for thinking that there would be any purchaser ready, willing and able to offer money for SHI's share holding on 4th December. Further investigation by DBAG would have led to that conclusion and justified a zero valuation.

30(c) The Scorpion Shares

1393. SHI held 276,638 shares, amounting to 0.46% of the issued capital. The company's shares were listed on Oslo Børs. Scorpion was a company which constructed jack up offshore drilling rigs and provided contract drilling services. Mr Robinson's valuation ranges between US$460,000 and US$510,000 whereas Mr Davies fixes on US$510,000 as the correct figure.

1394. Trading in Scorpion shares prior to 4th December occurred frequently and the trading volume exceeded the size of SHI's holding on 27 of the 132 tradable days (20.5%). There was no trading on 3% of the trading days and the average daily trading volumes were 93.7% of SHI's holding in the period from June to September and 58.7% of that holding in the period from 5th September to 4th December. The median volumes were however lower, representing 29.2% and 16.2% of the SHI holding for the same periods which indicates that trading fluctuated between some large, one off trades and lower average volumes.

1395. In the preceding 6 months to the termination date there was a decline in share price from NOK 83 per share in early June to NOK 8.48 per share on 24th November. The closing price on 4th December, reflecting trades of 1,504,700 shares (over five times the SHI holding) was NOK 13.10.

1396. Unlike some other Norwegian Securities, this was therefore a reasonably liquid stock and disposal of the block of shares would, in my judgment, have been possible, subject to the challenges of the need for immediate sale. It is Mr Robinson's opinion that buyers existed within the market for Scorpion shares in December 2008 and that they would have bought these shares subject to some discount which reflected the fact that the average daily trading volume was only about 60% of the SHI holding. Since the share holding was only 0.5% of the total share capital and the stock was reasonably liquid, that discount is likely to be small.

1397. Mr Davies relies simply on the closing price on the termination date, without giving any discount at all in relation to the quantity to be sold and the requirement for immediate sale. I consider that there should be discount but that it would indeed be limited to 5% which gives rise to a NOK valuation of 12.45 per share which gives rise to a NOK total of 3,444,143. If converted at the rate used by Mr Robinson, this equates to US$482,792. Had DBAG carried out further investigations this valuation should have ensued.

30(d) The Seajacks Shares

1398. SHI's holding consisted of 208,700 shares which represented 1.59% of the issued share capital. The Seajacks shares were listed on the secondary market in Norway, the Oslo Axess. Seajacks was an owner and operator of purpose built self-propelled jack up vessels which assisted with the installation and maintenance of offshore wind turbines.

1399. The last price recorded prior to 4th December 2008 was a trade on 4th September 2008 at NOK 75. In the 3 months from 4th June to 4th September, trading took place on 16 out of a possible 67 trading days – i.e. approximately 24% of those dates. The average trading volume on days when trading occurred in the period from 4th June to 4th September was 132,268 shares, equivalent to 63.4% of the Seajacks holding. That included three large trading days on 13th June (1,050,900 shares), 7th August (191,400 shares) and 22nd August (800,000 shares). The extreme illiquidity of these shares is self evident.

1400. Despite the low levels of trading, the share price remained steady, between NOK 70 and NOK 80 but of course this represents very little trading.

1401. In the remainder of December there was only one further trade of 10,000 shares at a price of NOK 75 per share.

1402. Mr Davies values the shares between US$1.10 million and US$2.19 million based on the last traded price of 75 NOK on 4th September. This represents the high end of his range whilst the low end is simply a 50% discount representing the possibility of a reduction due to market conditions and illiquidity. Mr Robinson's high end of the range is US$110,000 based on the illiquidity of the shares and the amount of money actually spent in December in buying 10,000 shares, if spread across the SHI shareholding, whilst his low end of the range is zero because of lack of buyers.

1403. In the three months prior to 4th December, there were asks but not bids on 73.8% of the days. Throughout that period there were no bids at all. In the period between 27th November 2008 and 11th December 2008 when no trades were done, the asks recorded were all at NOK 65. There were no buyers willing to meet this price.

1404. Once again, any further investigation carried out by DBAG would have led to the conclusion that there was no available market and that an appropriate valuation for this stock was zero.

30(e) The Standard Drilling Shares

1405. SHI's shareholding in Standard Drilling comprised 8,056,400 shares which represented 3.89% of the share capital. The holding was of NOTC shares. Standard invested in ultra premium jack up rigs. Mr Robinson's valuations range between zero and US$20,000 but Mr Davies' range between US$160,000 and US$230,000. Mr Davies' higher figure equates to the last traded price of NOK 0.20 on 27th November whilst the lower end of his range of valuations allows for a 30% discount to represent the possibility of reduced price due to market conditions and illiquidity. Mr Robinson's valuations are based on the lack of buyers and the overall value of trades concluded in December where 268,000 shares (representing less than 3.5% of SHI's holding) were traded on 18th, 19th, 22nd and 30th of the month.

1406. There was a significant fall in the share price during 2008, representing a decline of 97% from the price on 7th January to the NOK 0.20 price on 27th November. There had been a repayment of NOK 3.60 per share, amounting to NOK 746.1 million in June 2008 following an assessment by the Board that the company was overcapitalised.

1407. Trading volumes were small throughout the year. Shares were traded on only 36 days at a median volume on days traded of 20,000, well below the size of the SHI holding.

1408. It is plain that this was a most illiquid stock and that, in the absence of a specific buyer being known, a disposal of shares would be difficult. No buyers have been identified of any size at all and very few trades concluded. The last trade prior to 4th December was on 27th November when 393,750 shares were purchased. The preceding trade was on 31st October when 6,000 shares were traded and before that small quantities of shares were traded on 12th, 16th, 18th and 19th of September.

1409. In these circumstances, if DBAG had conducted further investigations of the market in order to obtain a valuation for the disposal of the holding on December 4th 2008, it would have found that there were no buyers in the market and a valuation of zero would have been entirely rational and appropriate.

30(f) The Thule Shares

1410. SHI's shareholding in this company consisted of 5,495,830 shares, amounting to 8.36% of the issued share capital. These were NOTC shares. Thule's business was to develop jack up rigs. According to Mr Davies, in 2006 it acquired a partially wrecked rig and a contract was entered into for its repair and conversion. It also entered into contracts for the construction of two further rigs and acquired an option for the construction of eleven more. All three rigs which were the subject of repair or construction became subject to serious delays and cost overruns leading to Thule's eventual bankruptcy on 16th September 2010, by which time the work on none of those rigs had been completed.

1411. Mr Davies assesses the value of these shares as being in the range of US$1.8 million - US$3 million. The higher value is based on the last traded price of NOK 3.9 per share on 28th November 2008 when 5,000 shares were traded. His lower figure is based upon a 40% discount representing the possibility of reduced price due to market conditions and illiquidity. Mr Robinson's valuations ranged from zero to US$580,000. Once again his upper value is based upon the aggregate of money spent in trading shares after 4th December, with that total spread across the whole of SHI's shareholding. The total percentage of SHI's holding which was traded between 9th and 17th December amounts to less than 20% of that total holding.

1412. Trading took place on less than 17% of trading days in the three months between 4th June and 4th September. No trading took place on 80% of all trading days between 5th September and 4th December 2008. The average daily traded volume was around 0.4% of SHI's holding between the June and September dates and about 1.7% for the three months preceding 4th December. The median volume decreased from 10,000 to 5,000 shares in these respective periods. The largest volume traded on a single day in the three months preceding 4th December amounted to about 8% of SHI's holding in Thule. Using trading volumes recorded in the market, Mr Robinson concludes that it

would have taken almost 300 days to sell off the SHI shareholding. In these circumstances he concludes that these shares could not have been sold on 4th December and the value was nil or de minimis.

1413. Had DBAG investigated the position, this is the conclusion that would have justifiably and rationally been reached. The value was zero.

30(g) The Yantai Shares

1414. SHI's shareholding in this company amounted to 1.80% of the total share capital, being 4,933,900 shares. The shares were listed on the NOTC. Yantai was a large builder of semi-submersible drilling rigs in China and was involved in the construction of various offshore and marine projects including rigs and vessels. It was the subject of a public takeover in January 2010 by China International Marine Containers (Group) Co Ltd (CIMC).

1415. The last recorded price paid for Yantai shares prior to 4th December was NOK 7.50 on 28th November 2008 when 10,000 shares were purchased, representing 0.2% of SHI's holding. In the six months prior to 4th December Yantai's share price dropped from NOK 18 to that figure of NOK 7.50. On 3rd November, 27,360,000 shares (over five times the size of the SHI holding) were purchased for NOK 12.50 per share. Excluding one large trade on 3rd November 2008, the trading volumes reduced from an average 246,227 shares per day in the preceding three month period to an average of 10,850 shares per day between 5th September and 4th December 2008. There were only two days between 4th June and 4th September where the volume was greater than 20% of SHI's holding and apart from the large trade on 3rd November 2008, there were no other trades which exceeded 20% of SHI's holding in the later period. In the period from 5th December to the end of the year, a total of 81,845 shares were traded on three separate days at prices varying between NOK 7.50 and NOK 4.50.

1416. Unlike all the other holdings however, there is evidence here of an off-market purchase of shares by CIMC. As appears from its 2008 annual report dated 31st March 2009, CIMC acquired about 7.86% of the shares in Yantai in cash at a cost of NOK 186,831,510, equivalent to US$26,726,789, on 28th November, 19th December and 30th December 2008. The average implied price per share is NOK 8.69 (equivalent to US$1.24). This material came to light late in the day as a result of Mr Robinson's investigation but it did not cause him to change his mind about the valuation for December 4th which ranged from zero/de minimis to US$70,000 on the basis of lack of available buyers and the aggregate of money spent on purchase of shares in Yantai between 4th and 31st December, with that aggregate amount spread across the SHI holding. By contrast Mr Davies' valuation ranged between US$3.63 million and US$5.19 million. The higher end of the range was based on the traded price on 28th November of NOK 7.50 whilst the lower end allowed for a 30% discount to represent the possibility of a reduction in price due to market conditions and illiquidity. That 30% discount would result in a value of NOK 5.25 per share. Mr Davies refers in his first report to a figure of NOK 16.25 per share paid by CIMC for 10% of Yantai's shares in November 2008, which he assumed was reflected in the reported share price of 28th November 2008 for the small quantity of shares listed as sold in the market that day. This 10% acquisition appears to have been made on 3rd November but Mr Robinson's diligence shortly before he gave evidence revealed the

CIMC purchases on 28th November, 19th December and 30th December. Since these were "off-market" transactions, they must have involved bilateral negotiations by CIMC with shareholders. In consequence, it is now known that there was a purchaser in the market buying up blocks of shares in Yantai in this period. The evidence of Mr Robinson was that on 3rd November 2008 CIMC acquired a 10% stake in consequence of a change in previous purchase arrangements. It had been announced in March 2008 that CIMC was going to purchase a 30% stake, but the price and number of shares were subsequently reduced. In consequence a 10% stake was bought early in November at NOK 16.25 per share (at a time when the listed price was NOK 12.5) and then the further 7.86% was purchased on the 3 dates in November and December surrounding the Termination Date at an average price of NOK 8.69 per share as compared with the listed price on 28th November of NOK 7.50.

1417. Mr Robinson maintained that there was no evidence of any open offer to acquire shares at 4th December and that the transactions which he has since discovered would not have been known to the market at that time. He stressed the importance of understanding that CIMC were entering into trades with counterparties similar to private company sales. There were bilateral negotiations which were not disclosed to the market and there was no evidence at the time to suggest they were in the process of seeking to take over the company and were therefore willing to buy smaller holdings such as the 1.8% held by SHI.

1418. Mr Davies was not cross-examined about Yantai at all and his reports did not refer to the most recent information relating to CIMC's purchases. His reply report referred to the price ultimately paid by CIMC to DBAG when purchasing the balance of the 100% shareholding in Yantai, but his first report had proceeded simply on the basis of CIMC's purchase of 10% of Yantai's shares in November 2008 and CIMC's indication that further acquisitions were likely at that stage.

1419. At the end of December, CIMC had purchased 17.86% of Yantai's shares at the prices to which I have referred, namely NOK 16.25 for the purchases on 3rd November and an average price of NOK 8.69 for the later purchases in November and December.

1420. In my judgment, if DBAG had gone out to make further enquiries in the market in December as to the value of Yantai's shares on December 4th 2008, information as to CIMC's position in the market and accumulation of shares would have come to light. The purchases which took place on 28th November, 19th December and 30th December clearly indicate a desire to increase the holding and whilst 1.8% is not a large holding, the three purchases effected at this time, surrounding the Termination Date, only total 7.86% in all. Further enquiries made by DBAG would have brought this to light and an immediate sale would have been possible on December 4th. I can see no reason, other than the possible perception by CIMC that this was a distressed sale, why the price of NOK 8.69 should not have been achieved for these shares. The total realised price and therefore the valuation would have amounted to NOK 42,875,591. At the operative rate of exchange on 4th December that would gives rise to a figure of US$6,010,204.

1421. Thus, whilst I have concluded that, on receipt of the "no bid" replies from the Norwegian brokers, DBAG could not rationally have concluded that the Norwegian Securities were worthless, further investigation would have revealed that only certain

of them could be ascribed value at 4th December 2008 because of their general illiquidity. What DBAG ought to have done was to have made further enquiries about the individual holdings. If DBAG had done so, it would have come up with information of the type that has become available to this Court, albeit doubtless in less detail. One area where this would have made a significant difference is the Yantai shareholding where the substantial interest of CIMC in purchasing the shares would have come to light. Additionally, investigation of the liquidity of the Scorpion shares would have shown that a price was obtainable, as is recognised by Mr Robinson. Whilst the position is less clear for American Shipping, I have reached the same conclusion. The effect of my conclusions is that SHI is entitled to an additional credit of US$6,866,359 against any sums owed by it to DBAG.

31. The Covenant of Good Faith and Fair Dealing

1422. As set out earlier in this judgment (see paragraphs 286 and 287), Professor Cohen stated that the implied covenant of good faith and fair dealing, as part of the contract, does not create a cause of action that is truly separate from an action for breach of contract. As noted by the New York courts, "The duty of good faith and fair dealing is implicit in the performance of contractual obligations to the extent that a separately stated cause of action asserting breach of that duty is routinely dismissed as redundant." In the present case, that is exactly what has happened in the New York action. The seventh cause of action alleging breach of the implied covenant of good faith and fair dealing was dismissed by Justice Kapnick on 9th November 2012 as duplicative of SHI's more specific breach of contract claims on the basis that they arose from the same facts. The other wrongdoings alleged deprived SHI of the intended benefits for which it bargained, including the rights provided by the terms of the FXPBA and FX ISDA (whether express or implied). The alleged breach of the implied covenant therefore had no independent substance and added nothing.

1423. That decision was upheld by the Appellate Division, First Department on 2nd July 2013. In my judgment, on the facts here it can add nothing in the context of the breaches alleged in this action.

1424. I am moreover satisfied that, whichever view of the New York contract law experts is correct as to the width of this covenant, there was no breach by DBAG of it. Even if there could be a separate cause of action for a breach of the covenant in itself, it could only be in the context of interfering with the contract, preventing the other party from performance or failing to co-operate with the other party in performance. It cannot subsist without reference to the contractual rights of the other party. However the duty is seen, DBAG did not intend to cause harm to SHI, to deprive SHI of its rights under any contracts nor did it act in reckless disregard of such rights.

1425. Whilst I find elements of DBAG's conduct reprehensible, particularly its efforts to deceive SHI at the time of the margin calls, these were wholly ineffective as there was no actual deceit and the reason for doing was to avoid giving SHI any excuse for not paying money which was due and owing on those calls under the contracts. The ineffective cover up continued after the event at the meeting of 30th October and thereafter, including the failure by DBAG to acknowledge its inability to value and margin the EDTs until February 2012. Its maintenance of a case which it knew to be untrue up to that point does it no credit at all, but does not amount to a breach of contract.

32. DBAG's Claims

1426. I have found that DBAG was not in breach of contract or duty in any of the major respects alleged by SHI. In brief:

i) There were no oral collateral contracts of the kind alleged by SHI nor contractual limits on Mr Said's trading beyond those which were set out in the FXPBA and the Said Letter of Authority. Mr Said acted within the limits of his authority and all the transactions which he concluded, including the OCTs and EDTs, are binding upon SHI. The correlation swaps which were not currency options were authorised by Mr Vik on an ex post facto basis, if not authorised in advance.

ii) SHI, through the agency of Mr Said, expressly agreed that DBAG need not report on the EDTs until knockout, their MTM or DBAG's margin requirements thereon and there was therefore no breach of any implied term in the FXPBA: alternatively SHI by such agreement waived compliance with it. This applies equally to OCTs which did not fit within DBAG's VaR system and gave rise to no loss. Furthermore, insofar as any reporting obligation was governed by the GEM terms and conditions, there was no wilful default or gross negligence in failing to report because Mr Said knew that DBAG could not report accurately on these exotic trades and did not want them reported for fear of skewing the overall figures on his other trading.

iii) DBAG did not act in breach of any contractual duty to warn.

iv) DBAG did not act in breach of any tortious duty, whether under the law of New York or English law and did not negligently make misrepresentations on which SHI acted to its detriment or loss.

v) DBAG acted in accordance with the agreement and common assumption between it and SHI in ascribing Mr Vik's FX trading to the Equities PBA and requiring collateral under it, as opposed to the FX ISDA.

vi) Although DBAG's first two margin calls were not calculated in a commercially reasonable manner, contrary to Section 9 (b) of the FX ISDA, they were for less than DBAG's full entitlement, as Mr Said and Mr Vik well knew, and SHI suffered no loss in consequence.

vii) Although DBAG personnel at the time sought to explain the need for the calls by reference to market movements alone and did not disclose the inability of DBAG's GEM and ARCS VaR systems properly to report on the MTM of the EDTs and OCTs and the contractual margin requirements of the portfolio, Mr Said and Mr Vik were not deceived and knew the true position. It was not until 2012 that DBAG formally admitted that it was unable to value and margin contractually.

viii) There was no further breach of contract by DBAG in making the margin calls that it did and there is no basis for impugning those calls or the debts owed under the Equities PBA and the FXPBA or the FX ISDA by reference to the

calls, to the Russell Multiplier Error or the Ignored Payments Error. SHI did not pay the calls under duress nor under any relevant operative mistake of fact.

