Neutral Citation Number: 2017 EWHC 93 (Comm)

CL-2012-000299, 000344, 000355, 000553 to 000556, 000727, 000767, 000858, 000959 and 000960

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

Royal Courts of Justice, Rolls Building
Fetter Lane, London, EC4A 1NL

Date: 30/01/2017

Before :

THE HON. MR JUSTICE POPPLEWELL

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Between :

Claimants

(1) ASDA STORES LIMITED *CL-2012-000299*
(2) ARCADIA GROUP BRANDS LIMITED and others *CL-2012-000344*
(3) NEXT RETAIL LIMITED *CL-2012-000355*
(4) B&Q PLC *CL-2012-000553*
(5) COMET GROUP LIMITED (IN LIQUID
(6) NEW LOOK RETAILERS LIMITED *CL-2012-000555*
(7) ICELAND FOODS LIMITED *CL-2012-000556*
~~**(8) HOUSE OF FRASER (STORES) LIMITED** *CL-2012-000727*~~
(9) ARGOS LIMITED and others *CL-2012-000767*
~~**(10) RECORD SHOP 2 LIMITED (IN LIQUIDATION) and others** *CL-2012-000858*~~
(11) WM MORRISON SUPERMARKETS PLC *CL-2012-000959*
(12) DEBENHAMS RETAIL PLC and others *CL-2012-000960*

- and -

Defendants

(1) MASTERCARD INCORPORATED

(2) MASTERCARD INTERNATIONAL INCORPORATED

(3) MASTERCARD EUROPE SA

(formerly known as MasterCard Europe SPRL)

~~**(4) MASTERCARD UK MEMBERS FORUM LIMITED**~~

~~**(in Members' Voluntary Liquidation)**~~

(5) MASTERCARD/EUROPAY UK LIMITED

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Paul Lowenstein QC, Fergus Randolph QC, Christopher Brown, **Max Schaefer and Hannah Glover** (instructed by **Stewarts Law LLP**) for the **Claimants**

Mark Hoskins QC, Matthew Cook and Hugo Leith (instructed by **Jones Day**) for the **Defendants**

Hearing dates: 13-16, 20-23, 27-30 June, 4-7, 21 July, 28 September, 10 -13 October 2016

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Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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THE HON. MR JUSTICE POPPLEWELL

Mr Justice Popplewell:

Introduction

1. The Defendants are collectively referred to in this judgment as MasterCard; it is not necessary to distinguish between them for the purposes of the issues which I have to decide. MasterCard sets the level of fees to be charged for its credit and debit card transactions. Such fees are known as multilateral interchange fees or "MIFs". The MIFs are (indirectly) paid by the merchants with whom cardholders use their cards to purchase goods or services. Although MasterCard sets the MIFs, it does not receive them; the MIFs are paid to the institutions which issue the payment cards to cardholders. The issuers are typically, but by no means exclusively, banks. The Claimants are well known high street retailers who collectively claim to have paid a total of about £437 million by way of MIFs in the relevant period (broadly speaking since 2006). The central issue in these cases is whether the MIFs set by MasterCard for credit and debit card transactions by consumers in the relevant period, and in the relevant territories (UK, Ireland and cross border transactions between EEA countries), are tortiously anti-competitive in breach of UK, Irish and EU competition law; and if so by how much.

2. There are twelve separate actions, two of which have been brought to an end by settlement since the commencement of the hearing. The trial before me was to determine a number of issues which were selected and framed to determine all issues of liability and some issues affecting quantum (if relevant), in what was referred to as "the Phase 1 trial". Other questions relevant to quantum have been left for consideration (if appropriate) at a subsequent hearing ("the Phase 2 trial").

Background to the dispute

3. In this section I address the background under the following headings:

    (1) The MasterCard scheme.

    (2) Types of cards and users.

    (3) The legal framework for the claims.

    (4) The regulatory history.

    (5) The CAT decision.

    (6) An overview of the MasterCard MIFs and the markets.

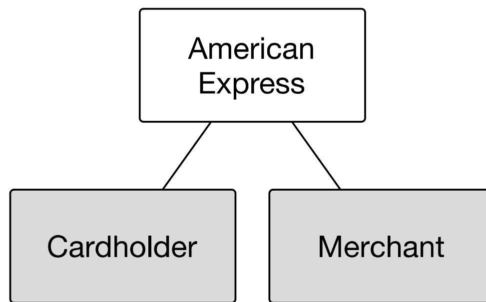
    (7) MasterCard Projects: Forward, Alhambra and Porsche.

    (8) The witnesses.

(1) The MasterCard scheme

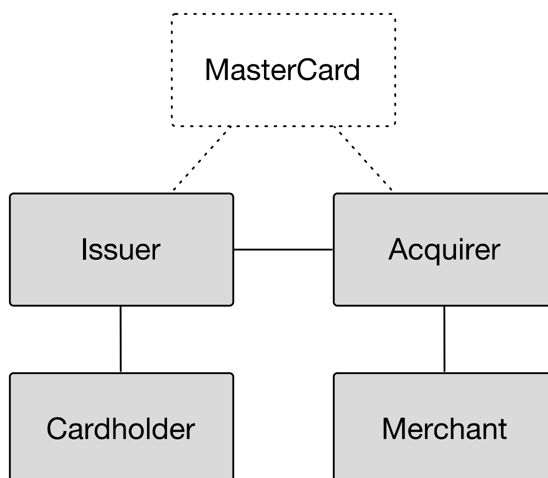
4. The MasterCard payment card scheme, like that of Visa, is often described as a "four-party" scheme, although it involves five parties. It is to be distinguished from "three-party" schemes which involve three parties.

5. A three-party scheme is represented diagrammatically as follows:



The operator of a three-party scheme deals directly with cardholders and merchants. It issues the cards to cardholders, who pay it a fee. It also charges the merchant a fee. Payments are cleared through the operator: the cardholder uses his card to buy goods or services from the merchant; the merchant is paid by the operator the price less the merchant fee; the operator recovers the full price of the goods or services from the cardholder, typically having provided credit. As the diagram suggests, the leading example of a three-party scheme in the UK is American Express ("Amex"). Another smaller three party scheme is operated by Diners Club.

6. By contrast, a "four-party" scheme involves five parties in the following structure:



7. The four parties in grey in the diagram are each necessarily involved in the flow of payments arising from a transaction: the issuer issues the payment card to the cardholder; the cardholder "pays" for the goods or services provided by the merchant by card; the acquirer provides the "acquiring" service to the merchant which allows it to receive card payments, and pays the merchant for the goods and services, less a discount. The acquirer obtains payment from the issuer, who charges the cardholder for the transaction. MasterCard charges a fee to both issuers and acquirers for their ability to participate in the scheme.

8. The financial dynamics for those participating in the scheme are as follows:

   (1) When the cardholder purchases goods or services from the merchant, he does not immediately make any payment. In the case of a credit card he does not

have to pay the issuer until the end of the period of credit agreed with the issuer. Typically in the UK he will receive free credit until the end of the month. In the case of a debit card, the debit from his account is swift but not instantaneous because it is made by the issuer in response to clearing via the acquirer.

(2) Following a sale, the merchant recovers the price from the acquirer, who services the payment. The acquirer charges a merchant service charge ("MSC") for the service which is deducted from the price paid to the merchant.

(3) The acquirer recovers his outlay, plus a profit, from the issuer; the issuer does not pay the acquirer the full price of the goods or services, but deducts an amount by way of interchange fee.

(4) The issuer charges the full value of the transaction to its cardholder customer. In theory therefore the issuer recovers in full from the customer and earns potentially profit making revenue in the form of (a) any fees charged to the cardholder for the issue or use of the card (b) the interchange fee and (c) any profit on the interest rate charged to the customer for credit. In practice there falls to be set against such potential profit (a) the costs of issuing cards and processing recovery from the customer (b) the cost of benefits or rewards offered to cardholders which attach to the use of particular cards in particular ways (c) the cost of free credit for the interest free period and (d) losses due to cardholder default or fraud, which under the terms of the scheme fall on the issuers rather than the merchants or acquirers.

(5) MasterCard has a contractual relationship with both the issuers and acquirers, who are licenced to participate in the scheme and undertake to abide by a single set of scheme rules set by MasterCard. These are detailed and prescriptive, and updated from time to time. The scheme rules in force at 28 May 2015 ("the Scheme Rules") were treated by the parties as representative of those in force throughout the relevant period for the purposes of the dispute in this case, and references in this judgment are to the relevant parts of that edition. MasterCard's income is derived from the fees it charges to issuers and acquirers in return for licencing their use of the cards.

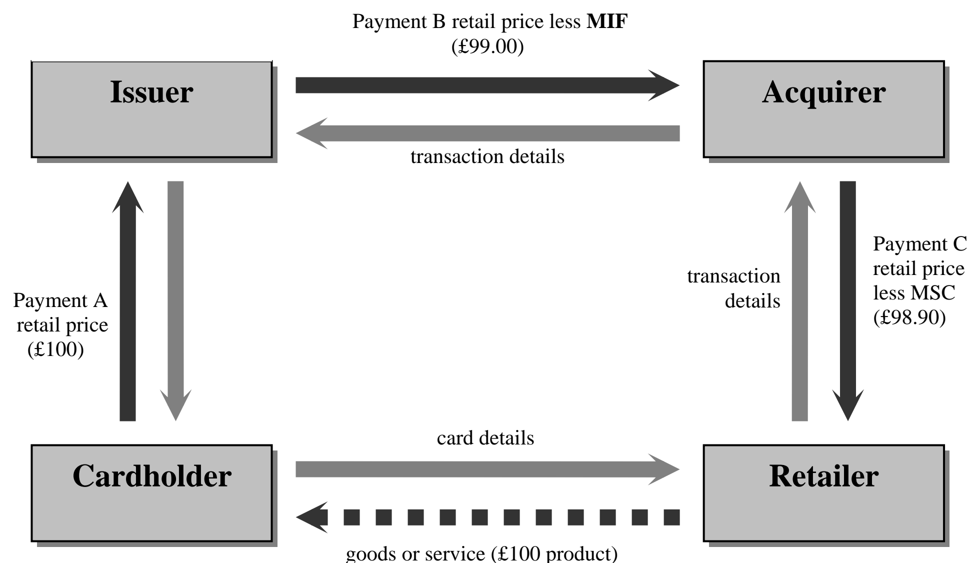
9. Interchange fees can in theory be agreed bilaterally between issuers and acquirers. In practice this is not how the interchange fee is determined. Under the Scheme Rules (Rule 8.3), MasterCard sets the interchange fees which are to apply compulsorily in default of bilateral agreements. These are the multilateral interchange fees or "MIFs". In practice there are no material bilateral agreements, and so the MIF always applies. This is not surprising: in a putative bilateral negotiation between an issuer and an acquirer the issuer has no incentive to accept less than the default MIF and the acquirer no incentive to offer more.

10. Not only have the MIFs set by MasterCard varied over the period covered by the claims, but at any given time MasterCard has had a wide variety of different MIFs for different categories of transaction. There are distinctions between territories and between credit and debit card transactions, so that the broadest relevant categories are the card-type/territory groups that define the MIFs in issue in this claim: i.e., EEA

debit, EEA credit, UK debit, UK credit, Irish debit and Irish credit MIFs. But within such groups (in the territories in issue and elsewhere) MasterCard also differentiated MIFs according to a variety of different factors, such as whether the transaction was face-to-face, online, or made by mail or telephone order; whether the card and/or the payment terminal had chip and pin functionality; how the payment was verified; whether cards were premium cards; and by the category of merchant.

11. MIFs may be expressed as a percentage of transaction value, sometimes referred to as "*ad valorem*", as a fixed sum per transaction, or as a combination of both. Very broadly speaking, MasterCard's debit card MIFs have tended to be set on a fixed or combined basis, and its credit card MIFs have been purely *ad valorem*.

12. The payment flows between the four parties can be illustrated as follows, assuming a transaction at £100, a MIF of 1% and an acquirer's margin of 0.1%. The dotted line represents the notional payment by the cardholder for the goods or services with the black lines representing the actual payments.



13. A payment system of this kind is known as a two sided platform, with merchants on one side and cardholders on the other. The platform is two sided because the more users there are on one side the more attractive the platform is to the other side. The more consumers with a MasterCard payment card, the more attractive it is for merchants to accept MasterCard cards; the more merchants who accept such cards, the more attractive it is for consumers to carry them.

14. In a number of countries, including the UK, Amex not only operates a pure three-party scheme which issues cards directly to cardholders, but also licenses third-party issuers (for example Lloyds Bank) to issue Amex cards. This part of Amex's operation, known as "Amex GNS" (for "Global Network Services") blurs the distinction between three-party and four-party schemes. MasterCard and Visa compete for issuers' business with Amex GNS, but not in respect of the "pure" Amex business.

15. It can be seen that in order for acquirers to operate profitably they must include within their MSC charged to merchants the amount of the MIF payable to issuers, and the scheme fee payable to MasterCard, together with such profit element as they are able to negotiate with the merchant in question. The expression acquirer's margin was used sometimes to reflect this profit element, and sometimes to represent the difference between the MSC and the interchange fee so as to include scheme fees. The evidence established that the acquirer's margin on relevant transactions, in either sense, was a small proportion of the MSC; the MIF, which was to be passed on to the issuers, typically comprised over 90% of the MSC. In the agreements between the Claimants and their acquirers in evidence in this case, a common charging structure for the MSC was for it to be expressed simply as interchange plus scheme fees plus acquirer's margin, in which it was only necessary to quantify the latter as the element of the agreement between the merchant and the acquirer which was bespoke.

16. The MIF therefore comprises a floor on the price which the merchants have to pay for accepting cards: in normal circumstances no acquirer will charge a merchant less than the MIF because to do so would necessarily create a loss. It is this aspect of the MIF which forms the central complaint of the Claimants in these proceedings. By creating such a floor when setting default MIFs, MasterCard is said to have unlawfully restricted competition on the market between acquirers and merchants, with the result that the merchants have had to pay too much to accept MasterCard's credit and debit cards.

17. The MIF is not, however, what MasterCard has received; it is what has been paid to the issuers. Whilst there was once a time when the issuers could be closely identified with MasterCard because the latter was owned and/or controlled by issuing banks, as I explain below that is not the case for the majority of the period with which these claims are concerned. There is no complaint about the licencing fees charged by MasterCard to acquirers which forms an element of the MSC paid by merchants.

Other relevant MasterCard Scheme Rules

18. The Scheme Rules contain what was referred to as the Honour All Cards Rule or "HACR" (Rule 5.10.1), which requires that a merchant which accepts MasterCard cards must accept all such cards. A merchant cannot, for example, accept MasterCard credit cards issued by one bank but not another, or standard but not premium cards.

19. MasterCard used to impose a no discrimination rule, which prohibited merchants from imposing a surcharge when a customer used a MasterCard card to pay. The rule was abolished at the beginning of 2005, and was to some degree overridden by UK domestic legislation before then. Merchants have therefore been free to surcharge their customers for the use of cards throughout the claim period. Although some merchants do, none of the Claimants has chosen to do so.

(2) Types of card and card user

20. There are various different types of payment cards within the MasterCard scheme. The two main categories of card are "pay now" cards, comprising debit and, more recently, prepaid cards; and "pay later" cards, comprising credit and charge cards. The parties referred to "pay now" cards generally as debit cards, and "pay later" cards generally as credit cards. I shall use the same shorthand.

21. Within these categories there are a number of subdivisions:

    (1) *Brands*. While its credit cards have (at least materially) always carried the MasterCard brand, MasterCard has, in the relevant period, offered debit cards under both the "Debit MasterCard" brand and the "Maestro" brand. Maestro cards had previously been branded Switch and Solo.

    (2) *Consumers and businesses*. MasterCard cards are offered to both. However the latter are outside the scope of this claim which is concerned solely with consumer cards.

    (3) *Standard and premium credit cards*. These are not perhaps rigid categories, but by "premium" cards what is generally meant is a number of specifically designated MasterCard products (which in the relevant period have been called MasterCard World, MasterCard World Signia, and MasterCard World Elite) which have historically attracted higher MIF rates than MasterCard's "standard" consumer credit offering. Cards issued by Amex and Diners Club are described as premium cards because their merchant fee was much higher than the MasterCard MIF. Premium cards are often reward cards: they reward cardholders for spend on those cards, for example in the form of cashback, loyalty points or air miles. However, the converse is not the case: many reward cards offered to consumers are standard cards (both MasterCard and Visa), subject to the same MIF rates as other standard credit cards that offer no rewards (but perhaps, for example, more attractive interest rates, or balance-transfer terms). There was evidence that at various times during the claim period in the UK about one third of credit and charge cards were premium cards. Of four party scheme cards these were mostly MasterCard cards: although Visa offers a premium credit card, such cards have only a small market share, likely to be less than 1%.

22. The card industry distinguishes between two types of credit card user: "revolvers" and "transactors". Transactors pay off their bill in full at the end of every month, and so do not make use of a credit facility above and beyond the interest-free period. Revolvers, on the other hand, roll over some or all of their debt at the end of the month, and thus pay interest. Premium cards and reward cards are generally aimed at transactors, who by definition have no real need of extended credit: the rewards are an incentive for them to use credit cards despite that fact.

(3) The legal framework for the claims

23. The claim is concerned with the MIFs charged for both credit and debit card transactions in three geographical markets, namely:

    (1) UK domestic: where the merchant/acquirer and the issuer are within the UK;

    (2) Ireland domestic: where the merchant/acquirer and the issuer are within Ireland; and

    (3) intra EEA: where the merchant/acquirer are in one country within the EEA and the issuer is in another country within the EEA.

24. The period of the claim is different as between Claimants and territories because it is affected by the local law limitation regime and the date of commencement of proceedings.

25. In relation to the UK domestic MIFs:

    (1) the claim period commences on 23 May 2006 for some Claimants and 5 October 2006 for others;

    (2) there is no claim for debit cards under the Maestro brand, operated by MasterCard, prior to August 2009 because until that time MasterCard did not control the setting of the MIFs for Maestro. MasterCard did however have its own Debit MasterCard which it launched in 2007, setting its own MIFs and promoting it alongside the Maestro brand. The UK debit card claim applies to the Debit MasterCard throughout its life.

26. In relation to the Irish domestic MIFs, the claim runs from 23 May 2006 or 5 October 2006 until 5 January 2007 (because the intra EEA MIF applied as the default MIF for domestic Irish transactions for that period) and thereafter from 20 January 2009 for all Claimants. There is no claim for the period between 5 January 2007 and 20 January 2009 for limitation reasons.

27. In relation to the intra EEA MIFs:

    (1) the claim period commences on 23 May 2007 for some Claimants and 5 October 2007 for others;

    (2) the MIF was set at zero between 21 June 2008 and 30 June 2009, so that there can have been no infringement during this period.

28. The claim is for infringement of:

    (1) Article 101 of the Treaty on the Functioning of the European Union ("TFEU")

    (2) Article 53 of the Agreement on the European Economic Area ("the EEA Agreement").

    (3) Chapter 1 of the Competition Act 1998 ("CA 98"), in respect of the UK MIFs only.

    (4) Section 4 of the (Irish) Competition Act 2002 in respect of the Irish MIFs only.

29. It was not suggested that there are any differences between Article 101 TFEU and Article 53 EEA Agreement which are material to the issues I have to decide. Moreover it was common ground that for the reasons I explain below, the dispute in relation to the UK and Irish MIFs turned on the principles embodied in Article 101 and its application. I shall therefore use infringement of Article 101 as a shorthand to represent the infringement of the various provisions which is alleged.

EU Competition Law

30. The wording of Article 101 TFEU has remained unchanged throughout the claim period, although the Article number and name of the applicable treaty have changed: prior to December 2009 the wording of Article 101 TFEU was contained in Article 81 of the European Community Treaty.

31. Articles 101(1) and 101(2) have direct effect in the English courts and so confer individual rights which are enforceable as between private parties in civil proceedings under s.2 European Communities Act 1972. An agreement may be held to infringe Article 101(1) by the Commission, by national competition authorities ("NCAs"), and by national courts in the Member States. In the UK the NCA was formerly the Office of Fair Trading ("OFT"), and is now the Competition and Markets Authority ("CMA").

32. Article 101(1) provides for a general prohibition on restrictive arrangements between undertakings as follows:

> "1. The following shall be prohibited as incompatible with the internal market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular those which:
>
> (a) directly or indirectly fix purchase or selling prices or any other trading conditions;
>
> (b) limit or control production, markets, technical development, or investment;
>
> (c) share markets or sources of supply;
>
> (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
>
> (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts."

33. In order for an arrangement to fall within that prohibition, three elements must be established:

    (1) the existence of an agreement between two or more undertakings or a decision by an association of undertakings or a concerted practice;

    (2) which has as its object or effect the prevention, restriction or distortion of competition to an appreciable extent; and

(3) which may affect trade between Member States of the European Union.

34. The first requirement identifies three alternatives; it is fulfilled by an agreement between two or more undertakings **or** a decision by an association of undertakings **or** a concerted practice. There was ultimately no real argument that the first requirement is fulfilled in this case. The MIF is set as a default MIF in the Scheme Rules, which comprise part of the contractual terms between MasterCard and each issuer and acquirer. The payment of the MIF is made pursuant to the terms of the agreements between MasterCard and its licensees. Moreover the payment of the MIF at the levels set by MasterCard was a concerted practice. This was not in issue in anything other than a formal sense: the Claimants were also alleging that MasterCard constituted an association of undertakings; in the course of the trial it was agreed between the parties that the Claimants would not pursue such an allegation in return for MasterCard's undertaking that it would advance no argument against the proposition that there was a relevant agreement or concerted practice. This was not a formal concession, but MasterCard's position was plainly realistic: the setting of the MIF was pursuant to an agreement between undertakings and was a concerted practice. For simplicity I shall refer to the three concepts in the first requirement as "an agreement", as did the parties.

35. Nor was there any dispute about the third requirement (effect on trade) if the second requirement were fulfilled.

36. The words "object or effect" in the second requirement are disjunctive: if an agreement has the object of restricting competition, there is no need to prove effect; conversely an agreement with restrictive effect fulfils the requirement even if that were not its object. The European Court of Justice, now the Court of Justice for the European Union (which I shall simply refer to throughout this judgment as the CJEU) has explained that the "distinction between 'infringements by object' and 'infringements by effect' arises from the fact that certain forms of collusion between undertakings can be regarded, by their very nature, as being injurious to the proper function of normal competition": Case C-209/07 *Beef Industry Development Society* [2008] ECR I-8637, paragraph 16.

37. The Claimants in the present cases do not allege any restriction by object. Accordingly the central battleground on Article 101(1) in this case was whether the MIFs had the effect of the prevention, restriction or distortion of competition to an appreciable extent. I shall use the expression "restriction of competition" as a shorthand to represent that broader concept: the issue under Article 101(1) in this case is simply whether the MIFs were a restriction on competition. It is common ground that the burden of proof lies on the Claimants to establish a restriction of competition which infringes Article 101(1).

38. For an agreement to be restrictive by effect it must affect actual or potential competition to such an extent that on the relevant market negative effects on prices, output, innovation or the variety or quality of goods and services can be expected with a reasonable degree of probability. Such negative effects must be appreciable: see paragraph 24 of the Commission's *Guidelines on the application of Article [101(3)] of the Treaty*, OJ C 101/97 ("the Article 101(3) Guidelines"). I shall adopt the shorthand used by the parties of "anti-competitive effect" to express this concept.

39. In order to determine whether an agreement has anti-competitive effect, there are two elements in the analysis whose existence was common ground but whose application was controversial in this case:

    (1) it is necessary to identify the market in which to gauge whether the agreement has had an anti-competitive effect; and

    (2) it is necessary to identify a counterfactual hypothesis of what circumstances would have existed, in the absence of the putatively infringing agreement, in order to determine whether the agreement restricts competition by comparison with those counterfactual circumstances.

40. As to the relevant market, MasterCard initially argued that the relevant market in a two sided platform such as the MasterCard card system included all aspects of the markets in which cards were used, and in particular included an examination of the issuing market between issuers and cardholders, and the inter-system market between MasterCard and Visa and Amex, as well as the market between issuers and acquirers and between acquirers and merchants. MasterCard's argument to the same effect was successful before the Competition Appeal Tribunal: see particularly paragraphs 130 to 137 of its judgment. The Claimants, on the other hand, argued that the relevant market was confined to the market in acquiring services alone; all that was required to be proved was a restriction in the market between acquirers and merchants; and that provided that such a restriction was made out, the effect of the MIFs on the issuing and inter-system market, and any benefits there created, were matters for consideration within the framework of Article 101(3), not 101(1). This was the conclusion reached by the Commission in the *MasterCard* Commission Decision: see paragraph 316. It is not necessary for me to address these rival arguments, because in the course of final speeches MasterCard conceded that I was bound by a recent decision of the General Court dated 30 June 2016 in ***Groupement des Cartes Bancaires (CB) v Commission*** Case T-491/07 RENV to hold that the Claimants were right on this point and that the relevant market was solely the acquiring market. This authority was not drawn to the attention of the CAT before it published its decision.

41. It was also common ground that the geographical identification of the relevant market was to be defined by national boundaries: it required a separate consideration of the effect of UK domestic MIFs on the UK acquiring market, that of Irish domestic MIFs on the Irish acquiring market and that of intra EEA MIFs on the intra EEA acquiring market.

42. What remained controversial between the parties was the appropriate counterfactual hypothesis against which to test whether the MIFs were a restriction on competition in the acquiring market compared with the position which would have obtained in such hypothetical counterfactual circumstances. This is what is referred to as the "restriction counterfactual".

43. A restriction counterfactual must be such as *would be likely* to occur in the absence of the impugned agreement or practice and must be *realistic*: CJEU *MasterCard* Judgment, paragraphs 161-169. In this respect, it is permissible, where appropriate, to take account of the likely developments that would occur on the market in the absence of the agreement in question: *ibid*, paragraph 166.

44. There is also a principle, called the "ancillary restraint" doctrine, which may take an agreement or practice outside the scope of the prohibition in Article 101(1). It arises where there is a main operation which is neutral or pro-competitive but has as one of its constituent parts what would be a restraint on the autonomy of the parties if considered in isolation. The ancillary restraint will not offend the prohibition in Article 101(1) if it is directly related and objectively necessary to the implementation of the main operation and proportionate to its objectives: see the Article 101(3) Guidelines paragraph 29. The requirement of objective *necessity* means that it must be shown that in the absence of the ancillary restraint the main operation would be impossible to carry out; it is not sufficient if it would merely be more difficult or less profitable. As explained in the CJEU *MasterCard* Judgment:

> "89. ……if a given operation or activity is not covered by the prohibition rule laid down in Article [101(1)], owing to its neutrality or positive effect in terms of competition, a restriction of the commercial autonomy of one or more of the participants in that operation or activity is not covered by that prohibition rule either, if that restriction is objectively necessary to the implementation of that operation or that activity and proportionate to the objectives of one or the other…
>
> 90. Where it is not possible to dissociate such a restriction from the main operation or activity without jeopardising its existence and aims, it is necessary to examine the compatibility of that restriction with Article [101] in conjunction with the compatibility of the main operation or activity to which it is ancillary, even though, taken in isolation, such a restriction may appear on the face of it to be covered by the prohibition rule in Article [101(1)].
>
> 91. Where it is a matter of determining whether an anti-competitive restriction can escape the prohibition laid down in Article [101(1)] because it is ancillary to a main operation that is not anti-competitive in nature, it is necessary to inquire whether that operation would be impossible to carry out in the absence of the restriction in question. Contrary to what the appellants claim, the fact that that operation is simply more difficult to implement or even less profitable without the restriction concerned cannot be deemed to give that restriction the 'objective necessity' required in order for it to be classified as ancillary. Such an interpretation would effectively extend that concept to restrictions which are not strictly indispensable to the implementation of the main operation. Such an outcome would undermine the effectiveness of the prohibition laid down in Article [101(1)]."

45. It was common ground that the burden of proof lies on MasterCard to bring itself within the ancillary restraint doctrine. This is, however, an evidential burden rather than a legal one; the burden is on the Claimants to establish a restriction of

competition which infringes Article 101(1): see *Racecourse Association v Office of Fair Trading* [2005] CAT 29 at paragraphs 131-133.

46. Application of the ancillary restraint doctrine also requires the court to consider counterfactual circumstances in which the ancillary restraint does not exist, in order to determine whether it is objectively necessary for the existence of the main operation compared with the potential existence of the main operation in the counterfactual circumstances. This is referred to as the "ancillary restraint" counterfactual. However the test for choosing the ancillary restraint counterfactual is slightly different from that which determines choice of the restriction counterfactual. The same counterfactual is not necessarily appropriate for conceptually distinct issues: CJEU *MasterCard* Judgment paragraphs 163, 108-111. The ancillary restraint counterfactual can be one which *might* arise in the absence of the restraint, although it must be *realistic*: ibid at 111.

47. Thus the test for choosing the counterfactual for the purposes of the ancillary restraint doctrine provides a lower threshold for the regulator or other person complaining of a restraint than the test for choosing the counterfactual for the purposes of establishing a restriction of competition within the prohibition of Article 101(1). For the ancillary restraint doctrine it is enough for a person complaining of infringement to point to one or more counterfactuals which *might* arise, by comparison with which the ancillary restraint is not necessary for the survival of the main operation. By contrast, in order for the prohibition in Article 101(1) to bite on the restriction, it must be a restriction on competition by comparison with a restriction counterfactual which *likely would* arise. In both cases the counterfactual must also be realistic.

48. Article 101(2) provides that any agreement or decision prohibited in Article 101(1) "shall be automatically void". In this connection:

    (1) Where only a part of an agreement is prohibited by Article 101(1), it may be that only that part is void, depending on the principles of severance applicable in the jurisdiction concerned.

    (2) The voidness or nullity under Article 101(2) has been held by the Court of Appeal to be "transient", in the sense that circumstances prevailing in the relevant markets may change from time to time, so that an agreement which at one time does not have the relevant anti-competitive effect to fall within the prohibition may, at a subsequent time, come to have such relevant anti-competitive effect and thereby move from validity to voidness at that subsequent time (and vice versa): ***Passmore v Morland*** [1998] 4 All ER 468.

49. Article 101(3) TFEU provides for what is commonly referred to as "exemption" from the prohibition in Article 101(1) TFEU in the following terms:

    > "The provisions of paragraph 1 may, however, be declared inapplicable in the case of:
    >
    > - any agreement or category of agreements between undertakings,
    >
    > - any decision or category of decisions by associations of undertakings,

> - any concerted practice or category of concerted practices,
>
> which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:
>
> (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;
>
> (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question."

50. Thus, the exemption applies where the agreement, decision or practice meets the four cumulative conditions, namely:

    (1) contributing to improving the production or distribution of goods or to promoting technical or economic progress; this may be paraphrased as conferring relevant benefits;

    (2) allowing consumers a fair share of the relevant benefits;

    (3) imposing on the undertakings concerned only restrictions which are indispensable to the attainment of these benefits; and

    (4) not affording such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

51. It is for the undertaking wishing to claim the benefit of exemption to demonstrate that the agreement is exempt under Article 101(3).

52. An agreement may be exempt by either of the following means:

    (1) "individually", if it can be demonstrated that it meets the four conditions for exemption ("individual exemption"); or

    (2) automatically, if it comes within the terms of one of the "block exemption" regulations published from time to time by the Commission. None of the block exemption regulations are applicable in the present case.

53. Until 1 May 2004, under the old enforcement regime pursuant to Regulation 17/62 (OJ Series I Volume 1959-1962 p87-93), it was the case that only the Commission could rule on whether or not an agreement benefited from exemption. Moreover, in order to obtain such an exemption from the Commission, an agreement had to be formally notified by the parties to the Commission. In the absence of an applicable block exemption regulation, an agreement which infringed Article 81(1) (as Article 101(1) then was) was automatically void by virtue of that infringement, unless and until the Commission had made a formal exemption decision. The exemption took the form of a decision addressed to the parties to a specific agreement or decision. It applied only for a certain period of time specified by the Commission in its decision.

Although the exemption could be granted retrospectively, it would only extend back to a date no earlier than the date of notification.

54. On 1 May 2004, Regulation 1/2003 (OJ 2003 L1/1) and a new implementing Regulation 773/2004 (OJ 2004 L123/18) came into force, which introduced a number of policy reforms to "modernise" the enforcement of EU competition law. In particular, the new regime aimed to decentralise the enforcement of EU competition law by devolving authority to NCAs and/or national courts. The NCAs and national courts are charged with applying EU competition law consistently and uniformly across the Member States and in close cooperation with the Commission: see Articles 15 and 16 of Regulation 1/2003.