1427. SHI has therefore no valid claims to set off and its counterclaims fail.

1428. In consequence and as a result of the other findings I have made, DBAG is entitled to recover from SHI the sums owing to it on both Mr Said's FX PB account and also on the Equities PB account. DBAG's claim on the FX account succeeds in the sum of US$116,989,618 and its claim on the Equities account succeeds in the sum of US$118,656,737.

1429. In these circumstances SHI's claims do not therefore arise and I need not deal with them. I shall nevertheless set out some conclusions at which I have arrived which bear upon its formulation.

33. SHI's Damages Counterclaim

1430. The expert forensic accountants were in agreement as to the quantum of SHI's actual trading losses in respect of Mr Said's FX transactions. The agreed total was US$584 million, plus US$13 million hedging costs, of which I have found that only US$11.5 million is actually recoverable. So far as the actual losses incurred by SHI in respect of Mr Vik's FX trading is concerned, there was a dispute between the forensic accountants as to US$4 million. Mr Inglis' figure is US$378 million and Mr Davies' figure is US$374 million. SHI counterclaimed for these losses but that counterclaim necessarily fails on the findings I have made.

1431. SHI also claimed costs incurred in respect of this trading which are insignificant in the overall context of this case. The costs in question are the commissions paid to DBAG. Once again, for the reasons I have given, these are irrecoverable and the parties have not in fact agreed the figures though Mr Inglis has calculated that the costs incurred in respect of Mr Said's FX trading throughout the entire trading relationship amounted to US$296,000.

1432. In its defence at paragraph 83(1) SHI counterclaimed for the amounts claimed by DBAG against it, for US$511,505,142 transferred from SHI's GPF account to DBAG's own account as a result of the FX margin calls and sums claimed for the unauthorised transfers of NOK 70 million, NOK 130 million and NOK 285 million. Additionally, SHI had a counterclaim which was initially expressed as being "not less than $750 million" with a footnote that claims would, where appropriate, be expressed in NOK. This claim was made in respect of profits which SHI claimed it would have made if DBAG had not been in breach of contract. SHI's case is that, had DBAG not breached its obligations, SHI would have retained positions that it was forced to close out, including FX positions, gold positions, short equity index futures positions and long and short equities securities positions. I have already found that the course of action undertaken by Mr Vik in relation to SHI's trading on the Equities PB account including the closure of his FX positions and his short equity index futures was not the result of any breach of contract or duty by DBAG, whether undertaken in the context of the 3rd September email from Mr Brügelmann relating to the margin position under the Equities PBA or the losses that he and Mr Said were incurring on their FX transactions. There is no need for me to make any findings in relation to what would have occurred if Mr Vik's FX trading had been allocated to the FX PBA.

1433. SHI's case however was that it would have retained a range of positions that it was forced to close down as a result of the FX margin calls. Whilst there is a difference between the lost profits that are attributable to the closure of these positions as opposed to the maintenance of them until the time when SHI says they would otherwise have been realised, the overall figure in respect of closure of FX positions, Russell 2000 positions, CAC 40 and IBEX 35 positions, long and short equities positions, gold forward positions and additional gold forward positions amounts to about US$1 billion. DBAG's position is that this claim is unsustainable because SHI chose to close down these positions and because it had other funds which were available to it for margin purposes, in particular the money which SHI transferred between 9th and 22nd October 2008, which it could have used to retain such business. The question of whether these funds were available to SHI is therefore a matter which was canvassed before me and which I am prepared to determine. In addition to the question whether or not such funds were available for the purpose of meeting margin calls so that SHI was not "forced to close out various positions, in consequence of those calls" the reasons for the transfers may also have significance. DBAG contends that the transfers of such large amounts reveals Mr Vik's understanding of the scale of risks posed by Mr Said's trading at the time in the very volatile market conditions obtaining and his desire at the time to limit SHI's immediate exposure to the sums remaining in SHI's accounts with DBAG and DBS. Furthermore, the history of disclosure by SHI on this subject and the information supplied by Mr Vik demonstrate this and his willingness to mislead the court.

33(a) SHI's Available Funds

1434. SHI points out that its funds were only exhausted when, on 22nd October, DBAG identified a deficit resulting from the US$315 million Ignored Payments Error. It is true that Mr Vik could not have anticipated this. It is also true that the extent of the losses which would be incurred in closing out Mr Said's FX transactions (and his own FX transactions) in the volatile market at the time could not have been calculated by him with any precision as at 13th October. Mr Said had told him on 10th October that it would cost hundreds of millions of dollars to close out the positions but the manner in which this was expressed shows the difficulty of ascertaining what the actual figure might be. The exchanges between Mr Vik and Mr Said over the preceding few days and their conversations over the immediate past weekend were enough for Mr Vik to know that the losses would be very substantial having conducted an examination of Mr Said's outstanding positions. He knew of DBAG's past failures properly to margin the EDTs and in due course was to seek to make arguments based on that. There was a perpetual desire to minimise DBAG's collateral requirements and the sums which DBAG required to be paid.

1435. There is no significant dispute about the fact that during the week from 13th October onwards approximately US$1 billion worth of funds and assets were transferred from SHI to Mr Vik and to companies associated with him or his family. The figures are set out at paragraph 8.90 of Mr Inglis' second Loss Report. In its closing submissions, SHI refers to the principal relevant transfers as the following:

i) The transfer of NOK 1.5 billion from SHI's account with the Bank to SHI's account at HSBC Zurich and from it to Beatrice.

ii) The transfer to Beatrice of a number of fiduciary deposits held by SHI (through HSBC) totalling NOK 1,476,244,000.

iii) The transfer by SHI of Norwegian Treasury Bills with a value of approximately NOK 1.4 billion, ultimately received by Beatrice.

iv) The transfer of a NOK 1 billion Certificate of Deposit which SHI held with Den Norske Bank ("DnB") to VBI Corporation.

v) The transfer of SHI's shares in Confirmit to Mr Vik (worth approximately US$92 million).

1436. The first two transfers are the equivalent of approximately US$250 million each, whilst the third and fourth represent approximately US$230 million and US$166 million each.

1437. SHI submits that the transfers made were legitimate payments to third parties and that the transfer instructions were given in advance of the margin calls. Further, it is said that, when following the first margin call, Mr Vik had an indication of the catastrophic position and ample opportunity to transfer SHI's assets away from it in the context of the proposed new FXPB account in the name of Beatrice, he did not do so. Had he done so, however, Beatrice's assets would have been more readily exposed on Mr Vik's transferred FX transactions.

1438. As DBAG points out, prior to the trial it had made a series of applications to the court to obtain information and documents relating to the transfers and in particular to the identity of the transferee and the reasons for the transfers. It is accepted by SHI that Mr Vik's response to these requests was unfortunate, but it is said it is explained by his desire for privacy for himself and his family. I am unable to accept this as an adequate explanation.

1439. In February 2012, Eder J ordered SHI to disclose what had happened to the first transfer, namely the transfer of NOK 1.5 billion to an unidentified account with HSBC Guyerzeller Bank Zurich. Mr Vik signed a disclosure statement on 4th April 2012 in which he stated that it had been transferred to a party other than himself or any corporate body controlled by him and asserted that no further disclosure was needed. As DBAG submits, the statement can only be read as meaning that the transferee at the time the transfer was made was not a body controlled by him. Following further orders made by the court because of the unsatisfactory nature of the responses given, it emerged that the funds had in fact been transferred first to SHI's account with HSBC and from thence to Beatrice, a company which was controlled by him at the time. In a letter of 23rd November 2012 SHI asserted that, in its disclosure statement, Mr Vik had been referring to the position of the transferee at the time when the statement was made by him and not at the time when the transfer took place. I do not find such an explanation credible and I see the earlier disclosure statement as a deliberate attempt by Mr Vik to mislead. He had no satisfactory explanation for this in cross-examination.

1440. The transfer instructions were given on 9th October to Mr Brügelmann but the transfer was not made until Monday 13th October. The reason given by Mr Vik for the two-stage transfer process was that SHI had ready access to the details of its

account with HSBC and HSBC had ready access to the details of the account which Beatrice had with it. This makes little sense and the obvious reason for a two stage transfer was to hide the identity of the ultimate recipient from DBAG.

1441. As to the second transfer, the transfer of the fiduciary deposits held by SHI through HSBC, there is a fax from Mr Gauch (who appears to have acted for Mr Vik) to HSBC sent on 13th October 2008 which refers to an instruction given by Mr Vik on the telephone which must have been given earlier, but which was confirmed in writing by Mr Vik on 29th October.

1442. All three transfers to Beatrice were effected between 13th and 15th October 2008, the total being the equivalent of approximately US$730 million.

1443. SHI's case is that the first two transfers from SHI to Beatrice were repayments of a loan. The loans from Beatrice to SHI were said to have taken place from 2004 to 2006 when Mr Vik, acting for both SHI and Beatrice agreed the terms of the loan. In his evidence he said that the loans were made on the basis that they were repayable after five years from the date of the first advance or earlier on demand, and that they would carry interest at a minimum of 15% per annum plus an additional amount to be agreed by reference to the profits earned by SHI. Mr Vik explained that Beatrice was his savings company whilst SHI was his trading company and it therefore made sense for Beatrice to finance SHI and to participate in its profits. Not only was there no written loan agreement but there was no documentary record of the existence of any such agreement nor of the origin of any inward payments to SHI which were said to come from Beatrice. Mr Vik said that he was sure that the funds had come from it since he was the sole director of both companies.

1444. It was Mr Vik's evidence that in June 2008 it was agreed between SHI and Beatrice (both represented by Mr Vik) that SHI would repay the loans plus the base interest and profit interest within 120 days. Mr Vik calculated that the base and profit interest, when added to the principal sums advanced required a payment to Beatrice of NOK 3 billion. As part of the process of disclosure following applications made by DBAG, SHI disclosed a document dated 20th June 2008 as the best evidence of the purpose of the payments. It was signed for SHI but not for Beatrice and stated the following:

> "Sebastian Holdings hereby agrees to distribute 3 billion Norwegian Kroner to CM Beatrice Inc in settlement of all Sebastian Holdings debts and obligations to CM Beatrice Inc and any claims of CM Beatrice Inc has on Sebastian Holdings. This will be completed within 120 days."

1445. The odd terminology of this is self evident, and, having put it forward as evidence of the purpose of the payments, SHI subsequently stated that it was not binding because it was not signed on behalf of Beatrice. It was merely the only relevant document that SHI had managed to find when a personal assistant of Mr Vik came across it in Monaco. An agreement to distribute a sum in settlement of all debts, obligations and claims is an odd document to evidence repayment of loans.

1446. The loans were alleged to have been made by Beatrice to SHI between 2004 and 2006. Under cross-examination Mr Vik confirmed that he had not taken into account,

when determining the interest to be repaid, the fact that payments were made to SHI in different amounts at different dates but simply came up with an aggregated rate and figure without any detailed work. He could not recall the basis upon which he had assessed the profits against which the interest was to be calculated nor whether it was the 2007 or 2008 figures to which he had regard. He did not take into account the fact that the loan might not be repaid for another 120 days from June 2008 and that more interest could therefore accrue. It was a round number calculation.

1447. Mr Vik said that it was in the spring of 2008, as part of his "estate planning" that he decided that he would transfer his ownership in Beatrice to his family trust and it was in June 2008, before the estate planning had been completed that, after discussion with his wife, SHI agreed to repay Beatrice the outstanding balance of the loan with interest.

1448. It will be noted that 120 days from June 20th expires on or about October 18th. The reason for the selection of a period of 120 days for repayment was threefold, on Mr Vik's evidence: his wife was eager for the estate plan to be finalised; the period of time would allow for the Trust and estate plan to be put into place and completed; and SHI needed time to make repayment.

1449. It is said that small repayments of the loan, some of them in very small sums indeed including both dollars and cents were made during July 2008 but the material amounts were paid in October 2008 with a total which exceeded the NOK 3 billion figure. According to SHI's Further Information, the repayments made included a figure of US$12,173.38 paid on 31st July and a yet smaller sum of US$1,308.46, amongst other figures. The suggestion that these were "leftover monies that were free" is hardly an explanation for the use of these sums for what was supposed to be an NOK 3 billion obligation. It appears that, after the event, someone on Mr Vik's staff cast about to find sums which, when aggregated, would amount approximately to the figure of NOK 3 billion when the first two transfers were taken into account. Mr Vik himself said he had no idea how these small figures came to be part of the repayment.

1450. Moreover, on Mr Vik's evidence, the transfer of his shares in Beatrice was made by him to the CSCSNE Trust on 30th October 2008, the day when he signed a trust deed as the settlor of that Trust.

1451. The history of disclosure in relation to these transfers and the information given in the course of that does not provide any reason for confidence in the truth of Mr Vik's evidence. The version of events which he puts forward is not, to my mind, susceptible of belief. The coincidence of the expiry of the 120 day period with October 18th, the absence of documentary records supporting the loan and the size of the payments in question and the rough and ready nature of the supposed interest calculation, when combined with the fact that Mr Vik represented both sides of the alleged loan and agreement for repayment militates against the existence of any loan agreement of the kind suggested. SHI produced no corporate minutes in support of the loan agreement or agreement to repay. The corporate books and records of SHI were, in accordance with Mr Vik's evidence in other proceedings, maintained by the corporate administrators for SHI in the Turks and Caicos Islands. Mr Vik had not seen any such minutes and said in evidence that he thought that no minutes were required for loans of US$240 million with significant interest repayment obligations. There was no disclosure of Mr Vik's estate planning and no disclosure from Beatrice.

The CSCSNE Trust deed was not disclosed and there was no documentary evidence showing that the funds in SHI emanated from Beatrice, and some of the purported loan payments appeared in the account statements for SHI with DBAG as having been received from Sebastian Holdings.

1452. Mr Vik stood upon the separate corporate identity of SHI, as distinguished from himself, his family and Beatrice. To my mind, had Mr Vik wished to produce documents to support his position from Beatrice, himself, or his family Trust, he could have done so, but he chose not to. If there had been supporting documents, it is hard to see why he would not have produced them. Apart from Mr Vik's evidence, and a letter from Mr Gauch, and the odd document, there was nothing to support his position.

1453. I find that Mr Vik told lies concerning the ownership of Beatrice in the disclosure statement of 4th April 2012 and that he transferred the ownership of that company to the CSCSNE Trust, of which his wife is trustee, not before 30th October 2008. The written agreement dated 20th June was fabricated ex post facto and the supposed loan and the terms of it do not reflect a negotiated loan with agreed interest at all. Mr Vik owned SHI and Beatrice at all times until 30th October 2008 at the earliest and moved money from one to the other as he saw fit. There was no good bona fide commercial reason for the first two transfers of funds and fiduciary deposits from SHI to Beatrice in October 2008.

1454. Mr Vik gave no credible explanation for SHI producing and putting forward the 20th June document as the best evidence for the purpose of the payments and subsequently disavowing it as a non-binding piece of paper, probably drafted by one of his assistants in Monaco and connected in some way with his estate planning, without reference to any of the professional advisers he had engaged for that purpose. The evidence which Mr Vik gave about giving instructions for the second transfer on 9th October was not satisfactory. When faced with this, Mr Vik suggested for the first time that they had spoken when he was in Norway but he had no real recollection of doing so. By the time he arrived in the USA, Mr Gauch had left the office for the evening.

1455. Following Mr Said's email exchanges with Mr Vik over the preceding days about the disastrous situation which had emerged in Mr Said's FX trading, Mr Vik and Mr Said met in the afternoon/evening of 9th October on Mr Vik's return from Europe. Mr Said was to produce details of his trading and to explain the pattern to Mr Vik with a view to deciding what was to be done. It is in this context that any instructions given on 9th October to transfer funds out of SHI have to be seen. The extreme reluctance shown by SHI and Mr Vik to produce documents relating to these transfers and the paucity of documentation actually produced after a series of applications by DBAG all point to the same conclusion which I have already expressed. There was no good bona fide commercial reason for the first two transfers from SHI to Beatrice and they can only have been done with a view to depleting SHI's assets and making it more difficult for DBAG to seek recovery, should it need to do so.