55. As a result of such modernisation:

    (1) The rule that individual exemption required notification to, and a decision by, the Commission has been abolished. Article 101(3) now has direct effect and can be relied upon directly before the national courts in the same way as Articles 101(1) and 101(2). Consequently, NCAs and national courts which are assessing an agreement under Article 101(1), are also entitled to determine the issue of exemption under Article 101(3): see Articles 5 and 6 of Regulation 1/2003.

    (2) Exemption operates by way of a "directly applicable exception system" so that agreements caught by Article 101(1), but which do not satisfy the conditions of Article 101(3), "shall be prohibited, no prior decision to that effect being required": Article 1(1) of, and recitals 4-7 to, Regulation 1/2003. Similarly, agreements which *do* meet the criteria for exemption "shall not be prohibited, no prior decision to that effect being required": Article 1(2) of Regulation 1/2003.

    (3) An agreement which meets the exemption criteria is valid and enforceable from the time when the conditions of Article 101(3) are satisfied and for so long as that remains the case.

    (4) Applications for exemption made under the old enforcement regime lapsed as from the date of application Regulation 1/2003, i.e. 1 May 2004.

    (5) The Commission retains the power to make a declaration that the exemption criteria are, or indeed are not, met in a given case and/or to withdraw the benefit of a block exemption regulation in a particular case.

56. In any national court proceedings, the burden of proving an infringement of Article 101(1) to the requisite legal standard rests on the party or authority alleging the infringement. Once that is established the burden shifts: it is the undertaking or association of undertakings claiming the benefit of Article 101(3) which bears the burden of proving that the exemption conditions have been satisfied: see recital 5 and Article 2 of Regulation 1/2003.

English competition law

57. Sections 2 and 9 of the Competition Act 1998 ("the CA98"), which came into force on 1 March 2000, closely follow, both in substance and procedure, Article 101 TFEU.

The only material difference is that, instead of a requirement that the agreement should affect trade between Member States, the effect must be on trade within the UK. Because an agreement or conduct may affect both trade within the UK and trade between Member States, it is quite possible for both the EU and the UK competition rules to apply to one and the same agreement.

58. The CA 98 contains certain provisions which are designed to give primacy to EU law and to reduce the possibility of conflicting solutions being reached under the two regimes:

    (1) Sections 6 to 10 make provision for exemption (both individually and by "block exemption") in terms similar to Article 101(3). The CMA or a national court may declare an agreement exempt. Further, an agreement will be automatically exempt from the Chapter I prohibition if it is exempt under Article 101(3) TFEU (or would be, if it had an effect on inter-State trade), either by the application of a block exemption regulation or by virtue of a Commission exemption decision. Such an automatic exemption is defined as "parallel exemption".

    (2) Section 60 of the CA 98 sets out principles to be applied to ensure that the application of the CA 98 is consistent with EU competition law. When a court (or the CMA) is determining any question under Part I of the CA 98 (which includes the questions of whether an agreement falls within the Chapter I prohibition and whether an agreement is exempt), it is under a duty to act with a view to securing that there is no inconsistency between the principles it applies and the decision it reaches, and the applicable principles laid down by the TFEU and the EU Courts in determining a corresponding question under EU law. Moreover the court or the CMA must *have regard to* any Commission decision or statement: see section 60(3).

    (3) The effect of section 60 is therefore to apply the substantive principles of EU competition law to the Chapter I prohibition.

59. Regulation 1/2003 makes further provision to ensure consistency between UK and EU competition law as applied by the national courts, including that:

    (1) national courts which apply national competition law to an agreement must also apply Article 101(1) to the agreement if it may affect trade between Member States: Article 3(1);

    (2) the application of national competition law may not lead to the prohibition of agreements which may affect trade between Member States but which either do not restrict competition within the meaning of Article 101(1) or are exempt under Article 101(3), whether by way of meeting the exemption conditions or by way of the application of a block exemption regulation: Article 3(2); and

    (3) national courts, when ruling on agreements under Article 101 TFEU, must not take decisions that run counter to any decisions already adopted by the Commission on that agreement: Article 16 of Regulation 1/2003.

60. As to administrative regulation, the CMA, formerly the OFT, has powers of investigation and enforcement similar to those of the Commission, which it can

exercise in relation to Article 101 TFEU, the CA 98 Chapter I prohibition or a combination of the two: see sections 25-44 of the CA 98 and Article 5 of Regulation 1/2003.

Irish competition law

61. The relevant law in Ireland is contained in section 4 of the Competition Act 2002 which applies within Ireland and can be taken for present purposes to be materially equivalent to English law applicable within the UK.

Application of law

62. Accordingly it was common ground that the dispute in relation to the UK and Irish MIFs turned on the principles embodied in Art 101 and its application; and that for the purposes of the issues which I have to decide, English and Irish law can be taken to be identical to EU law. Since much of the jurisprudence is in the European Court, it is convenient to refer to the provisions of Article 101 TFEU rather than the equivalent domestic provisions. I shall therefore use infringement of Article 101 as a shorthand to represent all the alleged infringement, including that under English and Irish domestic legislation.

(4) Regulatory History

63. MasterCard's MIFs and Visa's MIFs have been the subject matter of regulatory and court decisions in Europe which form important context to the issues in the case.

64. The Commission was first notified of Visa's MIFs and other rules by Visa International's predecessor, Ibanco Ltd, in 1977. Having sent a comfort letter, the Commission reopened its investigation in 1985. The investigation at first focused on certain Visa rules other than the MIF. In a decision of 9 August 2001 [2001] OJ L 293/24 the Commission held that none of those rules restricted competition within the meaning of what is now Article 101.

65. On 24 July 2002, the Commission adopted a decision in relation to Visa's EEA MIFs [2002] OJ L 318/17. It found that they restricted competition within the meaning of what is now Article 101(1), but that the setting of those MIFs could be exempted pursuant to what is now Article 101(3) for a period of five years, pursuant to undertakings from Visa that it would:

    (1) carry out a phased reduction in the level of the MIFs over that period, so that they did not exceed the figures specified in the Decision: on a weighted average basis these caps were €0.28 per transaction for debit cards and 0.7% for credit cards; these levels were said by Visa to involve a reduction of over 50% for debit cards and a reduction in revenue of 20% overall;

    (2) further ensure that the levels did not exceed an objectively measured cap, defined as the sum of three categories of issuers' costs, for which further data was to be collected; and increase transparency by making the MIF levels and the relative percentages of the issuer costs on which they were based available to merchants; and

    (3) introduce a separate MIF for mail order/telephone order transactions.

66. The Commission made clear in its decision that over the five-year exemption period, it would re-examine the practical impact of the modified Visa scheme on the market and in particular its effect on merchant fees.

67. The 2002 Visa Decision had no immediate effect on MasterCard MIFs. MasterCard was not bound by it and did not respond by voluntarily reducing its MIFs.

68. In the UK, the OFT investigated MasterCard's MIFs and on 5 September 2005 issued a Decision against MasterCard (the First, Third and former Fourth Defendants) and the UK licensees of the First and Third Defendants. It held that MasterCard's UK MIFs infringed the EU and UK competition rules in that they restricted competition and did not satisfy the criteria for exemption. In November 2005, MasterCard appealed against the OFT's infringement decision. In defending that appeal, the OFT changed the factual basis on which it had held that there had been an infringement of the relevant competition provisions. In the circumstances, and following submissions from Visa who supported MasterCard's appeal, the OFT decided to withdraw its infringement decision on procedural grounds. The Decision was formally set aside by the Competition Appeal Tribunal on 10 July 2006: see [2006] CAT 14. The OFT continued to investigate MasterCard's UK MIFs (and Visa's equivalent MIFs), albeit focussing on the (then) current MIFs rather than the historic arrangements. In practice, the investigation was put on hold shortly thereafter pending the outcome of the Commission's investigation into MasterCard's EEA MIFs and MasterCard's subsequent appeals (see below); and, soon after the CJEU's Judgment in September 2014, the CMA announced that, in view of the proposed EU regulation on interchange fees (see below), it would not be progressing its investigations.

69. Immediately upon expiry of the Visa exemption period in 2007, the Commission commenced a fresh investigation into Visa's EEA MIFs.

70. Meanwhile the Commission had been investigating MasterCard's EEA MIFs and in a decision of 19 December 2007 ("the *MasterCard* Commission Decision") it found that, in breach of Article 81 EC, MasterCard's cross border EEA MIFs for the period since 22 May 1992 had restricted competition and were not exempt.

71. MasterCard reacted to the Commission Decision by appealing, and in the meantime reduced its EEA MIFs to zero. Visa did not respond by reducing its own EEA MIFs but continued to engage with the Commission to negotiate acceptable commitments in relation to them. Neither Visa nor MasterCard reacted by reducing their UK MIFs. In July 2009 MasterCard increased its EEA MIFs from zero to 0.3% for credit cards and 0.2% for debit cards, following discussions with the Commission.

72. Visa's negotiation strategy was successful. On 8 December 2010, the Commission adopted a decision accepting commitments offered by Visa in relation to its EEA debit card MIFs. The Decision:

    (1) recorded the Commission's concern, expressed in a Statement of Objections issued to Visa in the course of the investigation, that the MIFs had both the object and effect of restricting competition in the acquiring market;

    (2) recorded and made binding for four years Visa's commitment (*inter alia*) to reduce its weighted average EEA debit MIF to 0.2%; and

(3) held (expressly without determining whether there had been an infringement) that in light of Visa's commitments there were no longer grounds for action in respect of Visa's EEA debit MIFs.

73. This 2010 Visa debit card Decision marked a departure from its 2002 Decision in the methodology it adopted when considering the lawful level of a MIF. The 2002 Decision was based on an issuer costs based methodology. The 2010 Decision adopted the concept of a Merchant Indifference Test and announced that the Commission no longer looked at an issuer cost-based justification for MIFs. These two different methodologies play an important part in the Article 101(3) issues in this case and are discussed more fully below.

74. MasterCard's appeal against the Commission Decision was dismissed by the General Court on 24 May 2012: [2012] 5 CMLR 5 (GC) ("the *MasterCard* General Court Judgment"). MasterCard appealed to the CJEU.

75. Prior to the determination of MasterCard's appeal, on 26 February 2014 the Commission adopted a decision accepting further commitments offered by Visa in relation to its EEA credit MIFs. The Commission:

(1) recorded the Commission's preliminary assessment that the MIFs had both the object and effect of restricting competition in the acquiring market;

(2) recorded and made binding for four years Visa's commitment (*inter alia*) to reduce its weighted average EEA credit MIF to 0.3%;

(3) held (expressly without determining whether there had been an infringement) that in light of Visa's commitments there were no longer grounds for action in respect of Visa's EEA credit MIFs.

76. On 11 November 2014 MasterCard's appeal from the General Court was dismissed by the CJEU: [2014] 5 CMLR 23 (ECJ) ("the *MasterCard* CJEU Judgment").

EU Interchange Fee Regulation

77. In July 2013, the Commission had published a proposal for a regulation capping interchange fees across Europe. The proposal was based at least in part on the Commission's frustration that "[i]n spite of the [*MasterCard*] General Court Judgment…international and national card schemes operating in the EU currently do not seem willing pro-actively to adjust their practices to comply with the European and national competition rules": (Proposal for a Regulation of the European Parliament and of the Council on interchange fees for card-based payment transactions, COM(2013) 550 final, page 6).

78. Regulation (EU) 2015/751 on interchange fees for card-based payment transactions [2015] OJ L 123/1 ("the IF Regulation") was adopted on 29 April 2015 and came into force on 8 June 2015. Articles 3 and 4 cap interchange fees for debit cards at 0.2% (or €0.05), and for credit cards at 0.3%. Member States may impose lower caps for domestic transactions, but the UK has not done so. Ireland has imposed a lower debit card interchange fee of 0.1%. The caps do not apply to three-party schemes, except insofar as they license third parties to act as issuers and/or acquirers: Article 1(4)–(5).

79. All parties before me submitted that the IF Regulation's maximum caps are irrelevant to the determination of the present dispute.

The legal effect of the MasterCard Commission Decision and MasterCard General Court and CJEU Judgments.

80. This court is bound by legal principles established by the CJEU, both in applying Article 101 (by reason of s.3 European Communities Act 1972) and in applying the equivalent provisions of the CA 98 to the UK MIFs (by reason of s.60 of CA 98). It is agreed that the same applies in respect of the Irish MIFs. Decisions of the General Court are binding insofar as consistent with CJEU decisions.

81. So far as concerns the *MasterCard* Commission Decision:

    (1) By virtue of Article 16 of Regulation 1/2003, when national courts rule on agreements, decisions or practices under Article 101 which are already the subject of a Commission decision, "they cannot take decisions running counter to the decision adopted by the Commission". Where there is a prior infringement decision by the Commission (or CMA) which has become 'final' (either because it was not appealed or any appeals have been unsuccessful) then the court is bound by that decision: section 58A CA 98. This court is therefore bound by the MC Commission Decision insofar as it concerns the same subject matter.

    (2) By virtue of s. 60(3) CA 98, this court must "have regard to any relevant decision or statement by the Commission".

    (3) Where a Commission decision covers different subject matter from that on which the court is required to decide, the approach is that set out by the House of Lords in ***Crehan v Inntrepreneur Pub Co (CPC)*** [2007] 1 AC 333. Lord Bingham of Cornhill said at paragraphs 11 and 12:

    "11. …Community law prohibits the making by national courts of decisions which contradict decisions of Community institutions on the same subject matter between the same parties, and strongly discourages the making by national courts of decisions which may be inconsistent with decisions which may yet be made by Community institutions on the same subject matter between the same parties. But it does not, as the analysis of the relevant authorities by my noble and learned friend, Lord Hoffmann shows, go the length of requiring national courts to accept the factual basis of a decision reached by a Community institution when considering an issue arising between different parties in respect of a different subject matter….

    12. The judge had either to accept the commission's assessment, which (unless required) would have been an abdication of the judicial function, or form his own opinion,

> giving such weight to the commission's assessment as in his judgement the evidence merited…."

Lord Hoffman said at paragraph 69:

> "…The correct position is that, when there is no question of a conflict of decision in the sense which I have discussed, the decision of the commission is simply evidence properly admissible before the English court which, given the expertise of the commission, may well be regarded by that court as highly persuasive. As a matter of law, however, it is only part of the evidence which the court will take into account. If, upon an assessment of all the evidence, the judge comes to the conclusion that the view of the commission was wrong, I do not see how, consistently with his judicial oath, he can say that as a matter of deference he proposes nevertheless to follow the commission. Only a rule of law, in the nature of an issue estoppel which obliges him to do so, could produce such a result and the Court of Appeal accepted that there was no such rule."

82. It follows that:

(1) The court is bound by the *MasterCard* Commission Decision insofar as the present claims relate to the application of the MasterCard EEA MIFs to intra EEA transactions for the period from 23 May 2007/5 October 2007 until 19 December 2007 (and the EEA MIFs as the default MIFs applicable to Irish domestic transactions for the period from 23 May 2006/5 October 2006 to 8 January 2007). In relation to this period, MasterCard acknowledged that the Commission concluded that the EEA MIFs actually set did not satisfy the exemption conditions and that this finding is binding. It contended, however, that because the Commission did not consider whether different EEA MIFs would satisfy the exemption conditions, this court is free to consider that question and must do so for the purpose of the Claimants' damages claim. That contention is well founded. The *MasterCard* Commission Decision was that MasterCard had failed to provide the necessary evidence to establish exemption for its MIFs in accordance with Article 101(3), but as recital 13 makes clear, the Commission did not regard its decision as precluding MasterCard from adopting new MIFs if it could prove that such MIFs fell within the exemption criteria based on further evidence.

(2) In relation to all other aspects of the present claims, whilst the court will have regard to, and may be assisted by, the *MasterCard* Commission Decision, the court is not bound by it. It will afford the Decision such weight as it deserves, bearing in mind the similarities or differences in the evidence and subject matter, and recognising the expertise of the Commission.

The Article 101(3) Guidelines

83. Section 60(3) CA 98, by which this court must "have regard to any relevant decision or statement by the Commission", applies not only to the *MasterCard* Commission Decision, but also to the Article 101(3) Guidelines published by the Commission. They are sometimes referenced to decisions of the CJEU, and in such cases obviously derive their authority from those decisions to the extent they are an accurate summary. In other respects they are to be had regard to and given weight, although I bear in mind that they are only guidelines and by their own terms recognise that they require flexible rather than mechanical application:

> "6. The standards set forth in the present guidelines must be applied in light of the circumstances specific to each case. This excludes a mechanical application. Each case must be assessed on its own facts and the guidelines must be applied reasonably and flexibly."