1456. SHI's case with regard to the transfer of the NOK 1.4 billion treasury bills was that this was a capital distribution to Mr Vik which was effected by making a transfer to Beatrice which then passed the money on. Why Mr Vik should decide to pay himself a capital distribution from SHI on 14th October via Beatrice is not adequately

explained. The explanation given was only advanced after the series of applications to which I have already referred. No documentation was provided in support of this capital distribution and no corporate documents by way of minutes or anything else to support it. SHI's case is that the transfer was instructed on 9th October but there was again no contemporaneous documentary evidence of that. Mr Vik's evidence about a conversation with Mr Gauch and the letter from Mr Gauch do not carry conviction, though it matters little in fact whether the instruction date was 9th October for this and for the transfer of fiduciary deposits or not. Delay in effecting the instructions for four days or more however seems unlikely.

1457. On 16th October, SHI effected the fourth transfer, namely the transfer of a NOK 1 billion certificate of deposit which SHI held with DnB to VBI Corporation, which was a company owned, according to Mr Vik, by his father, although the latter was not a director. Mr Vik had previously been a director. No documentary evidence was produced to show when instructions were given for the transfer though SHI's case is that they were given on 8th or 9th October. It may be recalled that this was the certificate of deposit which had been held by DBAG but was treated as a "special item" in Mr Brügelmann's email of 3rd September so it did not qualify as collateral for Mr Vik's Equities PB account. It was transferred to DnB on 26th September and so was deposited with DnB for only twenty days before transfer out.

1458. This transfer, on SHI's case, was also made as repayment of a debt arising from loans made to SHI by VBI corporation in 2007, amounting to NOK 1.7 billion for the purpose of financing SHI's trading in futures. This loan is once again entirely undocumented. The loan is said to have been made on the same basis as the funds advanced to Beatrice, namely that repayment would take place after five years from the date of the first advance or earlier on demand and that on repayment of the principal, VBI Corporation would be entitled to receive a minimum base interest of 15% and agreed profit interest. A demand for repayment is said to have been made orally by Mr Vik's father on or around 1st October 2008.

1459. Not only was there no written agreement for the loan but there were no minutes or corporate records at SHI reflecting it. There is no record in SHI's bank statements reflecting any payments to SHI from VBI Corporation. A number of payments said to constitute the NOK 1.7 billion are attributable to Fearnley Fonds ASA, the brokers who handled various investments for SHI. The demand for repayment was, according to Mr Vik, made orally by his father in person but he did not demand full repayment of the loan with interest and profit interest. According to Mr Vik it came up in conversation that SHI had free money at DnB and they discussed the use of that money to repay the loan. Mr Vik junior did not make any calculations as to the profit or interest payable at that time. When cross-examined about the fact that Mr Vik senior was not a director of VBI Corporation on 1st October 2008 and therefore had no authority to act for VBI Corporation, Mr Vik simply said that this was how they acted. It is highly unlikely that it would take much time to effect instructions to transfer the certificate of deposit which actually took place on 16th October.

1460. Once again, the conclusion to which I am driven is that this is another example of Mr Vik disposing of SHI's assets as he wished in order to render access to them more difficult.

1461. I therefore find that all these funds were available to SHI (some US$896 million) prior to transfer and that, moreover, Mr Vik could, at a moment's notice, procure the transfer of those funds back to SHI should he have chosen to do so. There was no good bona fide commercial reason for the transfers.

1462. As to the fifth transfer of the Confirmit shares, Mr Vik inquired on 8th October as to the number of such shares held at DBAG by SHI. On 9th October he instructed Mr Brügelmann that they should be transferred to SHI's account with DnB. They were transferred to DnB on 14th October and out of DnB on 15th October. SHI's case is that the transfer from DnB was pursuant to an instruction given in July 2008 to DnB to transfer all the Confirmit shares to Mr Vik once 100% of the shares were held on the conclusion of a mandatory buy out process. The shares transferred on 15th October amounted to 90% of the share capital. There is no documentary evidence as to the recipient of the transfer but SHI has stated that the shares were transferred to Mr Vik. Mr Vik's instructions to Mr Brügelmann were given following his return to the USA on 9th October, as was the case with the first transfer. As with that transfer, Mr Vik expressed anxiety on 10th October to ensure that the transfer had been made. In cross-examination Mr Vik asserted that he had given oral instructions to DnB on 8th or 9th October, but this is at odds with SHI's case that instructions had previously been given in July.

1463. It does not much matter, as I have indicated already, exactly when instructions were given for the transfers in October. It is clear from the exchanges with Mr Said that, by the time Mr Vik returned to the USA on 9th October, he had a very clear idea of the substantial liabilities that Mr Said had incurred on his FX trading. The dates of the transfers make it difficult to accept that instructions could have been given as early as Mr Vik says, save where the documents show that to be the case. Regardless of that, Mr Vik was seeking to move money and assets speedily away from SHI and in particular away from SHI's accounts with DBAG.

1464. In these circumstances, not only are Mr Vik's explanations for the transfers not capable of belief but these funds were available to SHI to produce margin for Mr Said's FX trading, if Mr Vik had so wished. Mr Vik could choose to utilise those funds whilst they were in SHI's accounts, whether with DBAG, HSBC or elsewhere and equally could use them once they had been transferred to Beatrice, to VBI Corporation or to himself. It cannot therefore be said that Mr Vik was forced to close out any of SHI's transactions, whether those concluded by Mr Said or those concluded by Mr Vik himself.

1465. When being asked in cross-examination about the position on 16th October 2008, Mr Vik said that they were in the process of closing out Mr Said's trades at that point and it was suggested to him that he decided to generate funds by closing positions on the Equities PB account instead of using the funds which he had been in the process of transferring out of SHI since 9th October. His response was to say that he did not consider how much other money SHI had on 16th or 17th apart from what was at DBAG. He said that SHI did not have sufficient capital to meet DBAG's demands and there was no need to send any money in from elsewhere but even if he had money elsewhere, he would not have sent it into "a black hole of negligence and deceit". He said there was not enough money elsewhere to satisfy the demands of the bank but it is plain, in my judgment that there was more than enough, had he wished to utilise the

funds that were available to SHI both prior to and after the transfers to which reference has been made.

33(b) Mr Vik's Trading in September and October 2008 and the losses claimed in respect of forced close out

1466. SHI maintained that Mr Vik had specific trading positions which, but for Mr Brügelmann's email of 3rd September 2008 and its warning of a potential margin call and but for the margin calls of October 13th-18th, would have been retained by SHI. Instead these were closed out at a loss. Additionally, a further gold trade would have been concluded and retained after mid October 2008.

1467. In his evidence, Mr Vik said that he did not close any of his FX positions as a result of Mr Brügelmann's email whereas the closure of his futures positions were so caused. SHI's case however was that three FX positions held by Mr Vik were closed in consequence of the margin calls made in respect of Mr Said's FX trading which otherwise would have been held until trial. The first of these was a 450 million (short) EUR/(long) NOK position which was closed out on 22nd October by transferring it to an account held by Mr Vik's father at HSBC Guyerzeller in Switzerland, thus releasing collateral held in relation to it in the GPF account. Because of subsequent movement of the currencies, as at 1st December 2012, there was a loss of profit of US$111 million. The second position was a 994 million (long) NOK/(short) HUF position which was closed out on 22nd October. If held at 1st December 2012 the lost profits would amount to US$54 million. The third trade was a 1.5 billion (short) USD/(long) NOK position which was closed on 14th October and which, if held at 1st December 2012 would have given rise to profits of US$79 million. The total profits as at 1st December 2012 would therefore have been US$244 million but figures would have to be calculated for the position as at trial.

1468. SHI had long equities and short equities positions. It was SHI's case that it would have held the long positions until trial and as at 1st December 2012 the lost profit would have been US$38 million. As to the short positions, it was SHI's case that they would have been closed out when the Russell 2000 Index went below 400 on 23rd February 2009, whereupon the realised profits would have become a component of the Hypothetical Portfolio. The lost profits on that basis up till 23rd February 2009 would have been US$70-72 million.

1469. A short US$575 million position in Russell 2000 future contracts was closed on or around 17th October 2008 which SHI maintains it would have retained and closed on 23rd February 2009, in which case the lost profits would be US$92 million. Similarly, other short positions in the Russell 2000 Index, the CAC and IBEX equity futures index contract were closed as a result of Mr Brügelmann's email which would also have been held until 23rd February 2009 with a consequent loss of US$482 million.

1470. Additionally, SHI claims that it was forced to close out an existing gold position on 22nd October 2008 with an immediate loss of US$3 million but, if held thereafter until trial, the loss as at 1st December 2012 would be US$21-22 million. It would also have increased its gold position by a further purchase of US$50 million which again it would have held till trial with a resultant loss of profit as at 1st December 2012 of US$48-51 million.

1471. There are a number of reasons why SHI's claim in respect of these trading positions could not succeed even if there had been a breach of contract or duty by DBAG.

1472. Had Mr Vik wanted to, he could have produced additional collateral to keep the positions open following Mr Brügelmann's email. In evidence he said that this was never a consideration.

i) The DnB certificate of deposit for NOK 1 billion was not taken into account by DBAG as collateral on the GPF account, despite Mr Vik's protestations that it should be. He made specific reference to its liquidity. He could have realised it and produced over 99% of its value as margin or obtained a bank guarantee from elsewhere on the strength of it.

ii) SHI also had NOK 853 million available in an account with DnB to which the emails exchanged between Mr Vik and DNB concerning the certificate of deposit also refer.

iii) SHI had fiduciary deposits with HSBC to the value of approximately US$104 million which could have been used as collateral. These deposits, together with NOK 825 million transferred from DNB on 18th September, were used by SHI to purchase NOK 1.4 billion of Norwegian Treasury Bills which SHI later transferred to Beatrice on about 14th/15th October 2008.

iv) SHI thus had no difficulty in producing collateral to support Mr Vik's continued trading on the GPF account had it wished to do so and was not forced to close down any of his positions as a result of the receipt of Mr Brügelmann's 3rd September email. Mr Vik's decision to close out trades was a trading judgment on his part.

1473. The history of Mr Vik's trading from July 2008 onwards which was the subject of cross-examination revealed his growing discomfort with the market positions that he had, his inability to understand why the market was behaving as it was, the "pain" he was suffering as his trading position worsened and his decision to close out trades rather than continue with the risk of even further losses.

1474. SHI's case was that Mr Vik's long-term strategy was to short the equities futures until the Russell Index hit 400. By July 2008 Mr Vik had built up a substantial short position in equities futures on the Russell, CAC and IBEX indices (USD1.1 billion on the Russell positions). On 9th July 2008 he bought back half of the CAC positions and a sixth of the IBEX positions at the current market price when the Russell Index was not standing at 400. Mr Vik had no explanation to give for this in cross-examination. On the following day Mr Vik reversed the position by selling the same amounts short and increased the short position on the Russell Index by another 200 million.

1475. At the end of July, Mr Vik started to reduce his 2.9 billion (short) Dollar/(long) NOK position.

1476. Between 5th and 11th August the markets moved against him and his equities futures moved from about +€21.8 million to -€51.3 million. On his (short) Dollar/(long) NOK position the movement was from -12 million NOK to -590 million NOK. This

led to Mr Brügelmann transferring monies from DBS to avoid a margin deficit on the Equities PB account which Mr Vik said happened without reference to him. The assets in the DBS account were to be transferred to the GPF account by way of collateral on the movement of Mr Vik's trading to the Equities PB account on Mr Vik's instructions in early 2008 but it does not appear that Mr Brügelmann, despite saying that he would, ever notified Mr Vik of the transfer at this point. It is clearly what Mr Vik would have wanted however rather than closing down trades suddenly.

1477. The P&L on Mr Vik's FX positions got progressively worse throughout July, August and September and by mid-August he was taking steps to reduce SHI's exposure. There was no large drop in the equities markets between August and mid-September so that Mr Vik's short equities futures did not do as well as he had expected. On 2nd September Mr Vik told Mr Said in an email that he was "definitely not in sync with the markets" when referring to the strength of the US Dollar either. It was at this point that Mr Brügelmann sent his 3rd September email.

1478. Mr Vik said that the reduction in his FX positions was a continuing process, commenced prior to the 3rd September email and was not connected with it. He told Mr Said that he had to reduce his short USD/NOK position because he did not understand what was driving the market, told him that the USD/NOK position was costing him a fortune and causing him to reduce all other positions and that he had lost confidence in his ability to understand what was driving the market. Mr Vik said that he was bearish on equities but was reducing his positions nonetheless because the market was doing the opposite of what made sense to him. On 8th and 11th September he said he was lost at sea.

1479. By 9th September he had closed his EUR/NOK positions. He reduced his short positions in the CAC and IBEX indices whilst instructing Mr Brügelmann to roll the short Russell positions. Then, on 10th September he bought back some Russell short positions and on 11th bought back short CAC and IBEX positions. He told Mr Cummunale on 10th September that he was not in the market for new trades and just wanted to exit the positions he had as well as possible. On 11th September he bought back further Russell short positions.

1480. The publication of the rescue plan for AIG in mid-September resulted in a small improvement for the equity indices. On 17th September Mr Vik emailed Mr Hanssen not to increase the short exposure and said that his risk appetite was very low. The remaining positions on the CAC and IBEX indices were closed out on 22nd September because Mr Vik failed to respond to Mr Brügelmann's request on 19th as to whether he wanted them rolled over. Following their expiry Mr Vik asked where they were and was told they had expired because he had given no such instructions. He did not take steps to reverse the position.

1481. Despite all this evidence, Mr Vik maintained that he closed out the short equities futures because of Mr Brügelmann's email. In my judgment, Mr Vik closed out the FX positions and the equities futures positions that he did because of his inability to understand what the market was doing, both in relation to FX and equities, not because he could not put up further collateral in response to Mr Brügelmann's 3rd September email.

1482. On 6th October Mr Vik told Mr Brügelmann that he wanted to start closing the Russell positions. Under cross-examination he initially maintained that it was in consequence of Mr Brügelmann's email but then accepted that he was "just managing the position". On being asked for his recommendation Mr Brügelmann recommended further reduction of the short positions and on 8th October Mr Vik bought back a further USD 100 million notional Russell shorts, which he accepted had nothing to do with the 3rd September email. On 7th October he had described himself as being "very risk averse".

1483. In the context of his FX trading, a P&L report of 30th September from Mr Brügelmann showed a loss of 150 NOK from closing out a short 100 million USD/CHF position and a long 200 million GBP/USD position. A USD/NOK FX forward had been closed out to generate a realised loss of 184 million NOK and the unrealised loss on the long 2.4 billion NOK/short USD position was 1 billion NOK. On 2nd October Mr Vik told Mr Said that he was "at the puke stage" and "pain is too great and unrelenting". On 3rd October he said he was getting annihilated in his USD/NOK positions. In discussing Mr Said's trading position he referred to his own mistake "of staying in these one-way trains" which "seem to go much further than expect[ed] or possible", when referring to his short USD/long NOK positions. By 5th October Mr Vik accepted that he was planning to get out of his USD/NOK positions altogether and his case was that, until the first margin call, he was not closing out any FX positions because of anything DBAG had done. On 6th October he instructed Mr Brügelmann to close the entire USD/NOK position slowly and carefully, the unrealised P&L on this FX then being -2 billion NOK.

1484. What emerged from this evidence was that SHI was able to continue trading in the short equities futures positions and the FX positions it held following the 3rd September email, if it chose to do so, by putting up further collateral. Mr Vik however did not wish to continue in these trades and was looking to close them down in order to reduce the risk, even though he had a long term affinity to the NOK and at all times believed it to be undervalued. In his deposition, Mr Vik had admitted that over the period July-October 2008 SHI had reduced positions in FX in response to the market. He accepted in cross-examination that he had two very bad days in August where significant losses had been seen on his futures and FX positions and on 6th October in discussion with Mr Said he referred to himself as "one of those forced to close out positions because the pain is too great". He referred to closing out part of the USD/NOK position on the same date as "a disaster".

1485. It is clear that the 450 million short EUR/long NOK position, which was built up between 7th and 14th October 2008, was taken on as part of the process of closing out the short USD/long NOK position as Mr Vik could not understand the continuing strength of the USD. Mr Vik wished to continue to back the NOK but, after acquiring the first tranche of 200 million short EUR/long USD on 7th October to replace part of SHI's short USD/long NOK position, by the next day there was a negative MTM of NOK 228 million. With a further build up of this position on 13th/14th October, the negative MTM increased so that by 21st October there was a negative MTM of NOK 552 million. It was this position which was transferred to Mr Vik's father's account by the early morning of 22nd October 2008 and there was no information as to what happened to that trade thereafter. There was very limited information about the transfer and it was clear from Mr Vik's answers in cross-examination that he was

involved on both sides of the transfer. Mr Vik maintained that it was a normal sale of the position and he assumed that his father must have put up collateral at HSBC though he did not know for whose account at HSBC the position was entered into. Given SHI's own connections with HSBC and the lack of information supplied, there is room for doubt as to whether SHI truly did dispose of the position and whether therefore it could have suffered any loss but I make no findings on that. The availability of other funds to SHI meant however that it was not forced to close this position out.

1486. With regard to the 994 million long NOK/short HUF position, the evidence shows that there was a positive MTM of NOK 48 million on 10th October when Mr Vik enquired as to the original acquisition price. On 12th October he asked Mr Brügelmann to get a quote as he might want to close the trade but the price fell back before rising again on 21st October when Mr Vik instructed Mr Brügelmann to close it out. It appears that he had it in mind to close this trade before the margin calls and was looking for the best price at which to do so. For the reasons given earlier, SHI had available funds which meant that the trade could have been kept open had SHI wished to do so.