"Read across"

84. Mr Lowenstein QC urged me to approach the issues by starting with the *MasterCard* Commission Decision, and applying it to the EEA MIFs for the majority of the claim period (which were not the subject of the Decision), and to the UK and Irish MIFs for the claim period, unless I could identify material differences which justified drawing a distinction. This process was characterised as "read across". This suggested approach reflected the way the claims had been framed in the Statements of Case, with the Claimants relying on the *MasterCard* Commission Decision and MasterCard identifying respects which made its application to the current dispute inappropriate. This in turn infected the framing of the Phase 1 issues and of some of the issues on which the experts were asked to express their views.

85. I do not consider that this is a helpful way to address the issues which I have to decide, for a number of reasons. First, I am not bound by the Commission's findings of fact and although it is sometimes possible to discern the evidence before the Commission which informed its conclusions, that is by no means generally the case. There is a logical flaw in the suggestion that this court should follow another tribunal's findings of fact unless it can identify a specific and material difference in evidence when this court is not in a position to identify the extent of the evidence before that tribunal. There was, for example, a lively debate on whether by reference to the memorandum referred to at recitals 626ff and in Annex 7 the Commission had considered UK MIFs. It remains unclear exactly what aspect of this evidence the Commission took into account or how, without an understanding of which it is impossible to assess the validity of any "read across".

86. Secondly, the period with which I am concerned, (2006 onwards) is very different from that being addressed by the Commission (1992-2007) with only a small period of overlap. The state of the markets was not identical and the data which I have had to work on is time specific and was not addressed by the Commission. It is also the case that economic theory has developed over the relevant period in a way which was simply not considered by the Commission. Moreover the link between MasterCard and the issuing and acquiring banks has also changed. For most of the period considered by the Commission the licensees could be closely identified with

MasterCard in terms of economic interest. All acquirers were issuers, and MasterCard was owned by the issuers and acquirers; it was in substance the issuing and acquiring banks which were setting the MIFs. The terms of the Commission Decision suggest that this was a commercial reality which it regarded as important, and which is reflected in its language throughout: see, by way of example, the language of paragraph 13 referring to "MasterCard's member banks" setting the MIF. Following an Initial Public Offering on 25 May 2006 ("the IPO"), the banks' shareholding was reduced to a substantial minority shareholding (41%) with no voting rights, but a right to appoint three members of the Global Board of directors (eight being appointed by public investors and a charitable foundation). Bank equity in MasterCard declined to 15% in June 2010 and thereafter the banks had no right to appoint any directors. Since 2010 the banks' equity interest has continued to decline so that today MasterCard licensees hold less than 2% of the economic interest in MasterCard, with no voting rights.

87. Thirdly, the EEA MIFs being considered by the Commission fell to be considered in a very different market context from the domestic MIFs which I have to consider. To give some examples, the UK credit card market sits in a culture of free banking, compared with say France where typically cardholders pay a substantial annual fee; the number of card payments and average spend per cardholder per inhabitant in the UK in 2014 (167 transactions totalling €9,996) is more than double that for the average in Europe (79 transactions totalling €4,055), and the position is more pronounced if one compares the UK market over the claim period with Europe prior to 2007; the same is true of the number of cards per person, with UK inhabitants averaging over 2.5 cards compared with the European average of 1.5; this comparatively higher degree of penetration of cards in the UK is potentially relevant to competition between issuers and schemes in circumstances where cardholders can choose between cards they hold in making payment; credit cards accounted for around 11% of overall consumer transactions in the UK in 2014 compared with 4% in the rest of Europe; the UK has a disproportionately high share of online card sales compared with the rest of Europe: some 25% of all European e-commerce sales. These are but a few examples. It would be an unduly difficult and burdensome exercise first to try to identify all differences between the markets over a period of almost 25 years and then seek to attribute weight or significance, or the lack of it, to each difference.

88. Since I am not bound by the Commission's findings of fact, nor (save for a brief period in relation to the EEA MIFs) its application of law to the facts found by it, it is unhelpful to start by an analysis of two different bodies of evidence and to compare them; and doubly so when the evidential basis for the Commission's conclusions cannot be determined with certainty. I must decide the case on the evidence before me, which is largely directed to a different period of time and a different market.

89. That is not to say that I should ignore the Commission's findings or reasoning save where they are binding. I have had regard to them and taken them into account, giving due weight to its expertise.

(5) The CAT decision

90. Apart from these proceedings, there are a number of other actions which have been commenced in England bringing claims against both MasterCard and Visa on the

grounds that their MIFs infringe competition law. Two sets of proceedings deserve mention.

91. Sainsbury's Supermarkets Ltd ("Sainsbury's") brought proceedings in the Chancery Division against MasterCard claiming damages for infringement of Article 101 and Chapter I CA 98 in respect of the MasterCard's UK MIFs since 19 December 2006 (19 December 2007 for Scotland). The action was transferred to the Competition Appeal Tribunal ("CAT") and was heard by Barling J sitting with an experienced economist and an experienced competition QC. The hearing took place between January and March 2016. Judgment was delivered on 14 July 2016, in the course of the Phase 1 trial in the present actions: [2016] CAT 11 ("the CAT Judgment"). I shall have to refer to parts of the CAT Judgment in greater detail in the course of this judgment, but its essential conclusions, so far as potentially relevant to these actions, were as follows:

    (1) The setting of the MIF was an agreement between undertakings, the agreement being between MasterCard and its licensees (paragraph 95).

    (2) The MIFs were a restriction on competition by effect on the acquiring market, the issuing market and the inter-system market, all three of which were relevant (paragraph 134).

    (3) The MIFs were not exempt under Article 101(3) (paragraph 288).

    (4) The starting point for the restriction counterfactual was one in which there was no MIF or a zero MIF (paragraph 143), but in those circumstances there would emerge a structure of voluntary bilateral agreements between issuers and acquirers under which the latter would agree to pay a positive MIF to prevent Visa having a monopoly of the four party scheme market (paragraph 196). I shall refer to this as the "CAT Bilaterals counterfactual".

    (5) The level of bilaterally agreed MIFs would have been, as a blended average, 0.5% for credit cards (paragraph 231) and 0.27% for debit cards (paragraph 234). The correct counterfactual was therefore a system of bilaterally agreed MIFs at these levels, which would have emerged in a competitive market and so been lawful.

    (6) Sainsbury's was entitled to damages calculated by reference to the difference between the MIFs set by MasterCard and those lower MIFs which would have emerged by bilateral agreement.

92. In the course of its detailed judgment, the CAT had to consider and resolve many of the same issues as those I have to decide, both of fact and law. Insofar as it made findings of law, I am not bound by its decision, but I naturally accord it considerable respect, coming from a body chaired by a judge of coordinate jurisdiction and which has very considerable competition law experience. However I have had the benefit of argument from a different legal team on the Claimants' side, and of argument on both sides addressed specifically to the reasoning expressed in the CAT Judgment. This has inevitably resulted in different formulations and refinements of the legal arguments from those which were presented to the CAT, and in one instance an important authority being brought to my attention which was not before the CAT.

93. There is also, of course, a very substantial overlap between the factual issues decided by the CAT and those I have to decide. Here too I am not bound by the findings, although the parties agreed I should take them into account and give them such weight as I thought appropriate. It is important to keep in mind in this context that the evidence before me was not the same as that before the CAT in important respects. For example, the CAT Bilaterals counterfactual, which is at the heart of the CAT's conclusion, was a construct of the Tribunal itself; it had not been addressed in the witness statements or experts reports of either party and had not been put to factual witnesses. By contrast the parties put before me detailed factual and expert evidence on the point, tailored specifically to the findings and reasoning in the CAT Judgment, which was all to the effect that such bilaterals were unrealistic. Moreover there was no identity between expert evidence in the two trials: Dr Niels gave evidence for MasterCard in both cases but different experts gave evidence on behalf of the respective claimants. They were not expressing the same views. For example, in the CAT proceedings Sainsbury's and its expert accepted that a MIF at some positive level was lawful; whereas the Claimants before me and their expert contended that any MIF above zero was unlawful. Nor was there anything like identity in the factual evidence put before the CAT and this court, either documentary or oral. The CAT had documentary material which was not in evidence before me and vice versa. The CAT heard from four Sainsbury's witnesses whose evidence I did not have; whereas I heard from a variety of Claimants' witnesses whose evidence was not before the CAT. Some MasterCard witnesses were common to both sets of proceedings but some were not. The experience of having arguments and evidence tested in the Sainsbury's proceedings inevitably led to fuller or more focused evidence before me on some points, both factual and expert; for example Dr Niels had the opportunity to consider over time, and address in writing, points which he had faced in cross examination in the CAT without forewarning. Even where the evidence was materially similar, I must make my own assessment of the witnesses and the other evidence before me; it would be an abdication of judicial responsibility simply to accept findings of fact made by the CAT.

94. Accordingly my approach to the CAT Judgment has been to use its reasoning on issues of both fact and law as a cross check for my own provisional conclusions, paying particular attention to the evidence on which findings of fact are based and how closely such evidence matches that before me.

95. The other proceedings which I should mention are the actions brought against Visa by the Claimants in these actions, and also by Sainsbury's and Marks & Spencer Plc, alleging infringement in relation to Visa's MIFs. The phase 1 trial in those proceedings commenced shortly after the conclusion of the hearing before me and is being heard by Phillips J. Similar issues arise, although the evidence and argument is not identical to that before me.

96. It is common ground that I am not in a position to make any findings about infringement by Visa: Visa was not represented in these actions and the lawfulness of Visa's MIFs was not an issue raised by the parties on the pleadings or addressed in the evidence. Nevertheless Mr Lowenstein submitted that I should *assume* that Visa's MIFs were unlawful for the purpose of arguments which I identify and address below.

(6) *An overview of the MIFs and the markets*

97. The value of the claims in these actions lies overwhelmingly in the dispute over UK domestic MIFs for credit cards. The UK is much the largest of the relevant markets, accounting for about 98% of the claim. Between 98% and 99% of card transaction volumes in the UK are generated by domestic transactions to which the UK MIFs applied, rather than cross border transactions which would include, amongst others, transactions to which the intra EEA MIFs applied. Ireland is a smaller and far less mature payment market than the UK, having one of the highest usages of cash and cheques in Europe. The claim is heavily weighted towards credit card transactions because MasterCard's share of the UK debit card market after 2009 was very small following the near collapse of the Maestro brand in circumstances considered more fully below; and the Irish debit card market has also been dominated by Visa, so that over 94% of the claims are referable to credit card transactions. The upshot is that the parties naturally devoted the bulk of their energies and evidence to the UK market and to credit card transactions, with the result that the evidence and analysis was more developed in those respects.

98. The MasterCard MIFs as set for the claim period are set out in the tables in the Appendix to this judgment, expressed as a percentage recalculated by Mr Dryden to an average transaction value and in some cases using an estimate where data was missing. These can be taken to be sufficiently accurate for the purposes of the Phase 1 trial, but I make no specific findings on the detail, in case it may affect the quantification of any damages claim. The MIFs vary significantly over time and by category of card and transaction, but expressed as a single weighted average they are as follows (with variation between the years):

UK Credit	0.87% to 0.92%
UK Debit	0.24% to 0.28%
Irish Credit	0.87% to 0.95%
Irish Debit	0.22% to 0.28%
EEA Credit	0.8% to 1.2% until June 2008 and 0.3% from July 2009
EEA Debit	0.5% to 1.15% until June 2008 and 0.2% from July 2009

99. I was provided by MasterCard with data for issuers, acquirers, and card use in the UK over the relevant period. Two caveats must be entered in relation to those figures. First, MasterCard indicated that it could not be treated as complete in certain respects. Secondly, the Claimants were not in a position to agree the figures in the absence of access to underlying documents. Nevertheless there was nothing in the data which the Claimants or their legal team had any reason to doubt or treat as inconsistent with the documents which are in evidence which bear on the subject. I regard the statistics as sufficiently reliable for the purposes of understanding the scale and dynamics of the relevant markets for the purposes of the issues I have to decide. The following summary is based not only on those figures but also on published data collated by the experts, supplemented by evidence from some of the MasterCard witnesses, including the Payment Statistics for 2012 published by the Payments Council.

100. The UK market for cards:

(1) In 2011, there were 147.7 million cards issued in the UK of which 54.5 million were credit cards and 86.3 million debit cards (the remaining 6.9 million being charge cards).
(2) The total card spend was £684 billion, of which £157 billion was on credit and charge cards and £527 billion on debit cards. Of the total, a little over a quarter (£188 billion) was used to take cash out of ATMs with all types of card. The remainder, £496 billion, can broadly be treated as the value of card use with merchants.
(3) These 2011 figures can be taken for present purposes as representative over the claim period subject to the following observations:
    (a) over the whole period the total number of cards grew a little from 143 million in 2006 to 163 million in 2015, and the total spend grew considerably from £498 billion in 2006 to £849 billion in 2015. This was a consistent and fairly steady growth year on year over the claim period.
    (b) Over the period, the proportion of cards issued and of card spend became more heavily weighted towards debit cards and against credit cards. In 2006 there were 69.5 million credit cards issued (spend £150 billion) and 68.7 million debit cards (spend £348 billion). In 2015 there were 59 million credit cards issued (spend £178 billion) and 95.7 million debit cards (spend £670 billion). This increase in the use of debit cards is explained in part by the use of debit cards replacing the use of credit cards, but to a much greater extent it reflected a drop in the use of cash; debit cards were replacing the use of cash at the tills and in online sales. A similar but more recent trend from credit to debit card use is apparent in Ireland.
(4) In 2010, debit cards were used to make 7.3 billion purchases. There were 45.7 million debit card holders, equivalent to 90% of the adult population. More than 60% had only one debit card.
(5) In 2010, credit cards were used make 2.1 billion purchases. There were 30.9 million credit card holders, equivalent to 62% of the adult population, and each credit card holder had on average 1.92 credit cards. On average regular users made 104 credit card payments a year spending £117 per week on their cards. About 71% of credit card holders were "transactors", always or usually paying off their credit balances in full each month. For "revolvers", outstanding debit and credit cards accounted for less than 4% of total lending to the personal sector.

101. UK Market share for MasterCard, Visa, Amex and others:

(1) In 2011, the market split between MasterCard, Visa and other schemes in terms of numbers of cards issued was as follows:

    (a) all cards: MasterCard 39.1 million, Visa 103.9 million, others 4.7 million;

    (b) credit cards: MasterCard 35.1 million (59%), Visa 19.4 million (30%);

    (c) debit cards: MasterCard 2.8 million (3%), Visa 80.4 million (97%).

(2) This is not representative of the whole period in that:

(a) These are cards issued, not cards used or transactions values. They are not therefore a true measure of "market share". When adjusted for transaction values the market share needs to be adjusted by several per cent in favour of three party card issuers (mostly Amex) and to some extent by a few percent between MasterCard and Visa for credit and debit cards. However the adjustments are not very large and do not prevent the cards issued figures giving a broadly representative picture of market share.

(b) The number of cards issued by third party schemes grew a little in the early years and thereafter remained fairly constant over the period.

(c) MasterCard's share of the credit card market gained at Visa's expense over the first part of the period and remained in place to the end of the period. In 2006 it was 44% (MasterCard) to 52% (Visa). By 2011 it was 59% MasterCard to 33% Visa, remaining roughly in those proportions to 2015. Again these are cards issued figures, which once adjusted slightly for transaction values become approximately 60% MasterCard to 30% Visa.

(d) The dominance by Visa of the debit card market took place between 2009 and 2011. In 2006 to 2008, MasterCard issued roughly half as many debit cards as Visa. From 2009 to 2011 it plummeted to the level given above in which MasterCard was issuing about 3% of all debit cards compared with Visa's 97%. That remained the picture for the remainder of the period. The reasons for this decline in the use of (MasterCard's) Maestro cards, and its significance for the issues in this case, was a matter in dispute and is further considered below.

(e) These changes in market shares for credit (in MasterCard's favour) and debit (in Visa's favour) fall to be considered against the changes in use of cards in favour of debit cards away from credit cards.

102. UK Merchant acceptance:

(1) In 2010, 71% of all spending in the UK retail sector was made using plastic cards. Debit cards accounted for 48% of the total spend. In subsequent years the use of debit cards has increased and the use of cash declined. According to British Retail Consortium figures for 2013, the value of cash payments dropped over a five year period by about 1% per year, and debit cards now accounted for 50% of sales with credit card sales remaining firm.

(2) In 2010, 836 million card payments were made online with a total spend of £63 billion. These online payments accounted for 8.5% of purchases using UK cards. Of these 56% were by debit card and 44% by credit card. The average value of a consumer internet debit card transaction was £65.86 and of an internet credit card transaction £88.12.

(3) In 2011, 1,047,000 merchant outlets accepted payment by cards, all of whom accepted both MasterCard and Visa; 780,000 outlets took Amex and 320,000 took Discover/Diners Club. In other words, all merchants who took cards accepted both MasterCard and Visa, and most also took a three party scheme card, predominantly Amex. This was the picture over the whole period,

although the total number of card-accepting merchant outlets grew year on year from 81,000 in 2006 to 1,126,000 in 2014, and the market share of the third party scheme cards in merchant acceptance varied between those schemes over time. It was always the case over the whole period that those merchants who accepted cards took both MasterCard and Visa.

103. The UK issuers and acquirers in the MasterCard Scheme:

(1) The CAT was faced with conflicting and anecdotal evidence of the number of issuers and acquirers in the UK market, from which it concluded that there were no more than 20 issuers and no more than 10 acquirers. The data provided to me demonstrates that this was a significant underestimate.

(2) In 2011 there were 42 issuers and 22 acquirers, of whom 12 acted in both capacities. The picture was one of gradual increase in the numbers over the claim period. In 2007 there were 29 issuers and 17 acquirers, of whom 10 acted in both capacities. By 2015 this had grown to 55 issuers and 29 acquirers, of whom 16 acted in both capacities.

(3) The issuing market was weighted heavily in favour of the large UK banks: HSBC Bank Plc, Royal Bank of Scotland Plc, Lloyds Bank Plc, Barclays Bank Plc and Santander UK Plc. According to figures adopted by the CAT in its Judgment, in 2011 three of those banks, HSBC, Lloyds and RBS, issued 56% of the MasterCard cards in the UK, compared with 44% by the other 39 issuers. This represented a gradually declining share over the claim period: they had been responsible for 68% in 2009 which had diminished to 43% in 2015: see table 1 at paragraph 47 of the CAT Judgment. According to figures in a publication "Retail Banking Research (2012)" collated by Dr Niels, in 2010 the share of all cards issued was Lloyds 21%, Barclays 14%, HSBC 13%, Santander 12%, RBS 10%, others 30% (of whom Sainsbury's, Tesco and other retailers issued in total 7%). Looking solely at credit cards, the share by cards issued for 2012 was Barclays 21%, RBS 14%, Lloyds 13%, Santander UK Plc 12%, MBNA Ltd 7%, HSBC 5%, Capital One Bank (Europe) Plc 4%, others 24%. If one examines transaction values rather than number of cards issued, in 2011 RBS accounted for some US$50.9 billion, HSBC US$39.1 billion and Lloyds US$24.4 billion; the nearest rivals were Barclays with US$10.1 billion, Clydesdale Bank Plc with US$6.5 billion, MBNA with US$6.5 billion, Capital One with US$4.3 billion, New Day Ltd with US$3.2 billion, Sainsbury's Bank Plc with US$2.7 billion, Santander with US$2.1 billion, and Bank of Ireland with US$1.3 billion; the others varied between hundreds of millions and hundreds of thousands. The issuer market was therefore relatively diverse, and although dominated by the large banks, was by no means dependent on their lead.

(4) In the acquirer market the main acquirers by merchant agreements were Barclays, Worldpay (UK) Ltd (owned by RBS until December 2010), GPUK LLP (49% owned by HSBC until mid 2009) and First Data Europe Ltd, all of whom at some time had agreements with more than 10% of the merchants. By merchant numbers they had 81% of the market: see CAT Judgment Table 2 at paragraph 49. When one looks at transaction values, in 2011 Worldpay acquired US$64.7 billion of MasterCard card transactions, Barclays US$49.2

billion, GPUK LLP US$30.46 billion, Lloyds US$11.9 billion, and Elavon Financial Services Ltd US$7.4 billion. Like the issuing market, the acquirer market was dominated by a few players but was relatively diverse and was by no means dependent on their lead.

(5) As the above figures show, there was a significant number of banks which acted as both issuers and acquirers, but there were many more participants who acted only in one or the other capacity. Amongst those who acted in both capacities some were more heavily involved, by value, as issuers and some more heavily as acquirers.

104. The Irish market:

(1) Ireland's payment card market has traditionally been dominated by credit cards, with Visa and MasterCard as the two main schemes, alongside Amex and Diners Club, as in the UK. It has, however, had a much higher proportion of cash to cards. Over the claim period the use of credit cards fell a little and the use of debit cards increased, to some extent in place of credit cards, but to a greater extent in place of cash. In 2014 the ratios were roughly credit cards 20%, debit cards 30%, cash 50%.

(2) Figures for 2012 to 2014 show fairly constant market shares by value in the card market, with Visa having about 52% and MasterCard about 33%, with Amex at about 4%. In 2004 the combined Amex and Diners Club share had been only 1.26%, but it is not clear whether there was consistent or steady growth over the claim period.

(3) The debit card market is relatively immature. Prior to 2007 a domestic debit card product, Laser, existed, to which Maestro was added. In 2007 and thereafter Irish banks started issuing Visa debit cards which had a much higher MIF (10c per transaction) than the domestic only Laser cards (3.8c per transaction). MasterCard only introduced its debit card in 2011 and, as in the UK, has failed to dent Visa's overwhelming dominance of the debit card market.

(4) As to merchant acceptance, the picture mirrored that in the UK. All merchants who accepted cards accepted both MasterCard and Visa, with some (but a smaller number than in the UK) accepting Amex or Diners club as well.

105. As to the make-up of the EEA market, relatively little attention was paid to it in the evidence, save in respect of the Commission's reference to particular schemes which operated without a MIF. Mr Perez said that it was common for banks to be issuers and acquirers but it was unclear to which particular period of time he was referring. By contrast, it was common ground that at least for the claim period, the number of issuers and acquirers was sufficiently large to render a counterfactual of bilateral agreements unrealistic.

MasterCard Projects: Forward, Alhambra and Porsche

106. In August 2007 Mr Titarelli was appointed by Mr Perez to lead a project which became known as Project Forward to consider the options available to MasterCard in

a no MIF or low MIF environment if such were the result of the MasterCard Commission decision, focusing on the EEA position but mindful that it might have implications for the domestic position. The project identified various options which were presented to the MasterCard Executive Committee in February 2008. Of these only a hybrid new business model was thought potentially feasible as an alternative to the MIF setting structure. That model involved charging higher fees to acquirers and using the revenue to provide financial incentives to both issuers and merchants to issue and accept cards pursuant to bilateral agreements with them. This model was subsequently found to face both regulatory opposition and legal difficulties which caused it to be put aside. The option adopted was to reduce EEA MIFs pending the appeal from the Commission Decision.

107. In late 2010, MasterCard set up a further strategy project to consider the viability of alternative models. This was called Project Alhambra, and focussed on MasterCard's four key domestic markets in Europe, being UK, France, Spain and Germany. Project Alhambra had in mind the options considered by Project Porsche, discussed below, and other possibilities, but in particular was set up to explore the potential introduction of a premium product which was exclusively fee based and which would not attract interchange.

108. In July 2011 Project Porsche was set up to develop strategies to address the potential outcome of the appeal from the MasterCard Commission Decision, one part of which was to explore potential business strategies in the event of regulators imposing a low MIF environment in Europe. Project Porsche absorbed Project Alhambra. It took account of options considered by Project Forward and Project Alhambra, but was seen as a clean slate to consider all potential business responses to the current environment. It considered as potential alternatives (1) non interchange fee based models (including the Project Alhambra fee based model, which had been trialled in Germany); (2) exclusive licencing of a single issuer; (3) a three party model; and (4) a domestic franchising model. For varying reasons none were regarded as sufficiently viable from a legal, commercial and regulatory perspective.

The witnesses

109. The Claimants adduced evidence from thirteen witnesses of fact, all of whom were tendered for cross examination except Mr Marsh who had died since giving his statement. MasterCard chose to cross examine three of the witnesses and the evidence of the other nine was unchallenged. There was little in the evidence of the three cross examined which was controversial.

110. MasterCard adduced evidence from seven witnesses of fact, whose evidence was more controversial and was challenged in cross examination. All the MasterCard witnesses were seeking to assist the court. They were:

(1) Dr Koboldt. He is a co-founder of an economic consultancy, DotEcon Ltd which provided advice to MasterCard in relation to EEA MIFs during the Commission investigation and which was instructed by MasterCard in the wake of the Commission Decision in December 2007 to advise MasterCard on a new methodology for setting intra EEA MIFs on an interim basis. He produced a report in May 2008 based primarily but not exclusively on an issuer cost methodology. He also explained the subsequent history of the

interaction between MasterCard and the Commission over EEA MIFs, which was not controversial. His evidence was given clearly and fairly. He was called as a witness of fact, most of which was uncontroversial; the report and his views on appropriate methodologies were really overtaken by the expert evidence.

(2) Mr Sidenius. He is the CEO of Edgar Dunn & Co ("EDC"), a financial services and payments consultancy retained by MasterCard since the early 1990s to conduct studies for use in its interchange fee setting process. His evidence as a witness of fact was also clear and fair, and largely uncontroversial. His evidence addressing methodologies in setting the MIF was overtaken by the evidence of the experts.

(3) Mr Perez has been the President of MasterCard Europe SPRL since March 2006 and in that role responsible for MasterCard's European operations. Before joining MasterCard in 1996 he had worked in banking in Argentina and for a period of about 18 months around 1990 he worked for Visa International as general manager for business development in Europe. His evidence was clear, articulate and cogent, and given in a straightforward and fair minded way.

(4) Mr Lane is employed by the Third Defendant as Group Executive for Europe Market Development, reporting to Mr Perez. He had worked for MasterCard in various roles since 1999, including rule drafting, pricing and interchange fee setting, and investor relations. He took over management of the business development aspect of Project Porsche from May 2012. He was an articulate and impressive witness.

(5) Mr Titarelli joined MasterCard in 1995 and was based in Rome until 2008. He was asked by Mr Perez to set up Project Forward and was also involved with Project Alhambra. His evidence too was given in a straightforward and fair-minded way.

(6) Mr Douglas is Executive Vice President and General Manager of MasterCard in the United States. Before joining MasterCard in 2005 he worked for more than 10 years in the UK retail banking industry, including over 6 years in senior roles in the consumer cards businesses of NatWest and RBS. He was the only witness on either side who had personal experience working for an issuer or acquirer, but this was prior to the claim period. Like other MasterCard witnesses he had had dealings with issuers and acquirers during the claim period from MasterCard's point of view. He had the greatest experience of any of the witnesses which was relevant to an assessment of how issuers or acquirers would behave in a counterfactual world, but he was not involved, save on the periphery, with the events leading to the Maestro decline. He was an impressive witness.

(7) Mr Willaert joined MasterCard in February 2009 working on pricing structures and became head of MasterCard's interchange fee team from early 2010 to early 2012. He was then Head of Business Development for Western Europe and then General Manager in the Nordics and Baltics, followed by France. As such he was well placed to give evidence from his own experience of Swedish

and Estonian domestic schemes, and of migration between schemes in other jurisdictions which he had observed in his regions. He too was an impressive witness.

111. All of the MasterCard factual witnesses apart from Mr Lane also gave evidence before the CAT, which additionally heard evidence from Mr Abrahams whose evidence was particular to Sainsbury's.

112. Each side adduced evidence from an expert economist who produced a number of reports and gave oral evidence. Mr Dryden gave evidence for the Claimants. He holds a post-graduate masters degree in Economics and a post-graduate diploma in EC Competition Law. He has extensive experience in providing economic advice to organisations in the context of competition and regulation, and has published articles and made presentations widely on the economics of competition law in many different industries and markets. He was well qualified, careful, fair minded and independent.

113. Dr Niels, who gave evidence for MasterCard, is also a well qualified economist with extensive practical experience in providing economic advice to organisations in the context of competition and regulation, as well as directing studies for the Commission and training for national judges in that context. He too has published widely on the economics of competition law in different markets. He had been involved in advising the UK members of the MasterCard scheme during the OFT investigation, and had had some personal involvement in the advice given by the firm of which he is a partner, Oxera Consulting LLP, to members of the MasterCard scheme and RBS in relation to interchange fees throughout the UK and European investigations, including the MasterCard Commission Decision and the appeals therefrom. He gave evidence on behalf of MasterCard in the Sainsbury's proceedings before the CAT. His experience was greater than Mr Dryden in the specific area of card payments and interchange fees, which made him slightly better placed to assess behaviour in that market from a practical rather than theoretical economic point of view than Mr Dryden, but both were heavily dependent on the underlying data and factual material with which they were provided, which was not within their personal experience and was extensive, diffuse and incomplete.

114. Mr Lowenstein submitted that Dr Niels' and Oxera's connections with MasterCard had compromised his independence and led to him slip into the role of advocate for MasterCard and to fail in important respects to consider matters objectively and fairly. This was an unfair criticism. I found him to be as clear, fair minded and independent as Mr Dryden. Both were doing their best to assist the court with their genuine views and both provided very real assistance. Where I have preferred the view of one over another it is on the basis of the cogency of the argument and evidence on the point, not because I regard either as inherently more reliable.

The Issues

115. "The list of issues for the Phase 1 trial was framed as follows:"

> "1. Were/are the First to Third and Fifth Defendants ("MasterCard") in breach of EU/UK/Irish competition law by their setting/imposition of the EEA/UK/Irish MIFs?

That involves the following sub-issues:

(a) Whether MasterCard was and/or is an association of undertakings in respect of the period after June 2009 and/or after June 2010.

(b) Was there an agreement or concerted practice between

i. MasterCard and each of its licensee banks in the EEA, UK and/or Ireland, and/or

ii. MasterCard and the Fourth Defendant,

in respect of the setting and/or imposition of the EEA, UK and/or Irish MIFs during the relevant periods covered by the claims?

(c) Was/is the EEA MIF in force at various times since December 2007 in breach of Article 81(1) EC/Article 101(1) TFEU, whether by analogy to the European Commission's MasterCard prohibition decision dated 19 December 2007 (the Decision") or otherwise?

(d) Can the Decision be relied on by way of "read-across" in relation to the UK MIF and/or Irish MIF; and in any event were the UK MIF in force at various times since 23 May 2006 and/or the Irish MIF in force at various times since 20 January 2009 in breach of Article 81(1) EC/Article 101(1) TFEU, section 2 of the Competition Act 1998 ("the 1998 Act") and/or section 4(1) of the Irish Competition Act 2002 ("the 2002 Act"), as the case may be?

(e) Whether it is open to MasterCard to advance a positive case that the EEA MIF the subject of the Decision met the criteria for exemption under Article 81(3) EC/Article 101(3) TFEU, given the terms of the Decision.

(f) If so, whether the EEA MIF in force between 23 May 2006 and 5 January 2007 (insofar as it applied as a default to Irish domestic transactions) and in force between 23 May 2007 and December 2007/June 2008 met the criteria for exemption.

(g) Whether the EEA MIF in force since December 2007/June 2008 met/meets the criteria for exemption.

(h) Whether the UK MIF and/or Irish MIF in force at any relevant time met/meets the criteria for exemption under Article 81(3) EC/Article 101(3) TFEU, section 9 of the 1998 Act or section 4(5) of the 2002 Act, as the case may be.

(i) Assuming the relevant MIFs (or any of them) were and /or are in breach of the relevant EU and/or UK and/or Irish

> competition rules, whether the Claimants are entitled to a declaration to that effect.
>
> 2. Insofar as the relevant MIFs (or any of them) were/are in breach of competition law and did/do not meet the conditions for exemption, would another level of MIF have met the conditions for exemption and, if so, at what level?
>
> 3. Insofar as the relevant MIFs (or any of them) were and/or are in breach of competition law, are the Claimants entitled in principle to exemplary damages?"

116. A number of these issues fell away or have been dealt with above. I have dealt with issues 1(a), (b), and (e); and issue 1(d) insofar as it addresses "read across". The Claimants abandoned any claim for exemplary damages (issue 3).