1487. The 1.5 billion short USD/long NOK position was the remnant of the USD short 2.4 billion/long NOK trade which SHI had begun to close on 6th October with further reductions on 7th and 13th October, leaving USD 1.072 billion on the morning of the following day. Mr Vik accepted in cross-examination that the reduction of the position from 2.9 billion at its peak to 1 billion was for reasons entirely unconnected with Mr Said, and I find it was because of his loss of confidence in his trading view that the USD did not justify its strength whilst the NOK was undervalued. Closure of a number of other short USD positions was effected on 7th October, about which no complaint is made. I have not referred to all the emails which show Mr Vik's increasing dissatisfaction with the position but it is clear that the close out of the remaining US$1.072 billion on 14th October was a continuation of the process in which Mr Vik was already involved.

1488. By this time Mr Vik knew of Mr Said's predicament as a result of the exchanges with him by email, their meeting on the evening of 9th October and their formulation of a plan to close out Mr Said's trades in an orderly fashion, as communicated to DBAG in the script which Mr Vik and Mr Said had agreed between them. The first margin call was sent to Mr Vik at 5.15 pm GMT on 13th October whilst the second margin call was sent on 14th October at 17:36 GMT by which time this trading position had been completely closed out. When cross-examined as to how it could be said that it was the margin calls which had forced this close out, Mr Vik resorted to saying that it was the uncertainty caused by the first margin call or the uncertainty in FX that drove him to do it. He attributed it to the whole situation developing with Mr Said. Yet he had decided as far back as 5th October to close out all his short USD/long NOK positions so that this closure cannot be attributed to the margin calls.

1489. The position with regard to the short equities and the short equity index futures is in one respect the same. The claim depends upon an acceptance of Mr Vik's evidence that the strategy was to wait for the Russell 2000 index to reach 400 and take profit at that point. The evidence of what occurred in July 2008 and the fact that this level was reached on November 20th 2008 falsify Mr Vik's evidence of this as a clear strategy and I am not satisfied that this was the position. Neither Mr Vik nor Mr Johansson

noticed what the level was on 20th November 2008 and SHI's case failed to take that into account. SHI has failed to prove that this was the strategy that was in place.

1490. I have set out earlier the sequence of events with regard to the closure of the short EUR, CAC and IBEX positions and the gradual reduction in the Russell positions. Mr Vik accepted that the closures of positions on 6th and 8th October were "managing positions". On 13th October Mr Vik was told that European equities had opened up 6-7% and on 16th October he instructed Mr Brügelmann to purchase USD 75 million Russell contracts at the current market price saying that he wanted to close more when that trade was complete. Mr Vik instructed Mr Brügelmann as to the prices at which he was to buy back the shorts and Mr Brügelmann did so, in some cases doing better than the limits given to him. Those funds were needed for FXPBA margin if no funds were to be produced from elsewhere but there was an element here of managing positions and deliberate profit taking with an eye to market movements.

1491. Once again, whether regard is had to short equities, to short equity index futures or to long equities (about which there is little else to say) there were available funds which could have been produced by way of collateral.

1492. Gold requires individual mention. The first occasion upon which SHI ever purchased gold through DBAG was on 10th October 2008, by which time Mr Vik was well aware of the problems that Mr Said had encountered which were likely to lead to hundreds of millions of dollars being spent in closing out his trades. Mr Vik obviously considered whether or not there might be flight to gold because of the existence of the currencies issues and instructed Mr Brügelmann to purchase gold at the price of US$880 per ounce. The spot price was higher than that on 9th October when the instructions were given but the purchase was effected the next day. By 13th October however, the price had reduced rather than gone up and on 14th October Mr Vik instructed Mr Brügelmann to sell at the price which he had paid. Mr Vik did not need to sell US$20 million worth of gold to meet the first or second margin call but the price did not go up and the sale was effected on 22nd October at a loss of US$3 million.

1493. Mr Vik accepted in cross-examination that his decision on 14th October to sell was the result of "uncertainty" although it was not clear what uncertainty he was referring to. He did not claim to have been anticipating further margin calls at that stage. In my judgment it is clear that Mr Vik simply made market decisions about the purchase and sale of gold as a speculation because of currency market movements.

1494. There is no reason to think that Mr Vik intended to build up a gold position with a further US$50 million worth by 4th December. He had never shown any interest in gold in the past and this appears to have been simply a passing fancy. If he had wished to buy gold, he was in a position to do so because of the assets available to SHI to which I have previously referred. I did not accept his evidence on this.

1495. As I do not accept the evidence of Mr Vik with regard to a gold strategy or a strategy to take profit on equities or equity futures at the point where the Russell 2000 Index hit 400, the basis of lost profits in the period to 4th December and thereafter for each of these asset classes disappears. It also disappears in the context of the Hypothetical Portfolio.

1496. There are additional reasons why the sending of the 3rd September email and the taking of margin calls could not give rise to liability for the damages claim.

1497. The sending of the 3rd September email is said by SHI to amount to a breach of the FX ISDA, the Equities PBA and the Listed F&O agreement. I cannot see how it could be a breach of any of these agreements to warn of a potential imminent margin deficit on the GPF account, whether or not the contents of the email were accurate. If the contents of the email did not reflect the true effect of the agreements and/or the common assumption/convention between the parties, then it was wrong on that account but this would not constitute a breach. It did not purport to be a demand or notice under any of the agreements nor did it change the status of the agreements or the positions of the parties in relation to them by repudiation or renunciation.

1498. Furthermore, the Equities PBA, the Listed F&O Agreement and the FX ISDA all contain exclusion or limitation Clauses which would present a further hurdle for SHI to overcome had DBAG been otherwise in breach. The non-reliance provisions in the FX ISDA would operate in relation to the conclusion of any individual transactions in supposed reliance upon the email or margin calls. The terms of Clause 13.4 of the Equities PBA and Clause 16.1 of the Listed F&O Agreement have the effect of excluding special, indirect or consequential damages on the one hand and all damages on the other (including specifically consequential, special damages and loss of profits) in the absence of gross negligence, wilful default or fraud. Those provisions would bite to exempt DBAG from liability in these commercial contracts unless Mr Brügelmann or DBAG was fraudulent, grossly negligent or in wilful default.

1499. No suggestion is made of deliberate deceit or intentional wrongdoing against Mr Brügelmann. On my findings he was correct in what he did but, had he been wrong, in the circumstances which obtained, he would not have been negligent nor grossly negligent in sending the email which reflected the way the parties had been operating since the beginning of the year, and which was clear on its face as to what was being said.

1500. As to the margin calls, if wrong, then SHI would be under no duty to pay. A wrongful demand is a wrongful demand whether made in the knowledge that sums are not due or made in the careless belief that sums are due. The margin calls would not however amount to breaches of any of the contracts let alone fraudulent, wilful or negligent breaches.

1501. Moreover, as a matter of New York law, lost profits are not recoverable for negligent misrepresentation.

33(c) The hiatus and the starting fund for the Hypothetical Portfolio

1502. I have found that SHI was not forced to close out any positions as a result of the 3rd September email or the margin calls of 13th-22nd October. Mr Vik decided to close out his own trading positions on the Equities PB account following Mr Brügelmann's warning email of 3rd September and to close out Mr Said's FX positions under the FXPBA during the weekend prior to receipt of the first margin call. The decision to close out Mr Vik's trading positions prior to the first margin call was taken because of market movements and, after the first margin call, both because of market movements and in order to pay the premium required to close out Mr Said's FX positions. As a

result of his exchanges with Mr Said, Mr Vik was aware, before the first margin call, of the large MTM deficit on his trading which required either the production of further collateral for Mr Said's trading or a reduction in, or closing out of, that trading.

1503. Whilst the position is not clear, it seems that the Ignored Payments Error existed from about 4th March 2008 with the result that the available margin was overstated in the Equities PB account from that point on by various amounts. There is no allegation of any breach by DBAG in this respect and SHI's case is that this error would not have been discovered at any point without some trigger such as the margin calls. SHI's counterfactual proceeds on the basis that the error would have continued indefinitely, which appears to me to be an unrealistic assumption to make, although some trigger might well have been needed to find it.

1504. The deficits which occurred on the FXPB account and the Equities PB account arose as a result of Mr Said's and Mr Vik's trading decisions which resulted in closure of their trades rather than the production of further margin. It follows that there is no basis for a starting fund of US$1 billion on 4th December which is the foundation upon which SHI's lost profits claim largely rests. SHI contended that, but for the breaches of contract and/or duty by DBAG which resulted in forced closure of its trading positions, it would have had a starting fund of that amount but that position is not tenable. Had Mr Vik wished to retain SHI's trading positions, he would have done so by producing more margin.

1505. There is no trading logic behind December 4th as the starting date for the loss of profits claim. Mr Vik's evidence was that he discussed the idea of creating a notional portfolio of trades with Mr Johansson in November 2008 and they decided to create it with effect from 4th December. The idea was that Mr Vik would make trading decisions which would be recorded to show what SHI would have done had it been in possession of the funds of which it alleged it was deprived by DBAG's wrongful actions. The trading decisions taken, as recorded in Mr Johansson's computer programme, give rise to lost profits of the order of US$7 billion. The notional portfolio or Hypothetical Portfolio as it came to be called proceeded on the basis of a fund of US$1 billion and no existing trades at that point.

1506. There is self-evidently a problem of continuity for SHI, even if it had succeeded in showing that DBAG was in breach of contract or duty. There is no connectivity between the trading positions which Mr Said and Mr Vik had adopted prior to the close down of their trades and the starting fund of US$1 billion without any trading positions. What trading positions would have been in existence but for the alleged breaches of contract or duty by DBAG and why is there a starting fund of US$1 billion, with a clean sheet on 4th December? SHI has shown no link between its trading positions on 7th October, upon which the starting fund of US$1 billion is said to be based and the fund utilised as the starting point on December 4th. The US$1 billion figure was said to be the approximate equivalent of NOK 5,993,232,768 which was the total of SHI's assets as set out in the document headed "Sebastian Equity Position" which Mr Brügelmann gave to Mr Vik on 7th October at their meeting in London. That figure, whilst it included the unrealised losses as at that date of Mr Vik's FX trading, did not include any element for Mr Said's FX trading. The only figure referable to the FXPBA was the amount shown as standing in the Pledged Account, which was the equivalent of US$67,438,318. The document handed over

did not purport to represent Mr Said's trading at all and the overall asset position, if that had been taken into account, was obviously very different, as Mr Vik knew.

1507. If Mr Said's trading positions had been taken into account, the issue would then arise as to what SHI's trading positions would have been, absent any breach by DBAG and absent the margin calls. The question would arise as to what collateral would have been required to maintain any extant positions and what impact that would have had on Mr Vik and Mr Said's trading decisions during the relevant period. Would positions have been closed out because of the adverse market conditions which obtained at the time?

1508. SHI has made a claim for interest on this "starting fund" from October 7th to December 4th, rather than making any case as to what would actually have happened, when it is clear that trading decisions would necessarily have fallen to be made during that period. SHI did not put forward a counterfactual scenario as to what Mr Vik and Mr Said would have done in the interim period as part of its case.

1509. Mr Vik did however, in his fifth statement served on 25th April 2013, say that, given the pressures on his own trading, he would have shut down his own FX positions before shutting down his Futures positions, if he had known that his FX trades were being margined under the Equities PBA with what he considered, ex post facto, to be an unattractive margining regime. Subject to that, any closing down of positions would have been effected in the order that they were effected after September 3rd and after the margin calls were made. Mr Vik added some qualification or amplification in his sixth witness statement but still maintained that he would have closed his FX positions first and his USD/NOK positions completely before any of his Futures. In his evidence, he claimed not to have closed any of his FX positions in response to the 3rd September margin call – only his Futures positions. In fact, he closed 73% of his Russell Futures positions and all the CAC/IBEX positions (some partly by mistake) before setting about closing his own FX trades. Approximately 27% of the Russell Futures remained open until 6th October when he started to close them but he did not commence closing the USD/NOK position until then. On 13th October he reduced his long NOK/short USD position from US$2.4 billion to US$1.072 billion and then closed out the trades completely on 14th October. His 450 million short EUR/long NOK position was transferred to HSBC/a family company on 21st October (thus closing it out) and the long NOK/short HUF position was closed on 22nd October.

1510. In his deposition evidence, Mr Vik said that he did not know why he closed the Futures positions and not the FX positions first but it is clear that Mr Vik's trading strategy was, against all market indications, to hold onto his long NOK positions and to dispose of his Futures positions in priority in order to raise margin. Mr Vik's evidence as to what he would therefore have done in the counterfactual situation, given what he actually did, is not capable of acceptance.

1511. The starting fund of US$1 billion was never a realistic figure. As Mr Vik accepted in cross-examination and as appears from the discussion earlier in this judgment relating to SHI's available funds, Mr Vik procured the first and third transfers of funds and Norwegian Treasury Bills by SHI to Beatrice in mid-October, which had the effect of reducing SHI's asset position at DBAG by approximately US$250 million and US$230 million respectively. The US$1 billion figure which appeared in the document handed over by Mr Brügelmann on 7th October was thus reduced by Mr

Vik's own transfers to approximately US$520 million regardless of the trading position, so that, even on the fallacious basis of the 7th October document, the starting figure for the Hypothetical Portfolio was almost halved. It is SHI's case that its lost profits claim can be reduced proportionately to the size of the starting fund, but that does not automatically follow.

1512. Furthermore, since SHI, as set out earlier in this judgment, transferred total assets/funds of approximately US$950 million - US$1 billion in the period October 13th-October 22nd according to DBAG's forensic accountant (with whom, on this issue, SHI's forensic accountant did not materially disagree). SHI in fact had available to it a fund of almost equivalent size to that of which it alleges it was deprived. It was therefore in a position to have utilised such funds to trade in the manner set out in the Hypothetical Portfolio, but it did not choose to do so. That in itself casts some doubt on the loss of profits claim since, if SHI had the wherewithal to trade and make the profits that are set out in the Hypothetical Portfolio, why did it not do so? This is of course not fatal to its claim because, had additional funds been available to it, they might have been used in the manner suggested by SHI which was free to use its existing funds in any way it wished. The point does however highlight DBAG's submission that the Hypothetical Portfolio does not represent the decisions that would have been taken by SHI if it was trading for real during the relevant period following 4th December 2008, in circumstances where Mr Vik has produced no information or documentation relating to any actual trading or trading strategy carried out by him in the period in question.

<u>33(d) The Hypothetical Portfolio</u>

1513. I heard evidence about this from Mr Vik and Mr Johansson. DBAG attacked SHI's Hypothetical Portfolio on the basis that it was a fabrication by Mr Vik and Mr Johansson and did not represent a record of trading decisions made at the time recorded in the computer file which was produced in support. I am satisfied that it does not represent the trading decisions which Mr Vik would actually have taken in the period from December 4th 2008 onwards if he had been trading for real.

1514. The Hypothetical Portfolio consists of a substantial Excel document with an apparent first creation date of 8th December 2008. Mr Vik and Mr Johansson say that this was the date when it was created but there is no forensic evidence resulting from the computer experts' investigations to show whether this is the case or not. It purports to record every trading decision contemporaneously taken by Mr Vik as part of a notional portfolio of trades which he would have undertaken had he not been deprived of funds by DBAG's actions. There are some 3,000 trades set out in the trading worksheets upon which monthly summary sheets with Net Asset Value, P&L figures and Open Positions are set out. The portfolio contains some twenty-one interconnecting worksheets. The four primary worksheets contain two hundred and twenty-six thousand populated cells, each holding formulae or information. The four primary trading worksheets contained the trade dates, trade types and investment amounts for each of the four asset classes traded in the portfolio – FX Forwards, Equity Index Futures, gold, which feature as "Commodities (Spot)" and Government Bonds which features as "Commodities (Futures)". Each worksheet contains a great deal of detailed information on each individual trade entry including a unique transaction identification code, a trade date, the amount, the trade settled date, the price and a series of checks including whether the trade date falls on a weekday and

whether the amount traded is consistent with the standard trade amounts recorded in the portfolio. Each worksheet not only deals with the inputting of data, but also contains a calculation engine determining realised and unrealised profits and losses and collateral requirements and produces open positions for reporting purposes.

1515. The trading worksheets in turn feed automatically into separate reporting worksheets for each asset class to capture, reformat and sort the necessary data for each asset class and allow it to be both automatically and manually copied across by Mr Johansson into a further spreadsheet (a final spreadsheet) for reporting purposes. The information in the trading worksheets also feeds into the NAV (Net Asset Value) worksheet, which is a weekly recording of the output from the NAV sheet information. This sheet is nearly entirely populated by formulae and records the total cash position of the portfolio, including realised profits and loss, interest and unrealised profit and loss on open positions at each relevant date.

1516. Data from the four trading worksheets and the NAV worksheet then feed into the Analysis worksheet to provide a weekly snapshot summarising all the relevant trading data. The top line within it uses formulae to pool the relevant data on a weekly basis. These individual weekly totals are then copied manually by Mr Johansson into the table below. Thus at 30th April 2013 there were two hundred and twenty-five individual line entries summarising the life of the portfolio on a weekly basis since December 2008. A final reporting spreadsheet, NAV Output (2) then provides monthly summaries of the portfolio trading history.

1517. SHI describes this work as one of Byzantine complexity with a degree of duplication and a layout which would not be the position if it was created ex post facto. It is said to include features that became redundant as they were superseded by later more sophisticated developments. It also includes data feeds which have progressively become automated. SHI submits that it would have been an extraordinarily time consuming and complex exercise to fabricate such a large architecturally imperfect record after the event in circumstances where Mr Johansson's evidence was that, if he were to be designing it today he would have done it very differently rather than simply letting it evolve into the sprawling document that it became.