117. There is a substantial overlap in the evidence and argument applicable to issues 1(f), (g) and (h) (exemption under Article 101(3) of the MIFs as set) and issue 2 (exemptibility of any level of MIF under Article 101(3)). It is therefore convenient to address the remaining issues under two headings, although as will be seen, it is impossible to keep the arguments under the two headings entirely distinct, namely:

(1) the Article 101(1) issues (issues 1(c) and 1(d)); and

(2) the Article 101(3) issues (issues 1(f), 1(h) and 2).

The Article 101(1) Issues

118. In relation to the Article 101(1) issues, the Claimants' submissions can be summarised as follows:

(1) The relevant counterfactual (both the restriction counterfactual and the ancillary restraint counterfactual), is a scheme which does not provide for a MIF and has a prohibition on ex post pricing, that is to say a rule which provides that in the absence of prior bilateral agreement, the issuer must pay to the acquirer the full transaction price of the goods or services without deduction. Such a rule is necessary because if there were no such rule, and no bilateral agreement reached in advance, the issuer could hold the acquirer to ransom by refusing to pay unless and until the acquirer agreed to whatever deduction was demanded by the issuer. The Honour All Cards Rule means that the merchant has to accept the issuer's cards for all transactions, so that the merchant needs to be paid by the acquirer and the acquirer by the issuer; but if there is no agreement in place, the acquirer has to pay whatever the issuer demands. This was described by the experts as "the hold-up problem". As Mr Dryden explained, and this was not controversial, a system with no MIF and a prohibition on ex post pricing is the same in its practical and economic effect as a system with a MIF with the MIF set at zero, because it is a default clearing rule which provides that the issuer is bound to pay in full absent a bilateral agreement.

(2) Alternatively the relevant counterfactual is a MIF set at whatever level the court decides is exemptible under Article 101(3) as a lawful level, if it is greater than zero (contrary to the Claimants' case) and less than the actual MIFs set by MasterCard (contrary to MasterCard's case). This is the maximum lawful MIF which MasterCard could have set and I will refer to it as the putatively lawful MIF or exemptible MIF.

(3) Compared with such restriction counterfactual(s), the MIFs set by MasterCard restricted competition on the acquiring market because they set a floor below which the acquirers could not compete for merchants' business.

(4) Such restriction is not within the ancillary restraint doctrine because it is not objectively necessary for the operation of the MasterCard scheme.

(5) The CAT Bilaterals counterfactual and the other counterfactuals canvassed during the case are not realistic.

119. In relation to the Article 101(1) issues MasterCard contends, in summary, as follows:

(1) MasterCard agrees with the Claimants that the only potentially relevant counterfactuals are a zero MIF/no MIF, alternatively the putatively lawful MIF; none of the other counterfactuals canvassed during the case is realistic, including the CAT Bilaterals counterfactual.

(2) The MIFs are not a restriction on competition in the relevant markets by comparison with a MIF set at zero or any positive level.

(3) Alternatively, the UK and Irish MIFs (but not the EEA MIFs) fall outside the scope of Article 101(1) under the ancillary restraint doctrine: they are objectively necessary to the main operation of the MasterCard scheme as a whole, which is neutral or positive in its competitive effect (as was common ground ignoring the MIF). This is because if MasterCard set its MIFs at zero, or even at a positive but significantly lower putatively lawful level, the MasterCard scheme would collapse: the issuers would in a short period of time all switch to issuing Visa cards; and the competition from Amex would reinforce the outcome. This was colourfully referred to as the "death spiral" argument.

(4) For the same reason the UK and Irish MIFs are not a restriction of competition. The death spiral argument applies equally to the question of whether there is a restriction on competition falling within Article 101(1) as it does to whether the ancillary restraint doctrine is fulfilled, because if the effect of the restriction counterfactual would be to eliminate the MasterCard scheme, the counterfactual world would contain no MasterCard acquiring market at all, such that it could not be said that the MIFs imposed a greater restriction on competition than in the counterfactual world.

120. The contention that the death spiral argument applies equally to the issue of restriction of competition is in my judgement correct. In the way it was framed, it assumes that the relevant acquiring market is in MasterCard cards alone, not all four

party scheme cards including Visa. If so, the elimination of the MasterCard scheme eliminates the whole of the comparator market and the MIFs cannot be more restrictive of competition on that market than if it did not exist. The contention holds good even if the relevant acquiring market is defined to include Visa cards, in which case the death spiral counterfactual world would involve a market on which acquirers could only compete for merchants' Visa card business as the only available four party scheme. The MasterCard MIFs cannot be a restriction of competition by reference to that counterfactual unless the elimination of the MasterCard scheme would result in Visa's MIFs being lower than both (a) those which MasterCard set and (b) those which Visa set. Despite the evidence that the inter-system market created an upward pressure on MIFs, there was nothing in the evidence which enabled me to conclude that in the absence of the MasterCard scheme, Visa's MIFs would reduce to an appreciably lower level than that at which MasterCard's had been set, or an appreciably lower level than existing Visa MIFs. It would be for the Claimants to prove such difference and they did not seek to do so. Indeed in the context of the ancillary restraint argument Mr Lowenstein accepted that the starting point was that the existence of the MasterCard scheme (ignoring the MIF) was at least neutral if not pro-competitive. If so, the non-existence of the scheme could not be treated as pro-competitive on all markets, including the acquiring market.

121. The Claimants contend that MasterCard's death spiral argument must fail for each of three reasons, which apply equally whether the death spiral argument is considered in the context of the ancillary restraint issue or the restriction of competition issue (and with each of which MasterCard takes issue):

(1) competition from Visa and Amex has to be ignored as legally irrelevant;

(2) the correct assumption to make about Visa's conduct in the counterfactual world is not, as MasterCard alleges, that Visa would have continued to charge the MIFs which it actually charged; but rather that Visa would have charged such MIFs as were lawful, which the court must assume would have been at the same level as MasterCard's MIFs because the Visa scheme was materially identical to the MasterCard scheme; with such a level playing field, there would be no threat to MasterCard's survival;

(3) alternatively, even if one assumes in the counterfactual world that Visa charged its actual MIFs, MasterCard has not established on the evidence that its scheme would have collapsed.

122. There was some argument as to whether the court should first address the ancillary restraint argument, as MasterCard contended, or the restriction of competition argument, as the Claimants contended. This was because the parties perceived that the order in which the points were addressed mattered when it came to the assumptions which should be made about Visa's MIFs for the purposes of the death spiral argument. Mr Lowenstein submitted that the restriction of competition issue should come first, because the ancillary restraint argument was only logically relevant to the outcome if the MIFs were a restraint which would otherwise be a restriction of competition and so engage Article 101(1). He pointed to the language of paragraph 91 of the MasterCard CJEU Judgment which talks of the ancillary restraint doctrine as involving "… determining whether an anti-competitive restriction can escape the prohibition laid down in [Article 101(1)] …"; and to the terms of

paragraph 29 of the Article 101(3) Guidelines. Mr Hoskins QC pointed out that the ancillary restraint doctrine as articulated in paragraph 89 of the same Judgment applies to "restrictions on commercial autonomy", which would include anything as simple as a contractual obligation, not restrictions of competition as such; and that European courts had often addressed the ancillary restraint issue first (as for example in the MasterCard CJEU Judgment), or as the sole issue without determining whether there is a restriction of competition (as in *Gottrup-Klim Grovvareforeni v Dansk Landbrugs Grovvareselskab AmbA (DLG)* (1992) C-250/92).

123. I did not find this debate helpful, because I do not consider that the order in which the arguments are addressed makes any difference to their determination, including in particular any assumptions about Visa's MIFs for the purposes of the death spiral argument. Nor should it. The issues could be addressed in either order and must lead to the same conclusion whichever is taken first.

124. I have not, however, found it easy to find a logical order in which to address all the issues in the case, quite apart from the debate as to whether to consider ancillary restraint before restriction of competition or vice versa. The selection of the counterfactual(s) may be an iterative process, and the arguments within the Article 101(1) issues and those under Article 101(3) are intertwined. I am also conscious that it might be regarded as helpful for me to address and determine all issues which were raised, including those which do not arise as a result of my other findings, not just for the purposes of this Phase 1 trial and in case of any appeal, but also in the context of the wider litigation of other claims by these parties against Visa and other parties against both MasterCard and Visa. I will endeavour to do so.

125. I have explained above that the death spiral argument in principle applies equally to the restriction of competition argument as it does to the ancillary restraint argument because of its potential effect on the acquiring market. I have also concluded, for the reasons explained below, that there is no relevant distinction to be drawn in this case between the restriction counterfactual and the ancillary restraint counterfactual; and that the legal issues in relation to the death spiral argument resolve themselves in the same way whether it is being considered in the context of restriction of competition or ancillary restraint, so that it is not necessary to address the death spiral issues separately for the restriction of competition argument and the ancillary restraint argument.

126. Accordingly I have found it convenient to frame the Article 101(1) issues in the following terms and address them in this order:

(1) What is the appropriate counterfactual?

(2) Leaving aside the death spiral argument, did MasterCard's MIFs as set restrict competition on the acquiring market?

(3) Is the death spiral argument available and made out for a no MIF/zero MIF counterfactual, and in particular:

(a) is competition from Visa and Amex a legitimate consideration?;

(b) does one assume in the counterfactual world that Visa's MIFs are those actually charged, or does one assume Visa MIFs at the same level as MasterCard's?;

(c) if one assumes actual Visa MIFs, would the MasterCard scheme have collapsed?

(4) Is the death spiral argument available and made out for the alternative counterfactual of a putatively lawful MIF?

127. Not all these issues apply to the intra EEA MIFs. None apply to the relatively short part of the claim period covered by the MasterCard Commission Decision which I must follow; and in respect of the remaining period, the death spiral argument is not advanced in relation to the intra EEA MIFs, so that only the issues identified at (1) (counterfactuals) and (2) (restriction of competition) arise.

Article 101(1) Issue 1: Counterfactuals

128. The following possible counterfactuals were canvassed during the course of the Phase 1 trial:

(1) No MIF. This counterfactual posits that the scheme rules say nothing about a MIF, MasterCard does not set any default pricing, and interchange fee pricing is left to the acquirers and issuers. There are then five possible scenarios:

(a) "Ex post bilaterals", also referred to during the trial as "pure bilaterals". This counterfactual posits that there are no bilateral agreements in place between the issuer and acquirer prior to the relevant transactions or the time when they come to be settled. Absent any MIF, issuers would have been entitled unilaterally to deduct interchange fees at the level of their choice upon settlement, or to refuse to settle at all, until acquirers consented to such fees.

(b) A prohibition on ex post pricing. The Commission's solution to the hold-up problem presented by pure bilaterals was to import into the counterfactual hypothesis a scheme rule which prohibited any fee deduction in the absence of prior agreement; this was the so called "prohibition on ex post pricing" (see paragraph 554). As I have explained, it is for practical purposes the same as a MIF set at zero. This was the Claimants' primary case and I will refer to it as the no MIF or zero MIF counterfactual.

(c) Voluntary ex ante bilaterals. This posits the emergence of voluntary bilateral agreements between each pair of issuers and acquirers, reached by negotiation between all issuers and acquirers in advance of the time of settlement ("ex ante"), which would provide for a positive interchange fee. This was the counterfactual adopted by the CAT, which concluded that in a world of no MIF with a prohibition on ex post pricing there would emerge voluntary bilateral agreements between issuers and acquirers under

which a positive interchange fee would be agreed to be deductible by issuers at a level below that of the MIFs as set by MasterCard. These bilateral agreements might potentially arise in the face of a zero MIF set by MasterCard, or in the face of a scheme with no MIF and a prohibition on ex post pricing, which is the same in practice.

(d) Mandatory ex ante bilaterals. During the course of the hearing I raised a further possibility, namely that it be a term of the scheme rules that all issuers must reach bilateral agreements with all acquirers, and vice versa, as a condition for being a licensee and participating in the scheme at all. Provision would have to be made for notification by those who wished to become new entrants and for a periodic renegotiation window. This might appear to impose the maximum competitive pressures on pricing between acquirers and issuers, and between issuers inter se and acquirers inter se.

(e) A further possibility floated by MasterCard was mandatory arbitration in the absence of bilateral agreement, with some temporary arrangement pending the award, but this was not ultimately pursued. Both parties agreed that for practical purposes it would be the same as having a MIF and neither party espoused it as a realistic counterfactual. I do not need to address it further.

(2) A MIF set by MasterCard at zero, that is to say scheme rules in their current form which apply the MIF set by MasterCard in default of bilateral agreement, which would on this hypothesis require the issuer to pay in full without deduction of any interchange fee because the interchange fee would be set at zero. This is the same in effect as the no MIF counterfactual.

(3) A MIF set by MasterCard at a positive but lower level as the putatively lawful level which would qualify as exemptible by application of Article 101(3). This was the Claimants' alternative case.

(4) Some alternative restructuring which MasterCard would have adopted because it would not have allowed the business to fail.

129. These are the only potentially realistic counterfactuals which fall for consideration. Mr Hoskins submitted, correctly in my judgement, that if the court were not able to identify any of these as a counterfactual which was realistic, the claim must fail. The MIFs could not be shown to be a restriction of competition by comparison with any realistic counterfactual world in which they did not exist.

130. In this analysis, and what follows, I refer to whether counterfactuals are "realistic". In doing so I have not overlooked the distinction between the test for the restriction counterfactual and that for the ancillary restraint counterfactual. The shorthand "realistic", which is a requirement for both tests, is intended to encompass a restriction counterfactual which likely would arise and is realistic, and an ancillary restraint counterfactual which might arise and is realistic. In using the shorthand I have not, however, elided the tests when applying them to the restriction counterfactual or ancillary restraint counterfactual respectively.

No MIF with Pure Bilaterals

131. This would give rise to the hold-up problem and is for that reason unrealistic, as MasterCard argued before the Commission: see MasterCard Commission Decision paragraph 553. This was Mr Dryden's view, with which I agree. Dr Niels suggested in evidence that the result of the hold-up problem would be to produce higher interchange fees than the MIFs set by MasterCard. My conclusion is simply that such a system of ex post bilaterals is wholly unrealistic because of the uncertainty it would involve. Ultimately that was also MasterCard's primary case, in agreement with the Claimants' position.

No MIF with a prohibition on ex post pricing.

132. The fact that it was common ground that the economic effect of such a rule was the same as a MIF set at zero by MasterCard seems to me to render superfluous two debates which occupied some time in argument. The first relates to the conclusion of the CAT that such a prohibition on ex post pricing is already inherent in Rules 8.2 and 8.3 of the existing Scheme Rules in the absence of a positive MIF: see the CAT Judgment at paragraphs 141-146. MasterCard pressed me with English authority on the availability and applicability of the "blue pencil" test to contractual provisions in arguing that the CAT's conclusion was erroneous. This is an arid debate for the purpose of the issue under consideration. The question is whether a prohibition on ex post pricing is realistic and likely as a restriction counterfactual if there were no MIF setting by MasterCard (or realistic and one which might arise for the purposes of the ancillary restraint counterfactual). That is a hypothetical question. The current scheme rules, which are drafted in the context of positive MIFs being set by MasterCard, are unlikely to shed light on what hypothetically would be contained in the scheme rules if MasterCard were leaving it to the issuers and acquirers to determine pricing. Moreover, since a scheme rule prohibiting ex post pricing is equivalent to a scheme rule in which MasterCard sets the MIF but does so at zero, it seems to me immaterial whether that effect was achieved by one or other of the two routes. The question is whether a scheme which has that practical effect is one which is realistic.

133. For similar reasons there is nothing which assists MasterCard in the evidence from a number of its witnesses, principally Mr Douglas, that it would not have introduced a prohibition on ex post pricing and did not consider doing so when modelling various potential responses to a no MIF or low MIF environment imposed by regulators. MasterCard did not consider such a rule because it equally did not consider a "pure bilateral" situation in which such a solution would have been necessary to avoid the hold-up problem. If the survival of the scheme required such a rule, because of the hold-up problem, I have little doubt that it would have been adopted. But in any event, if the same result is achieved by having scheme rules which are exactly as in the current form with MasterCard explicitly setting the MIF at zero, the realism or otherwise of a specific prohibition on ex post pricing is neither here nor there as an alternative route to achieving the same result.

134. For these reasons I do not consider that the counterfactual of no MIF, coupled with a scheme rule prohibiting ex post pricing, requires any separate consideration from that applied to a MIF set at zero.

135. It was common ground that, as the CAT also held, the counterfactual hypothesis is that MasterCard voluntarily adopted a zero MIF, not that it did so as a result of regulatory restraint.