1518. There are said to be three major strategic shifts in the portfolio. The first was to build up an Equity Index Futures portfolio and to hold it until the Russell 2000 index hit 400, whereupon a switch would be made to going long in the equities futures market. There is a note of 25th February 2009 which is said specifically to relate to this trading decision. The second major shift was in December 2010 when the large equity index futures position that had been built up and maintained was to be reduced. From this point on investments were switched to bonds and other particular instruments which carried little risk.

1519. The circumstances in which the Hypothetical Portfolio was disclosed are worthy of comment. The existence of this notional trading record was first disclosed to DBAG in April 2012 and was first mentioned to SHI's own lawyers in September 2011, nearly three years after the date upon which it was said to have been commenced and long after proceedings were in being and SHI's claims pleaded. There was no adequate explanation for this being kept "under wraps" until this point and the basis of the case being put forward in New York and London prior to its production does not sit happily with it. The desire to keep it secret and to maintain privilege in respect

of it until disclosure gives rise to the thought that, had the Hypothetical Portfolio not produced the astonishing profits that it did, it would never have seen the light of day in this action. The extent of the profits made and the approach adopted by SHI in relation to it are said by DBAG to show that it cannot reflect the trading decisions that would have been taken in real life.

1520. In January 2011 SHI served an Amended Complaint in the New York proceedings which, at paragraphs 282-284 set out a claim for damages in "an amount as yet undetermined but no less than the sum of $1.75 billion". In particular, losses were claimed in respect of "equities trades unable to be increased in an amount as yet undetermined but no less than $200 million" and "the profits Sebastian Holdings would have made from investing its capital and lost profits of which [it] was deprived by the bank … after its short positions had met its targets, pursuant to a similar long equity strategy and in amounts of similar proportion to its total assets at the bank, as Sebastian Holdings had previously done with its assets at the bank". In other words, the lost profits were to be calculated on the basis of the strategies SHI had adopted in the past.

1521. When the Amended Complaint is examined, it can be seen to be inconsistent with the Hypothetical Portfolio in a number of respects:

i) Whereas there was a substantial claim for losses in respect of trading in equities in the Amended Complaint, the Hypothetical Portfolio contained no record of trading in equities at all. There was a tab set up on the spreadsheet to record equities entitled "Equities (do not use)" which contained a number of complicated formulae and data feeds set up in order to obtain information from Bloomberg. This tab was said to be a "placeholder" by Mr Johansson.

ii) The Amended Complaint contains no claim for losses in respect of future trading profits in FX, despite the fact that the Hypothetical Portfolio showed profits of approximately US$710 million from notional trading in FX as at 7th January 2011.

iii) The Amended Complaint contains a claim for losses of US$500 million in respect of future trading profits in short equity index futures trading, but by January 2011, according to the Hypothetical Portfolio, SHI had stopped its trading in such futures and had realised profits of only approximately US$280 million.

iv) The Amended Complaint claimed "not less than US$1.75 billion for the heads of loss there set out" when the Hypothetical Portfolio, as at January 2011, showed a net value of approximately US$5.3 billion.

v) The Amended Complaint included no trading in bonds but the Hypothetical Portfolio did.

1522. Both Mr Johansson and Mr Vik said in evidence that they would have been involved in commenting on and approving the Amended Complaint but it is hard to see how they could have approved that pleading in the New York action if the Hypothetical Portfolio had existed then in the form in which it now appears for 11th January 2011. The claim could have been expressed for much larger sums than appeared in the

Amended Complaint and would have contained different heads of loss if reference had been made to the Hypothetical Portfolio as it is now seen to be for the date in question. Mr Vik stated that the creation of the Hypothetical Portfolio was "obviously part of the US litigation and that is what we were doing it for" but, if the Hypothetical Portfolio had existed in January 2011, in its current form for that date, it is impossible to see how the Amended Complaint could have taken the form it did with input from Mr Vik and Mr Johansson, even if they chose not to disclose the actual records of the portfolio to their lawyers at the time. Mr Johansson's evidence was that he has been engaged by Mr Vik and has effectively run the litigation on a day to day basis in conjunction with the New York lawyers and the English lawyers. He has been closely involved in the presentation of SHI's case in both jurisdictions.

1523. As regards the position in the English action prior to 27th April 2012 when the Hypothetical Portfolio was first the subject of reference here, SHI's pleaded case did not make any reference to the assets traded in the Hypothetical Portfolio. In the Defence dated 21st March 2011 particulars of loss and damage were given in relation to the forced close out of FX positions, Russell 2000 futures, gold and lost profits on a future gold trade that would have been done and "alternative trades during the period … until trial" (without any further details) on the basis of a capital fund of a sum "in excess of $1 billion".

1524. Different things have been said at different times about the real life nature of the Hypothetical Portfolio. Following the waiver of privilege in the disclosure of the existence of the Hypothetical Portfolio, I ordered disclosure of privileged documents which related to the date of its creation, formation and development, according to the principles governing collateral waiver. In consequence some documents passing between SHI and its lawyers were produced. These documents revealed different answers to questions asked by SHI's lawyers about the Hypothetical Portfolio. It was to be traded "as if SHI had been investing "for real" and in real time" and would maintain a record of how the profit and loss developed over time, save that end of day prices were to be used for all trades. A note of a meeting between Mr Vik, Mr Johansson and SHI's legal advisers of 2nd February 2012 (disclosed as part of SHI's collateral waiver of privileged documents) refers to the purpose of the portfolio as being "to recreate SHI's position that DB had destroyed by closing down the positions" and "rebuilding the positions he had on at the time". An email from Mr Vik of 26th March 2012 to his lawyers stated that he thought that some of the first trades were intended to re-establish some of the positions that he had been forced to close. In a further email Mr Vik stated that the portfolio recorded "the investments that I did do. Not what I would have done." Elsewhere however an attendance note of a meeting between Mr Vik, Mr Johansson and SHI's legal adviser records that the intention was to "keep it simple – not possible to imitate real life". A later attendance note states: "Did commodities. Was going to do equities but too complicated." Further, under cross-examination Mr Vik conceded that there were obviously adjustments which had to be carried out on how to record the portfolio in a way that was feasible for Mr Johansson to achieve but he said elsewhere that the portfolio "wasn't real life in the sense that it wasn't real money, but everything else we tried within the constraints that we had, such as how to manage this, how to administrate this thing, how to make it feasible for us to do". Mr Johansson accepted that he had tried to record Mr Vik's trading as in real life so far as it was reasonable to do it, though using rounded figures all the time.

1525. I have already referred to some significant differences between the Hypothetical Portfolio and the claim as put in the New York action. Additionally the Hypothetical Portfolio, however put together, cannot create the pressures that real life trading does. To my mind it is almost inevitable that trading decisions where the trading is fictional, without any actual risk, will be different from the situation in real life where real money is involved. The point is illustrated by a week in the period of the Hypothetical Portfolio when Mr Vik's trades lost NOK 6.6 billion (over US$1 billion). As is plain from Mr Vik's reaction in September and October 2008, real life trading would lead to changes in trading activity because the pain would be too much to bear. With the Hypothetical Portfolio however, nothing was done because there was no real pain and, if there had been huge losses, it would never have been disclosed as privilege would not have been waived. There are other differences in the types of trading effected, as compared with Mr Vik's and SHI's prior trading. It is highly significant that Mr Vik's actual trading during the relevant period was not the subject of evidence and no disclosure was given in relation to it, although it was sought by DBAG. As SHI conducted no trading of its own, it had nothing to disclose and Mr Vik was not prepared to provide any documentation or information as to the strategies which he had adopted outside the Hypothetical Portfolio.

1526. The only currency pairs traded in the Hypothetical Portfolio were pairs which included the NOK. During 2008, SHI had a far more diverse FX portfolio including an additional twenty-eight currency pairs. In the Hypothetical Portfolio there was some significant trading in gold whereas only a small quantity of gold had been held for a very limited period by Mr Vik in October 2008. As already mentioned, there was no trading in equities in the Hypothetical Portfolio (apart from Equity Index Futures) whereas that had played a part in SHI's trading strategy in the past. None of the trades in the Hypothetical Portfolio were ever closed out prior to maturity and all the notional investments were made in round number figures, neither of which reflected the reality of Mr Vik's and SHI's prior trading. In cross-examination he accepted that the absence of any trades being closed prior to maturity did differ from his actual approach in real life. Trading volumes on some indices exceeded the maximum allowable and were of such size as to depress the market price.

1527. SHI's case is that the Excel file used to record the Hypothetical Portfolio was created on 8th December 2008 to record trades upon which Mr Vik had decided on 4th December of that year and that it was stored on a portable hard drive retained by Mr Johansson. Approximately three thousand notional trades were said to have been recorded on it contemporaneously with instructions given by Mr Vik to Mr Johansson or immediately afterwards, using the end of day price to avoid any element of uncertainty. The one and only record of the Hypothetical Portfolio is on this portable hard drive which Mr Johansson said he carried with him everywhere he went. There was no back up version of any kind which beggars belief because, on Mr Johansson's evidence, the product took hundreds of hours of work on his part since he had sole responsibility for creating and maintaining the Hypothetical Portfolio, entering trades, rolling positions, creating P&L and other spreadsheets and tracking performance. It is said that Mr Vik gave exclusively oral trading instructions to Mr Johansson who input those instructions into the Excel files on the day in question or shortly thereafter. SHI's case was that no emails were ever exchanged between Mr Vik and Mr Johansson in respect of the original creation, instructions and subsequent maintenance of the Hypothetical Portfolio although information given to SHI's solicitors in 2011-

2012 gave rise to the impression on their part that some instructions had been given by email. The only documents which now exist consist of rough jottings made by Mr Johansson which he stated were made by him to remind himself of Mr Vik's oral instructions. Twelve are dated. Instructions were given when they sat side by side at adjacent desks in the office in Greenwich, Connecticut and by telephone or Skype when Mr Vik was travelling, which he was for large parts of the year, since he was only allowed to spend sixty days in the USA. Mr Johansson maintained that instructions were brief and no detailed written notes were required. A lot of the entries were merely rolling over trades as opposed to entering into entirely new transactions or reducing existing positions. About 500 trades were not and the notes are said to refer to 40% of such trades. Only one note exists for between the period 11th September 2009 and 16th December 2010. There are no notes in respect of 11 of the 20 crucial transactions in the periods of February 2009, December 2010 and June 2011 when strategy is said to have changed and there are no notes after 17th June of that year. There is one note that evidences the beginning of the move from equities futures to safer investments in December 2010. Although it is accepted that print outs were made for the purposes of discussion, none now exist.

1528. There is a remarkable absence of contemporaneous documents which evidence the creation of the portfolio and its operation. SHI states that there are no other contemporaneous documents beyond Mr Johansson's handwritten jottings and it has proved impossible to go behind the portable hard drive to ascertain the history of the creation of the file which was disclosed in April 2012. Forensic analysis of the computer hardware upon which the file was said to have been accessed has led nowhere because of various actions taken on the part of Mr Johansson, so that it has proved impossible to establish when the file was created and when the entries were made prior to April 2012. Mr Johansson's jottings were obviously made over a period of time and he was able to date some of them, however brief they were, by reference to the numbers in the portfolio and to other events in his life to show that those notes were not fabricated en bloc in 2011/2012, long after the trading dates to which they are said to relate. Where the notes are dated, those dates appear accurate. The first instructions appear to have been given on 4th December 2008.

1529. It is necessary to set out the unusual history of the portfolio of which Mr Johansson gave evidence. It was not until September 2011 that Mr Johansson and Mr Vik mentioned the compilation of the Hypothetical Portfolio to their lawyers. Despite an email of 12th September 2011 from Mr Vik to his lawyers (which was the subject of collateral waiver of privilege) suggesting that the lawyers knew of the Hypothetical Portfolio before then, SHI's English and US lawyers were clear in stating that this was the first they knew of it (although there is some suggestion that the first record was on a computer). The portable hard drive was the sole repository of the Excel file with all the Hypothetical Portfolio information on it. Despite many meetings with the lawyers, no earlier reference had been made to this portfolio and although Mr Johansson said he took the portable hard drive with him wherever he went, he did not give SHI's lawyers access to it even when the subject was first mentioned to them in September 2011. It was not until April 2012 that an electronic copy was made available, by which time, on Mr Johansson's evidence, the following events had occurred:

i) Mr Johansson disposed of his old laptop during the autumn of 2011 and purchased a new one, the first use of which, as a result of forensic examination, appears unlikely to have been before 26th November 2011.

ii) Mr Johansson disposed of his old desktop computer and acquired a new one which is unlikely to have been used before 14th September 2011 according to the forensic experts. Thus the laptop and desktop which had been supposedly used between December 2008 and the autumn of 2011 were unavailable for any forensic examination.

1530. The first record of the portable hard drive being connected to the new laptop is 10th April 2012. The first date of saving of the portfolio was 11th April 2012. When asked why this might be, Mr Johansson suggested that the first feature might be explained by his practice of uninstalling the drivers required to connect the portable hard drive to the laptop and reinstalling them whenever he had USB issues whilst the second feature might be attributable to the conversion of the spreadsheets from Excel 2003 to Excel 2010 on 11th April 2012. Mr Johansson said he kept no copy of the Excel 2003 version and, as already mentioned, had no back up copy of the file, the first saving date for which, as recorded, is 11th April 2012.

1531. On 3rd February 2012, Mr Johansson provided SHI's English lawyers with some hard copies of reporting parts of the spreadsheets as at 31st December 2012. Why he provided print outs, which on his own evidence were difficult to photocopy and led to an error in the inclusion of a wrong sheet, as opposed to an electronic copy, is not satisfactorily explained. The lack of provision of any electronic copy to SHI's lawyers when its existence was first disclosed is also remarkable particularly in the light of the lawyers' advice as to preservation of the evidence for the notional trading.

1532. The reason advanced for the conversion from Excel 2003 to Excel 2010 was that Mr Johansson was concerned at the stability of the Excel format. The absence of any back up during the preceding period and any retention of the 2003 version when converting to the 2010 version and of any back up for the 2010 version is, in this context, remarkable.

1533. It is common ground that Mr Johansson engaged on a very considerable exercise of review and correction of the portfolio between February and April 2012 before any electronic version was made available to SHI's solicitors. He had added automation features such as the IBEX ticker which allowed him to access IBEX pricing for particular trades. He said he also made a detailed review of all the information he had recorded and corrected errors in the reporting sections of the spreadsheets relating to the numbers of contracts and the trade dates. He did not however, on his evidence, touch the actual records of trades.

1534. The delay involved in Mr Johansson providing access to his new computer and desktop for forensic examination from the middle of 2012 onwards, notwithstanding orders that I made, was truly remarkable. Whilst there were private matters on Mr Johansson's computer, Mr Johansson was undoubtedly obstructive in this respect and, being as close as he was to Mr Vik, this must have represented a deliberate decision on their part. According to the Consultancy Agreement between SHI and XXI Art Inc. the intellectual property in the Hypothetical Portfolio recording SHI's notional trading and for which it was due to pay, was vested in XXI Art Inc. The separate

corporate personality of XXI Art Inc. however (in which Mr Johansson held a one third shareholding and his family held the balance) cannot obscure the reality that this was the vehicle through which Mr Johansson chose to act for SHI and that, had Mr Vik wished it to do so, XXI Art Inc. would readily have co-operated in the production of Mr Johansson's notes and produced the electronic files and computers for forensic examination. The history of the delay shows that Mr Johansson deliberately adopted an obstructive attitude. The order that I made in July 2012 for forensic examination ought to have been completed by October 2012 but was not in fact fulfilled until about February 2013.

1535. The computer experts' reports were not forthcoming until April 2013 with a Joint Expert Memorandum dated 19th April.

1536. In that Joint Memorandum, the experts agreed that:

i) Their investigations produced no evidence that indicated that the file was amended or otherwise processed between 8th December 2008 and 11th April 2012.

ii) The investigations did not identify any evidence of the portable hard drive being connected to the laptop prior to 10th April 2012.

iii) The lack of shadow copies identified was likely to have been a result of user intervention by either deleting the files or changing the settings so that they were not created.

iv) Only one setupapi.dev.log was found on the desktop, dated on the date on which the desktop was forensically imaged by the experts. The absence of any such files on the laptop and their absence on the desktop prior to 27th October 2012 was the result of user intervention, either by Mr Johansson deactivating the function which would create them or deleting them.

v) Only one LNK file was found on the desktop dated 27th October 2012. The experts agreed that the lack of more files on either the desktop or the laptop could be due to user intervention by deletion of the files or prevention of their formation.

vi) No temporary copies of the file were found on either the desktop or the laptop. This could have been the result of disabling of the auto recovery mechanism by Mr Johansson.

1537. In his fifth witness statement, Mr Johansson said that, as a matter of practice over the previous ten years or more, he had habitually not used or had otherwise deactivated any back up or similar function on his computers. As a matter of course he disabled any auto recover or auto save functions that related to Excel. He habitually disabled, so far as he was able to do so, logging mechanisms within his computers shortly after acquisition so that they were programmed not to record usage activity, device and programme installation events and such other matters. As already indicated he had an explanation as to why the available forensic evidence indicated that the first date on which the portable hard drive had been connected to the laptop was 10th April 2012, which was the day before the earliest record of the saving of any copy of the file to

the portable hard drive. The file was then uploaded to a third party on 12th April 2012 at which point SHI's solicitors were provided with an electronic copy for the first time. Mr Johansson's fifth statement which contains most if not all of these explanations, was provided two days before he gave evidence, some two months after the experts had finalised their investigations and produced their Joint Expert Memorandum.