Voluntary ex ante bilaterals and the CAT Bilaterals counterfactual

136. Without doing full justice to the detail of its reasoning, the CAT's approach can be summarised as follows:

(1) The starting point for the restriction counterfactual was that no default of any kind would be set by MasterCard (paragraph 141). This is what I have characterised as a no MIF counterfactual.

(2) That is equivalent to a zero MIF set by MasterCard because the Scheme Rules contain a prohibition on ex post pricing; paragraphs 142-151. I have reached the same conclusion albeit for different reasons.

(3) In these circumstances, issuers would have four alternatives or options (paragraph 153):

(a) Option 1: negotiate bilateral interchange fees with each acquirer participating in the MasterCard scheme in the UK;

(b) Option 2: accept participation in the MasterCard scheme without any payments by way of interchange fee from their acquiring counterparties;

(c) Option 3: participate in an alternative settlement system, other than the interchange operated by MasterCard, which could only occur with agreement of the acquiring counterparties;

(d) Option 4: leave the MasterCard scheme altogether and issue only Visa cards in the UK.

(4) These fell to be judged in a counterfactual world in which Visa was not subject to any regulatory constraints and would have maintained its MIFs at the levels actually set (paragraphs 158-163).

(5) Option 4 (a switch to Visa) could happen over time (paragraphs 165-167, 172, 174), because all other things being equal issuing banks would weigh future revenue flows against costs when considering switching (paragraph 60(3)), but the possibility of switching to Visa would be overtaken by option 1 (voluntary bilaterals): paragraphs 182ff.

(6) Option 2 (accept a zero MIF) and Option 3 (some other settlement system) were unlikely to be attractive to issuers if Option 1 (voluntary bilaterals) were an alternative: paragraphs 176-177.

(7) Option 1 (voluntary bilaterals) was a counterfactual which it was open to the Tribunal to adopt despite MasterCard's objection that it was not supported by either of the experts: paragraphs 179-181.

(8) Option 1 (voluntary bilaterals) was a realistic counterfactual because:

(a) the Scheme Rules envisaged bilateral agreements; the MIF was a default provision: paragraph 182;

(b) the number of issuers and acquirers in the UK market is such that "substantially all UK domestic MasterCard transactions could be caught by relatively few bilateral agreements": paragraph 184;

(c) bilateral agreements are relatively common in some markets, e.g. Sweden, and the evidence of the MasterCard witnesses supported the likelihood of bilateral agreements emerging: paragraphs 183, 184, 186;

(d) both experts recognised in their reports that bilateral agreements could have been concluded and on analysis their views in oral evidence that they would not have emerged was unconvincing: paragraphs 186-196;

(e) merchants, certainly the large merchants such as Sainsbury's who would have the most influence on acquirers, would be willing to pay a positive interchange fee because it was important to keep the MasterCard scheme in operation as a rival to Visa; a Visa monopoly or a market dominated by Visa and Amex would be undesirable and so it would be in the interests of both issuers and merchants/acquirers to ensure the continued existence of the MasterCard Scheme: paragraphs 196(3)(i), 196(5), 197(2); merchants would be willing to pay MIFs at a level which would encourage issuers to remain in the MasterCard scheme so as not "to precipitate the fatal erosion that no bilateral agreements would generate": paragraph 197(1);

(f) the transaction costs of concluding bilateral agreements would not be a sufficient disincentive because the number of issuers and acquirers is quite small and the costs would not be excessive: paragraph 197(4).

(9) In adopting bilateral agreements, acquirers would differentiate themselves in the acquiring market (paragraphs 196(4) and (7)) and this would likely lead to different pricing structures, such as a move away from ad valorem per transaction pricing, and volume discounts for larger merchants: paragraphs 196(8), 197(3).

(10) Bilateral agreement of lower MasterCard interchange fees would put pressure on Visa to follow MasterCard's lead, and make it "at least on the cards" that Visa would react by abandoning its MIF: paragraph 197(5).

137. The CAT then determined, after a lengthy analysis of the evidence, that the bilateral interchange fees which would be negotiated would be 0.5% for credit cards and 0.27% for debit cards, each being expressed as a weighted average.

138. This counterfactual scenario formed no part of either Sainsbury's or MasterCard's case but was a construct of the Tribunal. It was not addressed by the factual witnesses, or put to them in evidence, nor had it been addressed in the expert reports. It had been put to the experts by the Tribunal in the course of their evidence, but without it having formed part of the case for which they had prepared. Both experts rejected it.

139. This counterfactual was not part of either side's pleaded case in these actions, prior to delivery of the CAT Judgment in the middle of the Phase 1 trial. Following the CAT Judgment, the Claimants sought, and were granted, permission to add it as an alternative counterfactual, in case it appealed to the court, but they did not support it in evidence or argument. On the contrary, the Claimants joined MasterCard in mounting a robust attack on the CAT's reasoning and conclusion on this issue, not only in argument but by adducing further factual and expert evidence specifically addressed to the point.

140. In addition the Claimants (but not MasterCard) challenge each of the three premises from which the CAT's reasoning starts, namely that (i) it is legally permissible to take account of competition from Visa; and (ii) the appropriate counterfactual assumption is that Visa's MIFs were as set by them over the period; and (iii) absent bilateral agreements, the MasterCard scheme would or might have collapsed because there would have been a switch to Visa. I address each of these arguments below in the context of the death spiral argument, where I conclude that (i) competition from Visa is legally relevant; (ii) the assumption to be made about Visa's MIFs in the counterfactual is that they would have been as actually set, and (iii) the MasterCard scheme would have collapsed as a result of issuers switching to Visa if the differential was between MasterCard MIFs at zero and Visa MIFs as set. Accordingly the premise from which the CAT's reasoning proceeds holds good.

141. However I have reached the conclusion on the evidence before me that the CAT Bilaterals counterfactual is not one which would, or even might arise, and is not realistic, for the following reasons.

142. First, if one looks at it from the perspective of merchants:

(1) The CAT Bilaterals counterfactual depends on a sufficient volume of merchants voluntarily agreeing to pay an average interchange fee of 0.5% in order to keep the MasterCard scheme alive despite being entitled to transact without paying any MIF. None of the twelve Claimants, who are all major retailers, put forward evidence to suggest that they would be prepared to do this.

(2) The fundamental premise of the CAT's conclusion is that merchants would be willing to pay a positive interchange fee in order to avoid a Visa monopoly of four party schemes. It is implicit in this premise that merchants would perceive that they would be better off with inter-system competition from MasterCard than if there were a Visa monopoly. However the evidence before me from both experts was that the competition between Visa and MasterCard on the inter-system market put upward pressure on interchange fees. That was also the view of the Commission in relation to intra EEA MIFs: see the MasterCard Commission Decision at paragraphs 467-470. Although this might seem counterintuitive, it is the result of the fact that the two sided platform operates to create the maximum use of the scheme as a whole ("system output" in the economic jargon), if more cards are issued. The more MasterCard and Visa can persuade issuers to issue their respective cards, the greater MasterCard's and Visa's respective revenue, because the scheme operator's revenue in the form of licencing fees is maximised by maximising system output. MasterCard charges issuers and acquirers for clearing and

settlement services on a per transaction basis as well as other fees to licensees for participation. The result is that it is in the interests of both Visa and MasterCard when competing with each other to offer higher MIFs to issuers in order to encourage them to issue their own cards. This obviously has some natural upper limit at the point where merchants decline to pay for the benefit of accepting their cards, but within that boundary the inter-system competition puts upward pressure on MIFs. Accordingly the CAT's implicit premise that merchants as a whole would perceive that they would be better off with competition from MasterCard in the inter-system market was not a sound one on the evidence before me. In theory it might be the case that merchants would desire the competition in respect to card functionality which would exist from competition between MasterCard and Visa, but there was no evidence before me of any distinctions in functionality which would make that so, or that if they existed they would outweigh the upward pressure on MIFs of a market with both schemes. The evidence before me does not support a conclusion that merchants would have had, or perceived, an incentive to keep the MasterCard scheme going, which the CAT identified as the primary motivation for merchants volunteering to pay a bilaterally agreed interchange fee. It is noteworthy that when MasterCard lost almost all the debit card market represented by Maestro to Visa in 2009 to 2011, there was no move from merchants to help MasterCard stay in the debit card market because of fears of a Visa monopoly. Whether the collapse was primarily due to price (as MasterCard contend) or differences in functionality (as the Claimants contend), or both, the point is that merchants appear to have regarded the potential disappearance of MasterCard from the debit card market with equanimity.

(3) Even assuming that it would be collectively in the interests of merchants to preserve the existence of the MasterCard scheme, it was the combined view of the experts before me that no such collective move to agree positive interchange fees would emerge from the behaviour of individual merchants, absent some agreement or concerted practice which was itself unlawfully anti-competitive. Each merchant would be individually unwilling to pay an interchange fee which was any greater than that of its competitors. Faced with the default position that it need not pay any interchange fee at all, it would not be likely to agree to pay one, let alone at 0.5%, unless confident that this would be a level playing field with its competitors. Yet there is no plausible (lawful) mechanism under which this would come about. This expert evidence is consistent with the evidence of Mr Douglas, who considered it very likely that merchants would award their business in the hypothetical world (as they do in the real world) to an acquirer who could offer the lowest price. I found convincing the views of both experts that individual merchants would be highly likely to be attracted by offers of zero interchange, since they would be at a competitive disadvantage if their competitors did so and they did not. The same point was encapsulated in another way by Mr Dryden, who said that even if merchants and acquirers collectively benefit from positive interchange fees, each individual merchant would prefer to free-ride on other merchants paying interchange fees, and transfer their acquiring business to acquirers who do not pay interchange fees, and so charge lower MSCs. An individual merchant agreeing to pay interchange fees (via MSCs) would bear all of the

cost of the interchange fee but would get only a fraction of the benefits, and thus would risk disadvantaging itself compared to other merchants because of the free-rider problem.

143. Secondly, if one looks at it from the perspective of acquirers, it was the convincing evidence of both experts that as a matter of economic analysis, and on the reasonable assumption that the acquiring market is competitive, competition amongst acquirers would produce the outcome that merchants want, i.e. zero interchange fees. An acquirer which attempted to recover a positive interchange fee through a higher MSC would lose business to acquirers which did not do so. Faced with such a competitive threat, acquirers would therefore have no incentive to pay positive interchange fees to issuers. This was supported by the evidence of Mr Willaert and Mr Douglas. As Mr Willaert put it in his evidence: "…it would be suicidal for an individual acquirer unilaterally to charge a higher price to merchants than its competitors."

144. Thirdly, the number of issuers and acquirers would require such a large number of bilateral agreements that the practicalities would render them unrealistic (absent unlawful collusive activity on either side). The CAT was faced with conflicting and anecdotal evidence of the number of issuers and acquirers in the UK market, from which it concluded that there were no more than 20 issuers and no more than 10 acquirers. It did not identify the extent of overlap between issuers and acquirers but concluded that "substantially all UK domestic MasterCard transactions could be caught by relatively few bilateral agreements" (paragraph 184).

145. As I have indicated, the evidence before me was rather different. There was a gradual increase in the numbers over the claim period. In 2007 there were 29 issuers and 17 acquirers, of whom 10 acted in both capacities; in 2011 there were 42 issuers and 22 acquirers, of whom 12 acted in both capacities; by 2015 this had grown to 55 issuers and 29 acquirers, of whom 16 acted in both capacities. Given the HACR, there would have to be bilateral agreements in place between all pairs of issuers and acquirers, not just substantially all. The number of bilateral agreements which would be necessary would therefore have been (taking account of the number of entities who act in both capacities who do not have to reach a bilateral agreement with themselves):

2007: 483 bilaterals (29 x 17 minus 10)

2011: 912 bilaterals (42 x 22 minus 12)

2015: 1,579 bilaterals (55 x 29 minus 16)

146. These would have required regular renegotiation to take account of innovation, market factors and differentials between what were in practice many different MIFs, not a single MIF.

147. It was common ground that the number of issuers and acquirers for the EEA market was much greater. I had no data for Ireland, but at least so far as concerns the UK and intra EEA markets, the sheer number of bilateral agreements which would have been necessary is another factor which makes the CAT Bilaterals counterfactual unrealistic.

148. Fourthly, whatever the evidence before the CAT, the evidence before me of Mr Willaert and Mr Douglas did not support the hypothesis of bilateral agreements with positive interchange fees. Both expressly disavowed the possibility. This was not just the opinion of two current witnesses: it must reflect the views of all those at MasterCard who had been involved in Project Forward, Project Porsche and Project Alhambra. In none of those projects were bilaterals seriously considered as a viable option. Mr Willaert convincingly explained why the systems in the two jurisdictions in which bilateral agreements were employed, Sweden and Estonia, were underpinned by particular local circumstances which did not pertain to the UK, Ireland and cross border EEA transactions, and formed no useful comparator as to what might emerge in the territories with which I am concerned.

149. Fifthly, the CAT's conclusion is that merchants would have been prepared to pay 0.5% in bilaterally agreed credit interchange fees, and no more, which would involve a differential of 0.3% from the weighted average Visa credit card MIFs they would pay (0.8%). The question of whether MasterCard would have been driven out of the market if there were a differential of 0.3% between its credit card interchange fee and Visa's credit card MIF was not the subject of any evidence before the Tribunal. These were figures arrived at by the CAT after the hearing had finished in the course of drafting its Judgment. Unlike the Tribunal, this court has had the benefit of evidence on this issue. My conclusion, for the reasons discussed more fully below when addressing the death spiral argument, is that a differential of this amount would still lead to issuers switching to Visa and to the MasterCard credit card scheme collapsing.

150. This argument does not apply to MasterCard's modest share of the debit card market, because the differential between Visa's MIF and the level of the interchange fee in the CAT Bilaterals counterfactual is minimal; indeed the bilaterals would on the CAT's findings produce interchange fees slightly higher than Visa's MIFs: 0.27% bilaterally agreed interchange fees, as a weighted average, compared with Visa's blended MIF of 0.26%.

Mandatory ex ante bilaterals

151. Because of the HACR, this counterfactual has to posit that an issuer has reached bilateral agreements with all acquirers before he is allowed to participate in the scheme, and that the converse is true for a given acquirer. Neither side adopted this suggestion as a realistic possibility. It was not addressed by any of the factual witnesses, although the parties had an opportunity to adduce factual evidence directed to it after I had raised it. It was rejected by both experts in supplementary reports. It faces a number of problems which render it unrealistic:

(1) It suffers, at least in relation to the UK and EEA markets, from the impracticalities of any successful bilateral negotiation process which flow from the sheer number of issuers and acquirers involved. These would be exacerbated in the current context which posits (i) a limited window of time within which the negotiations would all have to be completed and (ii) the need to have periodic renegotiations sufficiently frequently to allow new entrants, say yearly or at most two yearly.

(2) This counterfactual introduces a new "hold-out" problem which was explained by Mr Dryden. Each issuer would want to hold out from agreeing with each acquirer so that he could use the impending expiry of the window as leverage to extract the most favourable terms, and vice versa. It would be very difficult for any issuer to reach agreement with any acquirer, who would be unwilling to contract at a competitive disadvantage to his competitor acquirers. There is no plausible dynamic for agreements being reached.

(3) Moreover, there is also a "hold up" problem, as Dr Niels explained: any given issuer or acquirer would know that if they refused to reach agreement by holding out for the most favourable terms, they could bring about the collapse of the whole scheme. If the participants could not afford to be outside the scheme, this might produce exactly the competitive pressures which are desirable. But would be new entrants, for example, would be able to hold to ransom established participants by demanding unduly favourable terms, without which they would profess willingness for the scheme to collapse; the same would be true of any existing participants who might plausibly suggest a willingness for the scheme to collapse.

(4) As Mr Willaert stated, the uncertainties which these dynamics would produce make them unrealistic. They comprise the uncertainties of the negotiation process, with high unpredictability of outcome, and are compounded by the uncertainties faced by issuers about their revenues over a period beyond the annual or two year cycle of renegotiation.

Some other alternative?

152. Mr Lowenstein relied on the evidence of a number of the MasterCard witnesses to the effect that they would not have let the business fail and so would have done "something to save the situation" or "found a way to make the business work"; and to the fact that none of the internal project discussions within MasterCard which addressed what it would do in a zero MIF or low MIF environment, including Project Alhambra and Project Porsche, specifically contemplated the business failing. This was relied on to suggest that in a no MIF or low MIF environment, MasterCard would have done something to keep the scheme alive.