1538. On his own evidence, the steps which Mr Johansson took, some of moderate technical complexity, had the effect of destroying any audit trail for the creation of the Hypothetical Portfolio file. He not only got rid of his old computers, but disabled various functions on his new computers in a way that prevented any forensic expert from finding back up copies or remnants of files which had been created and regularly used. SHI's English solicitors had given all the usual warnings to SHI about the preservation of material relating to the dispute between the parties, both back in November 2008 and on being told of the Hypothetical Portfolio.

1539. The experts considered Mr Johansson's late revelations and agreed that the explanations put forward by him to explain the absence of forensic artefacts and the 10th April 2012 date of connection were technically plausible. There were however, as agreed between the experts, other possible and plausible explanations including the most obvious one that the file was never edited on the recent laptop or desktop and that the portable hard drive was not in fact connected to the laptop prior to 10th April 2012.

1540. Mr Johansson was plainly proficient in IT matters, as appeared from his evidence and from the Hypothetical Portfolio file itself. Although he was aware of the terms of the order I made in July 2012, as contained in Schedule 4 of the first order made at the CMC, with its provision for the experts to investigate the issue of shadow copies, LNK files, setupapi.dev.log files and temporary files, at no stage did Mr Johansson inform the experts or the Court of his practice of disabling shadow copies, back up functions, auto recover and other logging mechanisms. The straightforward thing to do would have been to have told the experts before they began their investigation about what he had done and what his normal practices were. In fact, he had already engaged an expert prior to this, at a time when it was being said that Mr Johansson was relatively independent from Mr Vik and was objecting to any invasion of his privacy by reference to his computer.

1541. One feature stands out against this background of sophisticated activity relating to Mr Johansson's computers and that is absence of any back up copy for the Hypothetical Portfolio on the portable hard drive. It is to my mind inconceivable that a file of the size and complexity of the Hypothetical Portfolio would not have been the subject of any back up copy. When asked about this, Mr Johansson said that he took the portable hard drive with him wherever he went and when asked about the risk of losing it merely said that this did not happen. I did not find that explanation credible.

1542. I am driven to the conclusion that Mr Johansson took deliberate steps to make an audit trail extending further back than April 2012, beyond the March version then in existence, impossible. Once this conclusion is reached, the question of motivation comes to the fore.

1543. When this is combined with the absence of any documents other than Mr Johansson's brief jottings and regard is had to the content of the portfolio itself, the grounds for suspicion are heightened rather than reduced. Mr Vik's evidence was that he never kept copies of any papers provided to him by Mr Johansson in relation to the Hypothetical Portfolio when they discussed it but destroyed them because the portfolio was evolving and they were of no value as future trades were made. Again this sits ill with the duty of preserving documents which SHI's solicitors had explained. Both Mr Johansson and Mr Vik must have appreciated the importance of any material which supported the claim for lost profits which SHI was hoping to pursue. Mr Vik's own evidence was that the purpose of producing the portfolio was to avoid arguments as to what they could or might have done when the matter came to court and so a portfolio was built by trading "as we went along". The suggestion that Mr Vik made that he did not imagine that the authenticity of the portfolio would be in dispute is risible. Mr Vik and Mr Johansson had been specifically advised of SHI's disclosure obligations in October 2008, just a month before it is said that the decision was taken to initiate the Hypothetical Portfolio and Mr Johansson's evidence was that he was told not to change anything by SHI's solicitors when the existence of the computer file was revealed. In this context, given the supposed conversations by telephone and Skype between Mr Vik and Mr Johansson when Mr Vik was travelling, it is hard to imagine how Mr Vik could have made trading decisions without printouts or electronic copies of the file. None however were disclosed. The complete absence of any documentary record other than Mr Johansson's jottings and five printed out reporting sheets in February 2012 leads to the conclusion that, at the very least, SHI has not given proper disclosure. The only sensible reason for that is that there is something to hide.

1544. I have already referred to the tab in the file set up to record equities trading which was entitled "Equities (do not use)" put there supposedly for the English solicitors' benefit. There was also a further tab "Commodities (spot)" which had a table set up for silver trading. No trades were recorded in these tabs and yet Mr Johansson's explanation for the way in which the file was built up was that it evolved trade by trade, starting out with certain sets of asset classes and moving on to other sets with the result that, as they were added, the spreadsheet had to be expanded and various changes introduced. Both the equities tab and the silver tab contained detailed formulae and data feeds from Bloomberg. It is hard to see why these tabs were set up if no notional trades were ever conducted. There was a further tab entitled "Sheet 10" without information but with expanded column widths suggesting that there would once have been data in such columns which has been deleted. Oddly, a Deutsche Bank logo appears in fifteen of the spreadsheet's twenty-four tabs. It was suggested by DBAG that the spreadsheet may have been originally created for another purpose but all the suggestions made were speculative. It seems to me however that the only basis for including additional tabs would be the effecting of notional trades of other asset classes such as equities, silver and some other unidentified type of assets. Mr Johansson said he added the words "do not use" to the equities spreadsheet for the benefit of SHI's solicitors, which is incomprehensible since he alone was the person who made entries in the spreadsheet.

1545. The Hypothetical Portfolio shows an implausible level of profit in the period 2009-2010 where the rate of return was 279% as compared with the best performing actual fund of comparable size at the time which achieved 129% and the average rate of

return achieved by such funds of 12%. The Hypothetical Portfolio would be ranked top of a total of thirty-seven funds of similar size. SHI maintained that with astute directional trading such profits were realistically achievable, particularly where a private investor traded for his own account without being accountable to fund holders or shareholders and where there is no index or publically available information against which to make an appropriate comparison. In my judgment, on the evidence I heard from Mr Inglis and Mr Davies, the benchmarking analysis conducted by the former by reference to CTA funds and particularly those of a similar size represented a realistic comparison. The position was different in 2011 because of the radical change in the nature of the Hypothetical Portfolio which was essentially "derisked" between March and September 2011 after making an abnormally high rate of profit in 2009-2010. The collateral requirements of the Hypothetical Portfolio declined significantly from December 2010 onwards, evidencing the change in the risk profile of it.

1546. The recorded trades revealed the following strategy. Investments were made in short equity index futures until the Russell Index hit 400 in February 2009, whereupon there was a move from shorting such futures to going long. This was said to have been Mr Vik's strategy from way back but in fact the Russell Index hit 400 on 20th November 2008 which would suggest that the strategy allegedly formulated when discussing the portfolio in November could not have set this as a target. That strategy for going long in equity index futures continued until, at the end of 2010, SHI switched from investing in such relatively volatile assets (which contributed 65% of the Hypothetical Portfolio's profits) to investing in government bonds. The effect was that, between 4th December 2008 and 31st December 2009, growth was 212%. In 2010 there was 44% growth. In 2011 there was no growth at all and from January to December 2012 there was 13% growth. Effectively, as Mr Inglis put it, from December 2010 onwards there was basically a cash fund with small trading for which there was no comparator fund.

1547. As I have already said, the results of any trading which Mr Vik actually carried out between December 2008 and December 2012 are unknown. In the much easier market in 2005/2007, Mr Davies calculated a return of 107.5% on Mr Vik's trading whereas in the difficult market of 2008 (which continued thereafter), without the alleged forced close out of positions, the return would only have been around 25% and was hugely negative if Mr Vik's FX trading was included in full. The figures put forward for 2009/2010 essentially result from the alleged perfect judgment by Mr Vik of the point at which to move from shorting equity index futures to going long, in February 2009 before de-risking at the end of the year. Not only is this an unlikely strategy, given the fact that the Russell Index hit 400 in November 2008 (a fact of which both Mr Vik and Mr Johansson appeared unaware) but Mr Johansson missed the actual day when the Russell Index hit 400 in February 2009 as well. Notional long trading in NOK ignored Mr Vik's experience in 2008. The great advantage of the supposed strategy forensically was that, by the time the Hypothetical Portfolio was disclosed in April 2012, and future trading decisions were open to be seen, limited trading risks were being taken and the profits had all been earned long before anyone other than Mr Vik and Mr Johansson were told of the portfolio's existence.

1548. Whilst a number of Mr Inglis' discrepancies did not, to my mind, demonstrate that the whole Hypothetical Portfolio was put together after the event, it is true to say that the

volume of some of the trades made could not have been achieved consistently with the Rules of the Exchange and the size of the market or without an effect on the price which was unascertained. Nor was the effect of spreading the trade to the similar indices evidenced sufficiently. Leaving aside some of the practical difficulties involved in effecting the trades referred to in the portfolio, it is all the factors to which I have referred earlier which lead me to conclude that what appears in the portfolio does not represent a real trading strategy that Mr Vik would have adopted in actuality, with real money and assets at risk. The results are simply too good to be true and the whole history surrounding the making of the claim, the disclosure of the Hypothetical Portfolio, the deliberate destruction of any audit trail and the virtually perfect reading of the market required to earn the implausibly high profits achieved lead me to the conclusion that the portfolio cannot be relied upon as evidence of what Mr Vik would actually have done with any funds that he had at his disposal. The absence of any evidence as to what he actually did with the funds at his disposal reinforces this conclusion.

1549. Whilst I am very conscious of the need to be very cautious in making findings of fabrication of evidence on the appropriate standard of proof for dishonesty and it is not necessary for me to do so in the light of my findings that, without such fabrication, the record of notional trading does not reflect the decisions that a trader/investor would make in real trading and investment, I am compelled to the sure conclusion that the Hypothetical Portfolio has elements of fabrication within it, without being able to say what those elements are. I do not see how the Hypothetical Portfolio could have existed in the form it supposedly did in January 2011, given the terms of the Amended Complaint in the New York action.

1550. There are just too many features which prevent any investigation of the history of the Hypothetical Portfolio prior to 10th April 2012 to allow for any confidence in its integrity. Each such feature is capable of explanation and has been the subject of explanation by Mr Johansson. On its own each explanation appears plausible but when seen together, they constitute a remarkable series of events which have conspired to make such investigation impossible. In my judgment this is all too much of a coincidence and I conclude that Mr Johansson went out of his way to avoid any backup or any auto recover function and to disable any mechanism in the computers which would usually exist by which past history could be checked. Mr Johansson is plainly knowledgeable and skilled with computers, quite apart from engaging his own expert to advise him at one point in this matter.

1551. I do not need to decide how much of the portfolio is a fabrication and it is not possible to show that specific entries in the file were included after the events which gave rise to profit. The inference to be drawn from the history of disclosure, the lack of supporting documentation, the procured absence of any audit trail before April 2012 and the extent of the profits made is however to my mind irresistible. The file as it existed in April 2012 cannot reflect a complete series of trading decisions taken contemporaneously by Mr Vik by reference to the dates which appear in it. In short, in one way or another it must have been "doctored" prior to disclosure to produce the results sought in the period between the summer of 2011 and the spring of 2012. It seems inherently likely that there was trading in other classes of assets which has been deleted. It also seems likely that the timing of some of the crucial strategic trading decisions was fixed with a degree of hindsight, whether moving from short to long

equities futures or turning the investment fund into what was effectively a cash fund. I can only conclude that the only reason for the lack of supporting documentation, the obstructive approach to applications for disclosure and forensic analysis of the computers and the actions taken in relation to computers and the portable hard drive was a desire to produce trading results which were unrealistically high for the purpose of pursuing the counterclaim.

33(e) Bars to Recovery

1552. I have found that the losses suffered by SHI on the close out of Mr Said's FX trading were incurred as the result of a trading decision taken by Mr Vik over the weekend of October 10th-13th and SHI's agreement with DBAG that such closure should occur at the time of SHI's choosing with the provision of necessary margin in the interim. This held good until 22nd/23rd October when the deficiency in the GPF account was discovered and disclosed to Mr Vik and he refused to produce further margin. The agreement was not vitiated by duress or deceit. I have also found that the close out of the balance of Mr Said's trading positions following the expressed unwillingness to produce more margin was effected co-operatively between DBAG and SHI, with Mr Said's express agreement.

1553. It is generally recognised that the provisions in the ISDA agreements on close out are intended to represent a complete code on termination of such Master Agreements. In *Derivatives Law and Practice*, by Simon Firth, at paragraph 11.122 the following appears:

> "In the context of the 1992 ISDA Master Agreement, it is submitted that the provisions setting out the circumstances in which termination is permitted, and the consequences of such a termination are intended to be comprehensive, especially as regards matters falling within the scope of the termination provisions. The contrary view would mean that … the methodology prescribed for calculating the termination payment due on a contractual close-out would be inapplicable and the parties' choice of the "Second Method" for this purpose (so that a payment is due to the Defaulting Party if the termination results in the Non-defaulting Party making a gain) would be fruitless. It is difficult to believe that this would be the parties' intention, as the Second Method is designed to impose an obligation on the Non-defaulting Party to account for such a gain. This is an obligation that it would not have following a common law termination. If it were able to choose between a contractual and a common law termination, this obligation could easily be circumvented and the objective of the close-out provisions defeated …
>
> … it would seem illogical to conclude that, while the contractual methodology must be used where a party fails to perform its obligations, if that party merely *states* that it will not perform, the other party's common law remedies are preserved.

> The better view, therefore, is that the statement that the rights, powers, remedies and privileges set out in the Agreement are not exclusive of those provided by law [in clause 9(d)] is intended to preserve rights of set-off, remedies such as specific performance and similar matters rather than conferring an additional right to terminate on grounds falling outside the express terms of the Agreement. Rights of termination should therefore be regarded as falling within the words "except as provided in this Agreement" so that they are implicitly excluded by the fact that the Agreement contains a detailed code governing the circumstances in which termination is permissible, as well as its consequences."

1554. It is SHI's case that it was DBAG's breaches of contract which led to the close out and the termination of the Agreements, including the FX ISDA which was only terminated recently. It is also SHI's case that DBAG's terminations were wrongful. Breaches were alleged of the FXPBA, which refers to the FX ISDA, of the FX ISDA itself, of the Equities PBA and the Equities ISDA (as well as the oral agreements and the Listed F&O Agreement). It is hard to see how SHI could claim damages at large in respect of the Prime Broker Agreements and the FX ISDA and Equities ISDA, without reference to the provisions in them and the Master Netting Agreement. There are express terms in the Master ISDA Agreements about calculation of loss on the occurrence of Events of Default, Early Termination, designation of a Termination Date or Master Termination Date. The ISDA Agreements each provided for payment on early termination under Clause 6(e) on the basis of "Loss" and the "Second Method".

1555. Where close out occurs in the context of an agreement, as opposed to forced close out as the result of an Event of Default or Early Termination, it is difficult to see how a party's position can be improved as against the position where the other party is in breach.

1556. Moreover, each of the FX ISDA, the Equities ISDA, the Equities PBA and the Listed F&O Agreement contained provisions which exclude DBAG's liability in circumstances which obtain for many of the claims. The FX ISDA and Equities ISDA contain provisions as set out in Annex 1. The Equities PBA has an exclusion Clause in paragraph 13.4 in respect of "special, indirect and consequential damages arising as a result of any breach by the Prime Broker of any provision of this Agreement". The Listed F&O Agreement in Clause 16.1 again excludes "direct or indirect losses, damages, costs or expenses … unless arising directly from … gross negligence, wilful default or fraud" as well as excluding liability for "consequential or special damage or for loss of profits".

1557. There is no reason why these Clauses should not be given their full effect.

<u>34. DBAG's duty to account</u>

1558. I have determined the quantum of DBAG's claims and that SHI's counterclaims for damages for breach of express or implied terms and/or breach of tortious duty fail. The final statement of account between the parties is therefore fully determined by this judgment, as I understand the position, with no remaining claims or counterclaims

to be resolved, subject to issues of interest (and costs) and one remaining issue relating to DBAG's alleged duty to account to SHI. SHI originally brought a claim in these proceedings for an order that DBAG account to it for all trades executed pursuant to the FX ISDA, the Equities ISDA and the Listed F&O Agreement and all sums due thereunder. SHI withdrew its claim for a statement of account because of the work done by both parties' forensic accountants, recognising that such an order would now be redundant.

1559. SHI maintains that DBAG was however under an obligation to provide a statement of account and that its failure to do so in the first place caused SHI loss in the shape of costs incurred in this litigation and in the New York action in ascertaining the true position. SHI contends that these costs are recoverable as damages, if not as costs. The quantum of such costs cannot now be determined, in part because the investigation of SHI's loss would involve an invasion of its privilege.

1560. SHI's arguments as to DBAG's duty to account under the FXPBA are partially based upon an assertion that DBAG acted as its agent. These arguments are misconceived in the light of the FXPBA, under which SHI was DBAG's agent in committing it to Counterparty transactions. SHI concluded the trades and was under an obligation by Clause 3 to notify DBAG of the transactions it had concluded on DBAG's behalf with the Counterparties. It was liable for errors under Clause 7. As agent, SHI therefore had a duty to account.

1561. The other basis of the duty to account is said to be an implied term in the FXPBA that DBAG would retain and provide an accurate record of all concluded FX transactions and would render a true, accurate and full account, including all books and records and other information to SHI. I have already found that there was an implied term in the FXPBA that DBAG would provide a web based reporting service to SHI which set out details of the trades concluded, the MTM valuations and the margin calculations. Furthermore DBAG cleared and settled such trades. Whilst there was waiver of the duty in respect of exotic transactions such as OCTs and EDTs, the general duty remained.

1562. I am not conscious that DBAG adduced any arguments on the alleged duty to account in its closing submissions but, subject to any submissions it wishes to make, it appears to me that SHI and DBAG were mutual accounting parties under the FXPBA.

1563. In the case of the Equities PBA, DBAG as Prime Broker provided financing and settlement services to SHI, against cash and securities provided by SHI. SHI was entitled to purchase or sell securities from or to a third party, nominating DBAG as its "agent for settlement". Under Clause 4(b) DBAG, as Prime Broker, was to calculate in good faith the margin requirement on each business day in accordance with its procedures. Securities held in the securities account were vested in SHI with DBAG holding them upon trust. DBAG provided settlement services and the DBX web based reporting service.

1564. The Listed F&O Agreement made it clear that DBAG did not act as SHI's agent in concluding transactions but that DBAG entered into back-to-back transactions as principal with SHI on the one hand and on the relevant exchange on the other. There were, however, reporting functions on the DBX web system of a similar kind to those on the GEM web based system.

1565. Both the Equities PBA and the Listed F&O Agreement therefore appear to give rise to similar reporting duties as the FXPBA in terms of a web based reporting service. The other provisions of the agreement equally suggest a duty to account on the part of DBAG. On the face of it, however, it appears to be that there was equally a duty to account on the part of SHI in entering into transactions under the Equities PBA where it constituted DBAG as agent for settlement.

1566. SHI complained that DBAG failed to provide it with statements of account, having complained for some years about the wholesale unreliability and inaccuracy of DBAG's systems. It is clear that, in the context of the FXPB account, whilst cash settlements on close out did not present an accounting problem, MTM and margin reporting did for some OCTs and all EDTs. It has taken fresh computer modelling to produce accurate figures for these elements. The cash flow position was accordingly very difficult to produce. This however was a consequence of Mr Said's request to DBAG to take in these trades, knowing of the difficulties presented for DBAG's systems in doing so.

1567. It seems to me that little arises under the Equities PBA and the Listed F&O Agreement, once the Russell Multiplier Error and the Ignored Payments Error are accepted for what they are and once the issues relating to Mr Vik's trading, the PAL and the aggregation/cross-margining of his FX, F&O and equities trading are resolved.

1568. On the face of it therefore, the costs of the accounting exercise must follow the costs of the trial on the issues of implied terms and breaches of the FXPBA, the Equities PBA and the Listed F&O Agreement.

35. Disclosure

1569. Each party criticised the disclosure given by the other. In SHI's case this was, in my judgment, no more than an attempt to paint DBAG in its own colours because its own disclosure was obviously deficient.

1570. The areas in which SHI's disclosure was defective can be outlined briefly as follows:

    i) SHI's financial affairs and business strategy. Mr Vik had offices in Monaco and Greenwich Connecticut. He also appears to have had other offices elsewhere. He had three administrative assistants. Mr Bokias was an analyst who, according to Mr Vik's affidavit in other proceedings, was the individual who managed SHI's portfolio of investments with Mr Vik and who provided financial analysis and views of the market with reference to that portfolio, including, apparently, regular analysis and updates. Minimal disclosure was given of SHI's financial affairs despite this and no documents showing Mr Bokias' input into Mr Vik's trading activities. In particular there was an absence of disclosure about SHI's investments and transfers of shareholdings.

    ii) Third Party Managers: Mr Vik maintained that he made a practice of engaging third party managers with limited budgets and/or trading authority but virtually no disclosure was given relating to this.

iii) Transfers of assets by SHI in October 2008 and in particular transfers from its accounts with DBAG and even more particularly transfers to Beatrice. Disclosure on these matters was given inadequately, reluctantly and obstructively after a series of applications to the court seeking details of the recipients and the purpose of the transfers.

iv) The Hypothetical Portfolio. Disclosure was obtained only after applications to the Court. Mr Johansson, as it ultimately emerged, was not in any sense independent of Mr Vik and SHI although throughout it was said that all material in his possession was not in SHI's control. A Consultancy Agreement between SHI and XXI Art Inc. was the late subject of discovery as support for this proposition. Mr Johansson was the senior consultant of XXI Art Inc which was engaged by Mr Vik. Mr Johansson handled all the details of Mr Vik's litigation battles on a daily basis from 2009 onwards. He was obstructive in giving disclosure of documents relating to the Hypothetical Portfolio and any access to the computers which might validate the basis of SHI's US$7 billion counterclaim. There must have been more documents than have been disclosed.

v) SHI's dealings with entities apart from DBAG and DBS in connection with its investments. SHI was said to be Mr Vik's trading/investment company and he had dealings with GS, DnB, HSBC, UBS, MS, Merrill Lynch and JP Morgan. Only eight email chains have been produced in all which relate to Mr Vik's trading. No copies of any agreements with such entities were disclosed even though Mr Vik accepted that he had entered into a Prime Brokerage Agreement with MS.

vi) Emails generally: The quantity of emails disclosed by SHI as received or sent by Mr Vik was very limited because, according to his deposition, he had a policy of deleting them when he had done with them but searches of his own emails did not apparently include key search words such as "SHI", "Sebastian" or "Klaus Said".

vii) SHI's corporate documents.

viii) SHI's banking documents.

1571. The number of hard copy documents produced by SHI by way of disclosure is minimal. SHI had a filing system in the Greenwich office and also a principal base of operations in Monaco. Only fifteen hard copy documents have been disclosed from the Monaco office. Despite the existence of a "Klaus folder" and a folder for keeping instructions for bank transfers in Greenwich, nothing has been disclosed from either. No searches have been conducted of any other offices which Mr Vik used from time to time when travelling round the world.

1572. I need not detail the respects in which SHI's disclosure is inadequate whether by reference to its own corporate documents such as board minutes, banking documents relating to transfers, documents relating to its investments and transfers of shareholdings, telephone bills, schedules and itineraries of Mr Vik's activities, electronic documents on Mr Vik's laptop, Blackberry and desktop in the Monaco office (although he said that all his documents were kept in the Cloud so that his

electronic disclosure was global). No documents have been disclosed of the kind which must have been the subject of discussion between Mr Vik and Mr Said in October 2008 and which Mr Said was asked to produce for that purpose. The existence of a spreadsheet of 16th October 2008 relating to SHI is referred to in an email exchange between Mr Vik and Mr Bokias but that has not been disclosed. It does not appear that any search has been made of Mr Bokias' documents and any analyses, charts or reports he produced, although it is known that he sent frequent emails to Mr Vik and he worked full-time for him to help him in his trading decisions. Memorably there is a reference to "Strategy Sunday" in an email exchange of 17th August 2008.

1573. Whilst SHI was obliged only to give disclosure of documents in its control and Mr Vik was entitled to say that documents in his control which were not in SHI's control fell outside the ambit of SHI's duty of disclosure, it was Mr Vik himself who determined what fell within the SHI universe for disclosure and what did not. Had documents in the following categories assisted Mr Vik in his case, they would doubtless have been produced.

i) Documents relating to his trading, his appetite for risk and the strategies he adopted, particularly during the period of the Hypothetical Portfolio from December 2008 onwards, whether this related to trading by him personally or through one of the companies owned or controlled by him.

ii) Documents relating to the funds and assets available to Mr Vik and companies he owned or controlled which could have been used to support SHI's trading.

iii) Documents relating to his personal knowledge of investment banking practices and his supposed lack of knowledge of FX trading on which he relied at trial.

iv) Documents relating to Beatrice, its ownership and the transfer of its ownership. Beatrice was a company which was in fact owned by Mr Vik at least until 30th October 2008 and which was the recipient of some US$730 million of SHI's assets in October 2008. In response to a Request for Further Information, SHI said that it did not know whether Mr Vik owned or controlled Beatrice as at 13th October 2008 in circumstances where, in an earlier disclosure statement, Mr Vik had stated that he did not own the recipient of a transfer which was in fact Beatrice.

1574. I ordered SHI to write to Mr Vik and Beatrice to ask for relevant documents to be disclosed so that there could be no misunderstanding about the relevance of such documents or the assistance that they might give to the Court. No positive response was forthcoming. As a result of late disclosure, it emerged that Beatrice was owned by CSCSNE Trust which was the recipient of Mr Vik's shareholding in Beatrice on an unknown date. The agreement which documents the transfer refers to the transfer being made "as of 30th October 2008", which implies a later date of execution. That Trust is under the control of Mrs Vik who has refused to give any disclosure of Beatrice's documents. As the settlor of the Trust, Mr Vik and his lawyers would be expected to have a copy of the Trust deed and other relevant documents but no copies of those were forthcoming.

1575. Mr Vik and/or his wife have refused permission for DBS to disclose any documents relating to his personal affairs or those of Beatrice or to give information relating to them. Such permission is required because of banking secrecy laws in Switzerland. By way of contrast, Mr Vik sought disclosure from DBAG of DBS' documents relating to SHI which had to be obtained under the Hague Convention because of Swiss law, whilst SHI's disclosure of documents relating to DBS consisted only of bank statements. The reason for Mr Vik's refusal to give permission was, according to his evidence, that he was advised not to do so as "I would damage my legal rights to pursue Deutsche Bank".

1576. Despite SHI devoting twenty-seven pages of its written submissions to DBAG's disclosure failures, the extent of disclosure by DBAG in this action is, by any standards, gargantuan by contrast with SHI. There can be no inferences drawn against DBAG from documents which have gone missing and have not been disclosed. DBAG had formal document retention procedures and systems to record telephone calls and preserve the recordings and was subject to regulation with regard to its record-keeping processes in multiple jurisdictions. It also had teams of in-house lawyers whose responsibilities included policing of document retention policies but the sheer quantity of material which was produced during the course of this litigation was nonetheless mind-boggling.

1577. I do not absolve representatives of DBAG who conducted its telephone calls "off-line" and avoided sending emails in an attempt to disguise from other personnel within DBAG and DBS the failures of FXPB properly to book, value and margin the EDTs but efforts to discredit DBAG's responses to requests made by SHI for disclosure are ill-founded.

1578. It is true to say that some telephone recordings of London custodians were destroyed by error after the litigation commenced and there were gaps in DBS' voice recordings prior to 1st September 2007 and after 10th October 2008. In the overall context of the dispute, this is relatively insignificant.

1579. Complaint is made about the disclosure by the bank of raw data from its internal computer systems and access to SHI's accounts and the vagaries of the accounts, as now accessed, as compared with what appears to have been the position in 2008. There were system-wide changes made to DBAG's systems which have affected the data which are now beyond explanation but this does not evidence any desire of DBAG to avoid giving disclosure nor, at the end of the day, is it of any great materiality.

1580. Reference is made to the very late disclosure of Mr Brügelmann's notebooks, on which I have commented elsewhere in this judgment, but I have no doubt that this was an oversight which, once recognised, was rectified immediately. Mr Brügelmann had plainly never thought of them as material, though of course they were. I do not find that he was in any respect dishonest in this regard and once he alerted DBAG's solicitors to the position, the notes were found and disclosed. It is also true to say that Mr Orme-Smith's handwritten notes have never emerged. He too had notebooks which he left behind when he resigned from DBAG and was marched out of the premises in what regrettably now appears to be the usual brusque way that such things happen in banks.

1581. The process of disclosure has been extensive and drawn out and it is right that DBAG revealed the existence of some documents shortly before and during the trial. Some of these disclosures emerged as a result of evidence given and so DBAG is not to be criticised on that account.

1582. Save as expressly appears elsewhere in this judgment, I did not rely on SHI's failures in disclosure in coming to the conclusions that I did about Mr Vik and Mr Johansson's credibility. In the case of Mr Johansson the steps taken by him to ensure that no audit trail of the Hypothetical Portfolio could occur prior to 10th April 2012 and the limited and reluctant disclosure of other documents were significant. In Mr Vik's case, failures to disclose did not play a significant part in my conclusion that he was an unreliable witness, save in relation to transfers of SHI's assets and his efforts to mislead the Court as to the recipients of them and their continued availability to SHI. It is striking however, in retrospect, that with very few documents emerging from SHI, Mr Vik made six statements, some of considerable length, in which he referred extensively to documents disclosed by DBAG in support of the case he wished to make. Much of those statements did not contain, in truth, any real evidence of Mr Vik's own recollection and he had, it would appear from his evidence, no documents of his own upon which to draw which would support his case. Self-evidently, what he had done was to study the disclosure given by DBAG and, so far as it was possible to do so, to mould his evidence by reference to such documents where they could in any way be thought of as supportive. I do not however accept that SHI's disclosure was adequate and Mr Vik's own stance on such matters does not do him any credit. It reinforces the views I had already reached as to his unreliability as a witness.

36. The nature of DBAG and SHI's trading

1583. I asked counsel at one point during the trial whether the transactions which were the subject of dispute would, prior to the enactment of the Gambling Act 2005, have been unenforceable as wagering contracts under the various provisions of the Gaming Acts. The effect of the 2005 Act (and in particular sections 10, 334, 335 and 356) when combined with the Financial Services and Markets Act 2000 (and in particular Part II, section 22 and schedule 2)) was to repeal the Gaming Acts and to state that "the fact that a contract relates to gambling shall not prevent its enforcement, whilst stating that bets, for the purposes of the 2000 Act, did not include transactions made or accepted which were "regulated activities".

1584. I received no answer to this question and the subject was not addressed save that it was accepted on all sides that the critical EDTs were rightly described as "range bets". All the disputed transactions involved speculation on the movement of one currency against another (and in the case of the correlation swaps, more than one currency against another). The expert evidence was that over 95% of FX transactions in the US$4 trillion daily market were speculative and did not relate to any need for the exchange of currencies for the purchase of goods. The propensity for losses when bets are taken on market movement and the fragility of this market were, as was the case with many other investments, revealed by the unforeseen events of the autumn of 2008.

1585. At the risk of appearing simplistic or unduly moralistic, it is plain that those who bet know that they run the risk of loss as well as gain and that on any individual bet there

can only be one winner. This is to be contrasted with conventional trading by parties which results in mutual benefit as each obtains what has been promised against the consideration it provides (such as, for example, the provision of a commodity for a price), although the extent of the benefit to each will doubtless depend upon market movements. Where parties simply speculate on the movement of currency however, there can be no mutual benefits of any kind. The whole object of the transaction is that one should gain at the expense of the other. Parties enter into such transactions at their own risk and presumably with their eyes wide open.

1586. The nature and product of gambling has always been self-evident to any observer of life, whether in ancient Egypt or Greece (Aristotle) down to the present day (Barak Obama) as the following quotations from eighteenth and nineteenth century England and the US illustrate:

> "Gambling with cards or dice or stocks is all one thing. It is getting money without giving an equivalent for it." Henry Ward Beecher
>
> "Gaming is a mode of transferring property without producing any intermediate good." Dr Johnson
>
> "… a vice which is productive of every possible evil, equally injurious to the morals and health of its votaries. It is the child of avarice, the brother of iniquity, and the father of mischief. It has been the ruin of many worthy families, the loss of many a man's honor, and the cause of suicide. To all those who enter the lists, it is equally fascinating. The successful gamester pushes his good fortune, till it is overtaken by a reverse. The losing gamester, in hopes of retrieving past misfortunes, goes on from bad to worse, till, grown desperate, he pushes at everything and loses his all. In a word, few gain by this abominable practice, while thousands are injured." George Washington

1587. Whether proper consideration was given to the public policy issues when the law was changed in this country is not for me to say but the harmful effects on people and on society have been detailed in previous centuries and bear re-examination. To the extent that any company or bank founds its business on transactions of this kind, it does so at its peril and those of its shareholders and stakeholders. To the extent that any economy depends upon such business, its foundations are built on sand.

<u>37. Conclusions</u>

1588. DBAG's claims succeed therefore in the following sums:

i) On the FX account US$116,989,618.

ii) On the Equities account US$118,656,727.

1589. DBAG claims simple interest in respect of the FX trades governed by the FX ISDA at the Federal Funds Effective Rate plus 1% per annum. That rate is not contested. The exact figures can be agreed by the forensic accountants.

1590. Compound interest is claimed by DBAG on the amount due under the 2008 Agreements at the Federal Funds Effective Rate compounded daily, in accordance with Clause 3.3 of the Master Netting Agreement. As a contractual rate, this is again uncontroversial. Once again I leave it to the forensic accountants to calculate the appropriate figures.

1591. Costs must follow the event. The costs figures which appear in the pre-trial checklists are huge. The parties were represented by four and five counsel respectively and the volume of work conducted by both firms of solicitors and experts was enormous.

1592. I must pay tribute to the manner in which the trial was conducted by counsel in terms of co-operation between the parties on the best use of the court's time, the timetabling of witnesses and the consideration given to the trial judge with volumes of material to absorb in witness statements and expert evidence, as well as a trial bundle of significant size and overwhelmingly complex numbering on the Opus 2 Magnum system. The skill with which arguments were put forward and issues addressed was impressive.

1593. Nonetheless, as indicated earlier in this judgment, I warned the parties very early on about issues which did not pass the "red face test" and the possibility of indemnity costs being awarded in respect of them. Whilst such a sanction is of very limited force in an action involving sums of the size in question here and where the costs are also so large, it may be that it would be appropriate in this case to treat pursuit of some of the issues as "outside the norm" and to make indemnity costs orders in respect of them, in the probably forlorn hope that it may discourage other litigants from pursuing hopeless points. The written submissions of the parties, whilst ultimately obviating the need by agreement for long oral submissions, were extended to cover such a wide range of arguments as to be almost unmanageable. The process also had the effect of detracting from the traditional approach in closing submissions where the Court has the opportunity to question, challenge and probe the arguments made. It would be highly regrettable, in my view, if in future substantial litigation, the oral tradition was subverted and replaced by lengthy submissions of the kind with which the Court was faced here.

1594. If there are matters upon which the parties wish to address me, in relation to such issues and to the formal orders to be made, it would help to have advance notice in writing of the topics to be covered with short (and I mean short) written submissions where the parties are not agreed.

1595. Finally, I should also pay tribute to my clerk who has borne a very heavy burden in producing this judgment, for the length of which I apologise, relying, in mitigation, on the length of the submissions made and the breadth of the issues I have had to determine.

ANNEX 1

Extracts from ISDA Master Agreement and Schedule

"Part 5. Other Provisions.

I. (a) *Representations and Acknowledgements.*

(i) Non-Reliance. It is acting for its own account, and it has made its own independent decisions to enter into that Transaction and as to whether that Transaction is appropriate or proper for it based upon its own judgement and upon advice from such advisers as it has deemed necessary. It is not relying on any communication (written or oral) of the other party as investment advice or as a recommendation to enter into that Transaction; it being understood that information and explanations related to the terms and conditions of a Transaction shall not be considered to be investment advice or a recommendation to enter into that Transaction. No communication (written or oral) received from the other party shall be deemed to be an assurance or guarantee as to the expected results of that Transaction.

(ii) Assessment and Understanding. It is capable of assessing the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts the terms and conditions and risks of that Transaction. It is also capable of assuming, and assumes, the risks of that Transaction

(iii) Status of Parties. The other party is not acting as a fiduciary for or adviser to it in respect of that Transaction.

(b) *Party B Representations and Acknowledgements, Non-Reliance, Etc.* Party B hereby represents, warrants and acknowledges to Party A as of the date of this Agreement and will be deemed to represent to Party A on the date that Party B enters into a Transaction that (absent a written agreement between the parties that expressly imposes affirmative obligations to the contrary for that Transaction) that:

(i) Party B understands that (x) that Transactions may at times be volatile and are subject to complex and substantial risks that may arise without warning and (y) losses in value for Party B's position in that Transactions may occur quickly and in unanticipated magnitude.

(ii) Party A has made no representations, guarantees, or assurances whatsoever as to the expected or projected profitability, return, success, performance result, effect, consequence or benefit (whether legal, regulatory, tax,

financial, accounting or otherwise) of that Transaction. Party B will be relying upon its own judgement and its own advisors with respect to that Transaction and Party B has not sought and is not relying on any views of Party A with respect to that Transaction. All terms of, and the documentation evidencing, this Agreement and that Transaction have been the result of arm's-length negotiations between the parties.

Party A shall not be liable to Party B for any losses, costs, expenses, fees, charges, amounts, liabilities, claims, damages, penalties, interest, taxes, or fines associated with that Transaction, including the failure of that Transaction to achieve Party B's legal, regulatory, tax, business, investment, financial, or accounting objectives.

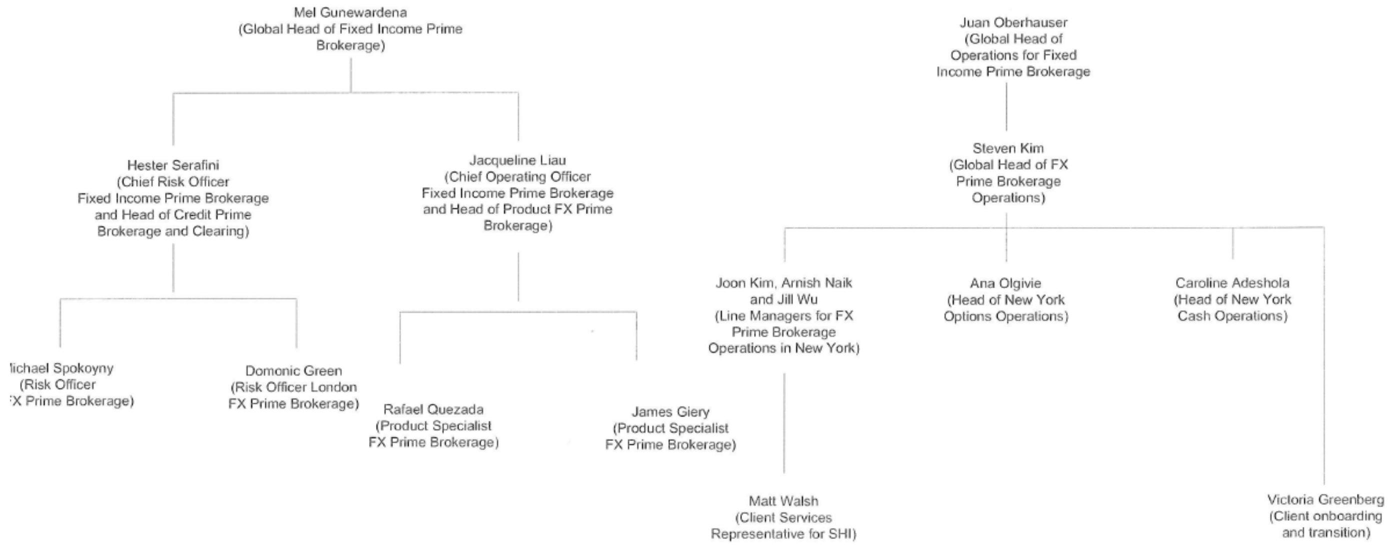
(iii) Party B entered into this Agreement and is entering into that Transaction for Party B's own account as principal (and not as agent or in any other capacity, fiduciary or otherwise).

(iv) Party B is a sophisticated investor and has sufficient knowledge, experience, and professional advice to make its own legal, regulatory, tax, business, investment, financial, and accounting evaluations of the merits and risks of entering into the Agreement and that Transaction. Party B will determine or has determined that each Transaction hereunder is suitable for Party B in light of Party B's investment objectives, financial situation, and level of investment sophistication.

(v) Party B's entrance into this Agreement and that Transaction complied and will comply in all respects with all applicable laws, rules, regulations, interpretations, guidelines, and governmental and regulatory authorities affecting Party B."

ANNEX 2

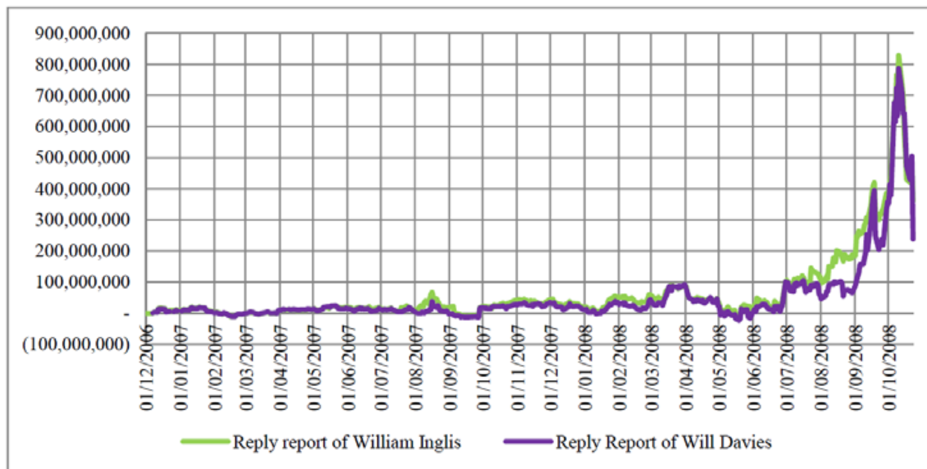
FXPB Organisational Charts

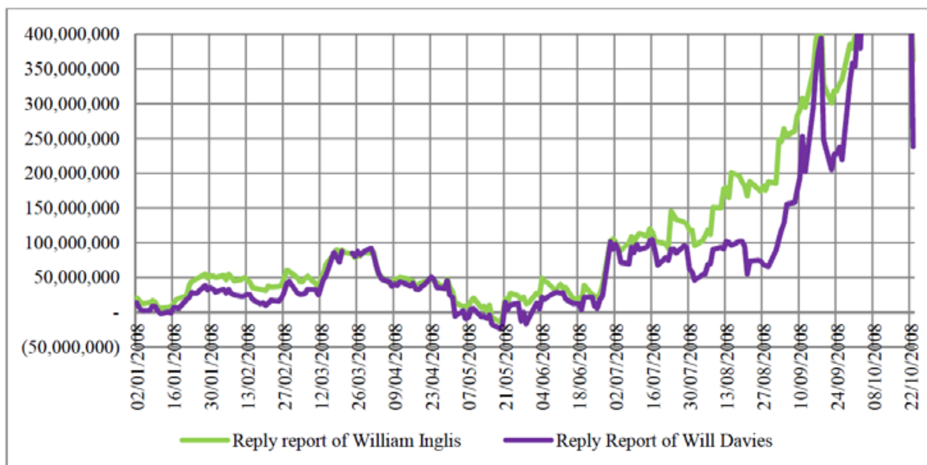


ANNEX 3

The margin figures for Mr Said's FX trading as calculated by the forensic accountants

Source	Inglis 2 Appendix 9.1.7	Davies 4 Appendix 14.1.2.S2	Difference
Date	**US$**	**US$**	**US$**
01/10/2007	22,817,474	18,271,819	(4,545,655)
01/11/2007	42,369,999	27,192,892	(15,177,107)
30/11/2007	42,691,046	33,804,322	(8,886,723)
31/12/2007	19,519,330	11,698,793	(7,820,537)
01/02/2008	49,972,337	28,686,998	(21,285,339)
29/02/2008	58,743,682	44,124,337	(14,619,306)
01/04/2008	86,515,800	82,444,395	(4,071,406)
01/05/2008	29,127,692	21,666,711	(7,460,981)
30/05/2008	13,291,504	(8,880,538)	(22,172,042)
01/07/2008	105,324,203	90,478,364	(14,845,839)
01/08/2008	95,863,618	45,794,552	(50,069,065)
01/09/2008	185,615,340	88,876,618	(96,738,721)
01/10/2008	396,446,916	353,772,591	(42,674,324)





ANNEX 4

DBAG's ARCS Monte Carlo VaR Methodology

"7. The Methodology comprises the following components:

a. Market data extraction/transformation (used to generate the data to be used by the MonteCarlo engine).

b. MonteCarlo simulation engine (used to generate 1000 paths for the FX spot rates used by the pricing engine).

c. Pricing engine (using the trade data, pricing functions and simulated risk factors).

d. P&L vector construction module (which took the difference in MTM between the MTM of the trade valued under one of the 1000 MonteCarlo scenarios and the original value of the trade (i.e. the current actual MTM of the trade)).

e. VaR calculation module.

8. The component parts of the Methodology can be illustrated as follows in Figure 1 and Figure 2 below:

Figure 1: VaR process diagram

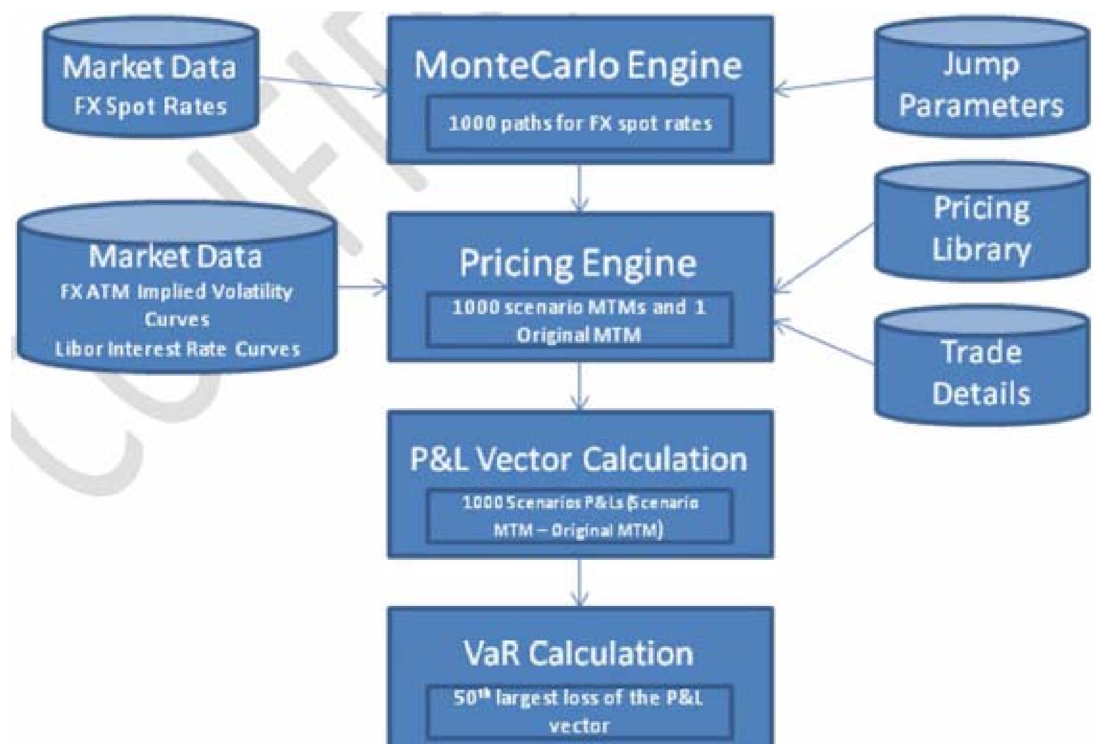
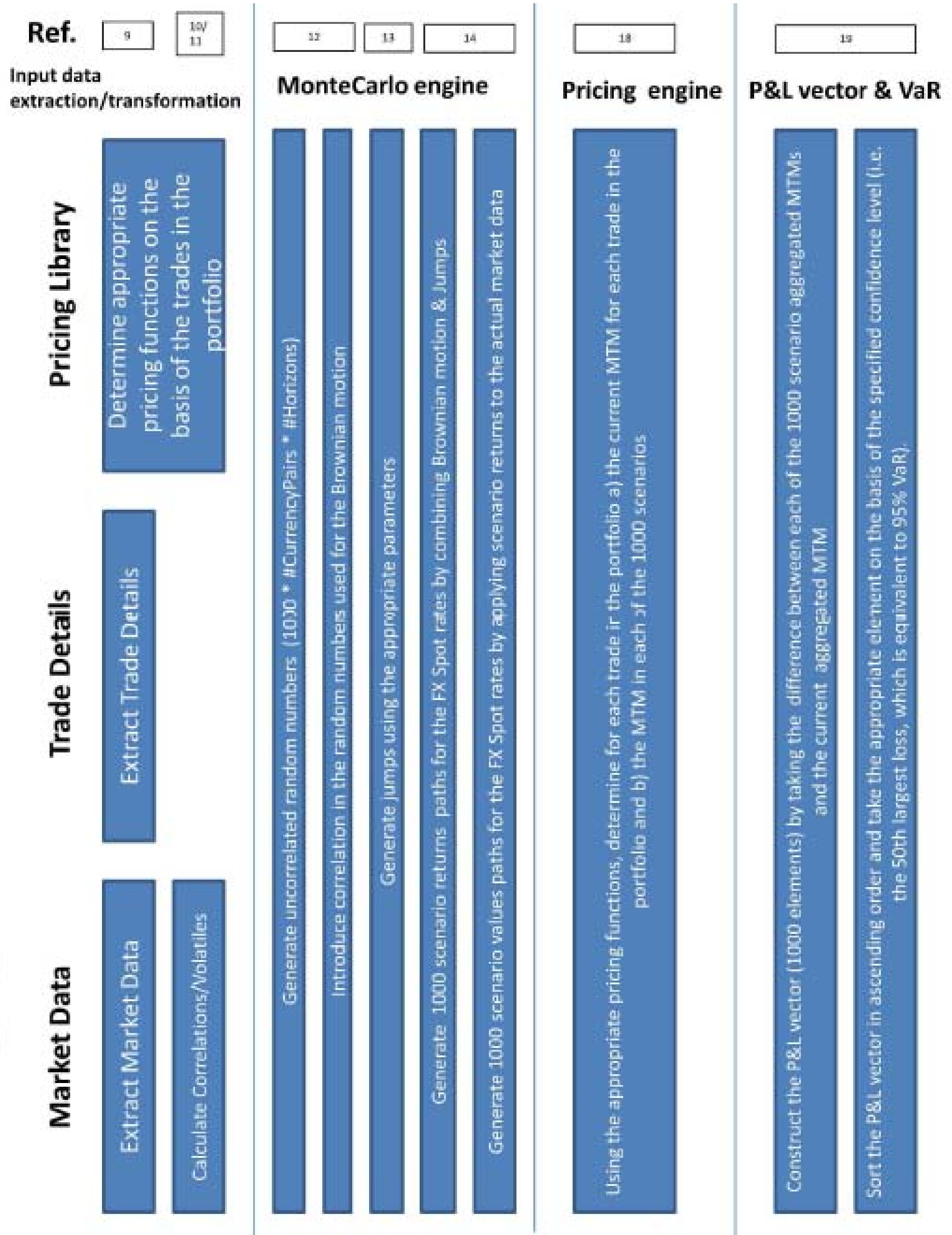


Figure 2: VaR calculation step-by-step guide (references to paragraphs 9-19 below)



…"