153. This does not afford grounds for considering some other counterfactual for at least two reasons:

(1) The particular evidence on which Mr Lowenstein relied, taken as a whole, went no further than a general assertion that MasterCard would have tried anything it could to stay in business. It did not identify how it might do so. The internal debate had identified a number of possibilities but rejected each of them as a viable solution and they had all been put to one side. It does not assist the Claimants merely to say that something would have been done, without identifying what. The Claimants did not contend, for example, that any of the possibilities contemplated by Project Porsche or Project Alhambra was realistic or should be taken as a specific counterfactual. The Claimants cannot establish that the MIFs were a restriction of competition by reference to a counterfactual if they cannot articulate what form that counterfactual would take.

(2) The evidence was not that the MasterCard *four party scheme* would have been preserved come what may, but only that MasterCard would have done anything it could *to stay in business*. The evidence of Mr Douglas, for example, which I accept, was that in a no MIF environment any response to an unconstrained Visa would have resulted in MasterCard having a very different business. If the counterfactual were not a four party scheme, the Claimants could not discharge the burden of showing that the MIFs restricted competition by reference to a counterfactual acquiring market which did not exist; and in any event could not show that the cost to merchants would be lower in that counterfactual alternative scheme. Amex's fees, for example, were higher.

Conclusion on counterfactuals

154. There is no distinction to be drawn in this case between a restriction counterfactual and an ancillary restraint counterfactual.

155. There are no counterfactuals which would or might arise and which are realistic other than, potentially, (i) a zero MIF (which is the same as no MIF with a prohibition on ex post pricing), alternatively (ii) a positive but lower MIF as the maximum putatively lawful MIF. Those now fall for consideration.

Article 101(1) Issue 2: Competition on the acquiring market

156. Subject to the death spiral argument, which I consider below, the MasterCard MIFs did amount to a restriction of competition on the acquiring market by comparison with a counterfactual of no MIF or a lower putatively lawful MIF. They imposed a floor below which the MSC could not fall, because acquirers had to pay at least that much to issuers and had to recoup it from the merchants, which in turn led to higher prices charged by acquirers to merchants through the MSC than if the MIF were lower or zero. Such a floor restricts competition because it interferes with the ability of acquirers to compete for merchants' business by offering MSCs below such floor. It is no different in kind from a collective agreement by manufacturers to maintain inflated wholesale prices, which prevents wholesalers competing on the retail market below those prices.

157. This was consistently the view of the Commission in relation to EEA MIFs, and applies equally to domestic MIFs:

(1) In the Visa 2002 Decision:

> "68. The MIF moreover has as its effect to distort the behaviour of acquiring banks vis-à-vis their customers (at resale level), because it creates an important cost element…which is likely to constitute a de facto floor for the fees charged to the merchants they acquire, since otherwise the acquiring bank would make a loss on its acquiring activity"

(2) In the *MasterCard* Commission Decision Summary:

> "2. The MIF in MasterCard's scheme restricts competition between acquiring banks by inflating the base on which

> acquiring banks set charges to merchants and thereby setting a floor under the merchant fee. In the absence of the multilateral interchange fee the merchant fees set by acquiring banks would be lower."

158. The Commission's finding that the EEA MIF set a floor for the MSC, resulting in higher prices than in the restriction counterfactual, and thus restricting competition on the acquiring market, was upheld by the General Court in paragraphs 157 to 165 of its Judgment, and by the CJEU which said at paragraph 195:

> "Similarly, the appellants cannot criticise the General Court for having failed to explain how the hypothesis applied had less restrictive effects on competition than the MIF, given that the only difference between the two situations lies in the pricing level of the MIF. As the Commission rightly points out, the judgment under appeal is not based on the premiss that high prices in themselves constitute an infringement of art.81(1) EC. On the contrary, as is apparent from the very wording of [143] of the judgment under appeal, high prices merely arise as the result of the MIF which limit the pressure which merchants could exert on acquiring banks, with a resulting reduction in competition between acquirers as regards the amount of the MSC."

159. Mr Hoskins challenged this conclusion on a number of grounds. First he submitted that the fact that a higher price is produced by one methodology rather than another is not in itself a sufficient criterion for establishing a restriction of competition; he gave as an example an auction, which is specifically designed to achieve a higher price for the seller but is not anti-competitive for that reason alone. This is true, but irrelevant to the current debate. What makes the increase in price anti-competitive in this case is the effect it has on the ability of acquirers to compete for merchants' business. The analogy with an auction is a false one, because an auction involves a single seller, not a group of sellers who reach a collusive agreement. An auction is merely a platform on which competition between buyers is maximised vis a vis a single seller. Even in an auction with a reserve, in which a seller sets a minimum price, there is nothing anti-competitive because a single seller is free to set a price, absent abuse of a dominant position. The difference between a seller's auction reserve and the MIF is that the former does not involve a relevant collusive agreement or concerted practice, whereas what engages Article 81 is a "collective act" (see *MasterCard* Commission Decision at paragraph 457). The only collective act or collusion is the agreement between buyers and sellers for the auction process to take place; that is not collusion on a given or minimum price but collusion to set a competitive process for determination of the price. By contrast, setting the MIF involves a collusive agreement to set a minimum price for the MSC without any such process.

160. Secondly Mr Hoskins submitted that it was contrary to principle to assess whether there has been a restriction of competition by assuming a counterfactual which suffers from the same alleged vice as the actual, which was what the court was being asked to do in this case; no MIF or a low MIF created a floor for the MSC just as much as MIFs at the level set. However in a no MIF counterfactual the alleged vice is not the

same as the actual: there is no floor. Nor is it the same if the counterfactual is a lower putatively lawful MIF, in which case the counterfactual is a different floor, and one which ex hypothesi does not suffer from the alleged vice because it is set at a level which is justifiably competitive.

161. Thirdly Mr Hoskins submitted that the evidence of both experts was that competition in the acquiring market is not affected by the level of the MIF. This was a mischaracterisation of the evidence. Mr Dryden's evidence was not that there would be no material difference in competition *on the acquiring market*, but merely that the level of the MIF did not affect the ability of acquirers to compete with each other *on the acquirer's margin*. His evidence was that the MIF **did** restrict competition by creating a floor, a restriction which is not removed or mitigated by the ability to compete on margin. Dr Niels stated that "Even if the MIF has the effect of raising the price in the acquiring market, this does not restrict acquirer's ability to compete on the level of acquiring margin. Acquiring competition would be the same whether the MIF is set at say zero or at 1%." This reasoning is fallacious because it conflates competition on "the level of the acquiring margin" with "acquiring competition" as a shorthand for competition on the acquiring market. It ignores the restriction on an acquirer from setting a MSC below the MIF. It is equivalent to saying that a manufacturers' pricing agreement which inflates the price charged to wholesalers is not a restriction of competition on the retail market because wholesalers are free to compete on the margin of profit they charge in the retail price to customers, a proposition whose falsity is self-evident.

162. Fourthly, Mr Hoskins submitted that a prohibition on ex post pricing was not a likely counterfactual, relying on the evidence of Mr Douglas and others that it was not one of the commercial options considered in the event of the MIFs being ruled to be unlawful. I have already explained why this is not a bar to the zero MIF/no MIF counterfactual.

Article 101(1) Issue 3: the death spiral argument applied to the zero MIF counterfactual

163. Three sub issues arise:

(1) Is it legally permissible to take account of competition?

(2) If so, what assumptions are to be made about Visa's MIFs in the counterfactual world?

(3) If the counterfactual assumption is of Visa's MIFs as set, would the MasterCard scheme have collapsed?

Competition relevant?

164. The Claimants rely upon the decision of the General Court in *Metropole Television (M6) v EC Commission* (2001) T-112/99 [2001] 5 CMLR 33, and in particular paragraph 109. What was said was in the context of the ancillary restraint doctrine, but the Claimants argue that if an analysis of competition is impermissible for the ancillary restraint doctrine, it must equally be impermissible for the restriction of competition analysis. I will consider the argument first in the context of the ancillary restraint doctrine and then in the context of the restriction counterfactual.

165. In *Metropole*, the General Court was concerned with an appeal by a partnership of French television companies from a negative clearance decision by the Commission in which they argued that the Commission had wrongly given clearance for only three years when it should have given clearance for the full duration of the relevant agreement as falling within the ancillary restraint doctrine and therefore outside what was then Article 81(1). The provision under scrutiny gave the partnership preferential broadcasting rights in respect of certain programmes produced by the parties to the agreement. They argued that it was objectively necessary to have such a restriction because the object of the partnership was to break into the market for the broadcasting of satellite pay-TV programmes and services in digital mode. The General Court upheld the Commission's decision that the competition faced by the partnership in breaking into the new market was irrelevant in determining whether the restriction was objectively necessary for the operation of the partnership: the ancillary restraint doctrine was a relatively narrow and abstract one in which the inquiry was directed simply to whether the restraint was necessary to implement the main operation, not whether it was necessary to make the main operation a commercial success. At paragraphs 107 to 109 the General Court said:

> "107 As regards the objective necessity of a restriction ….. it would be wrong, when classifying ancillary restrictions, to interpret the requirement for objective necessity as implying a need to weigh the pro and anti-competitive effects of an agreement. Such an analysis can take place only in the specific framework of Article 85(3) of the Treaty.
>
> 108 That approach is justified not merely so as to preserve the effectiveness of Article 85(3) of the Treaty, but also on grounds of consistency. As Article 85(1) of the Treaty does not require an analysis of the positive and negative effects on competition of a principal restriction, the same finding is necessary with regard to the analysis of accompanying restrictions.
>
> 109 Consequently, as the Commission has correctly asserted, examination of the objective necessity of a restriction in relation to the main operation **cannot but be relatively abstract**. **It is not a question of analysing whether, in the light of the competitive situation on the relevant market, the restriction is indispensable to the commercial success of the main operation but of determining whether, in the specific context of the main operation, the restriction is necessary to implement that operation**. If, without the restriction, the main operation is difficult or even impossible to implement, the restriction may be regarded as objectively necessary for its implementation." (my emphasis)

166. It concluded:

> "120 It must, however, be observed, first of all, that the fact that the exclusivity clause would be necessary to allow [the partnership] to establish itself on a long-term basis on that

> market is not relevant to the classification of that clause as an ancillary restriction,
>
> 121 As has been set out in paragraph [106] above, such considerations, relating to the indispensable nature of the restriction in the light of the competitive situation on the relevant market, are not part of an analysis of the ancillary nature of the restrictions. They can be taken into account only in the framework of Article 85(3) of the Treaty…"

167. MasterCard submitted that this did not reflect the jurisprudence of the CJEU, in decisions both before and since, by which I am bound.

168. In *Remia BV & others v The Commission* (1985) Case 42/84, the Court was concerned with two agreements for the transfer of businesses manufacturing pickles and sauces which contained non-competition clauses intended to protect the purchasers from competition from the vendors on the same market immediately after the transfers. The Commission had refused the transferees' application for exemption under what was then Article 85(3). In the context of the ancillary restraint doctrine the CJEU said:

> "17 It should be stated at the outset that the Commission has rightly submitted - and the applicants have not contradicted it on that point - that the fact that non-competition clauses are included in an agreement for the sale of an undertaking is not of itself sufficient to remove such clauses from the scope of Article 85 (1) of the Treaty.
>
> 18 **In order to determine whether or not such clauses come within the prohibition in Article 85 (1), it is necessary to examine what would be the state of competition if those clauses did not exist.**
>
> 19 If that were the case, and should the vendor and the purchaser remain competitors after the transfer, it is clear that the agreement for the transfer of the undertaking could not be given effect. The vendor, with his particularly detailed knowledge of the transferred undertaking, would still be in a position to win back his former customers immediately after the transfer and thereby drive the undertaking out of business. Against that background non-competition clauses incorporated in an agreement for the transfer of an undertaking in principle have the merit of ensuring that the transfer has the effect intended. By virtue of that very fact they contribute to the promotion of competition because they lead to an increase in the number of undertakings in the market in question.
>
> 20 Nevertheless, in order to have that beneficial effect on competition, such clauses must be necessary to the transfer of the undertaking concerned and their duration and scope must be strictly limited to that purpose. The Commission was therefore

> right in holding that where those conditions are satisfied such clauses are free of the prohibition laid down in Article 85 (1)."

(my emphasis)

169. In in *Gottrup-Klim Grovvareforeni v Dansk Landbrugs Grovvareselskab AmbA (DLG)* (1992) C-250/92, the Court was concerned with a provision in a farming cooperative purchasing agreement that its members could not belong to a competing cooperative. In addressing whether such a provision was objectively necessary for the purposes of the main operation of a cooperative collective, the CJEU said:

> "28 In the second set of questions, the national court seeks to ascertain whether a provision in the statutes of a cooperative purchasing association, the effect of which is to forbid its members to participate in other forms of organized cooperation which are in direct competition with it, is caught by the prohibition in Article 85(1) of the Treaty.
>
> 29 The plaintiffs in the main proceedings claim that the object or effect of such an amendment to the statutes is to restrict competition, inasmuch as the objective pursued was to put an end to 'B' members purchasing through LAG in competition with DLG, and thus to acquire a dominant position on the markets concerned.
>
> 30 A cooperative purchasing association is a voluntary association of persons established in order to pursue common commercial objectives.
>
> 31 **The compatibility of the statutes of such an association with the Community rules on competition cannot be assessed in the abstract. It will depend on the particular clauses in the statutes and the economic conditions prevailing on the markets concerned.**
>
> 32 In a market where product prices vary according to the volume of orders, the activities of cooperative purchasing associations may, depending on the size of their membership, constitute a significant counterweight to the contractual power of large producers and make way for more effective competition.
>
> 33 Where some members of two competing cooperative purchasing associations belong to both at the same time, the result is to make each association less capable of pursuing its objectives for the benefit of the rest of its members, especially where the members concerned, as in the case in point, are themselves cooperative associations with a large number of individual members.

> 34 It follows that such dual membership would jeopardize both the proper functioning of the cooperative and its contractual power in relation to producers. Prohibition of dual membership does not, therefore, necessarily constitute a restriction of competition within the meaning of Article 85(1) of the Treaty and may even have beneficial effects on competition.
>
> 35 Nevertheless, a provision in the statutes of a cooperative purchasing association, restricting the opportunity for members to join other types of competing cooperatives and thus discouraging them from obtaining supplies elsewhere, may have adverse effects on competition. **So, in order to escape the prohibition laid down in Article 85(1) of the Treaty, the restrictions imposed on members by the statutes of cooperative purchasing associations must be limited to what is necessary to ensure that the cooperative functions properly and maintains its contractual power in relation to producers.**" (my emphasis)

170. The *Metropole* judgment in 2001 made no reference in the relevant section to the *Gottrup-Klim* judgment, but did refer to *Remia* at paragraph 110, immediately after the paragraph relied on by the Claimants, in the following terms:

> "110 Thus, in the judgment in *REMIA v. E.C. COMM1SSION,* the Court of Justice held that a non-competition clause was objectively necessary for a successful transfer of undertakings, inasmuch as, without such a clause, "and should the vendor and the purchaser remain competitors after the transfer", it is clear that the agreement for the transfer of the undertaking could not be given effect. The vendor, with his particularly detailed knowledge of the transferred undertaking, would still be in a position to win back his former customers immediately after the transfer and thereby drive the undertaking out of business."

171. This is an accurate summary of *Remia*, but does not support the statement in the previous paragraph or the conclusion of the General Court at paragraph 120. On the contrary, *Remia* is inconsistent with its reasoning at paragraph 109 and conclusion at paragraph 120, because in *Remia* the CJEU held that competitive effects on the purchaser, in the absence of the restriction, were the very thing which had to be taken into account when deciding whether the ancillary restraint on the seller of a non-competition clause was necessary.

172. In the *MasterCard* General Court Judgment in 2012, the General Court made no reference to *Remia* or *Gottrup-Klim* but relied on *Metropole* in the following paragraphs:

> "89 As [*Metropole*] shows, examination of the objective necessity of a restriction is a relatively abstract exercise. Only those restrictions which are necessary in order for the main operation to be able to function in any event may be regarded as falling within the scope of the theory of ancillary

> restrictions. Thus, considerations relating to the indispensable nature of the restriction in the light of the competitive situation on the relevant market are not part of an analysis of the ancillary nature of the restriction (see, to that effect, [*Metropole*] at [121]).
>
> 90 Accordingly, the fact that the absence of the MIF may have adverse consequences for the functioning of the MasterCard system does not, in itself, mean that the MIF must be regarded as being objectively necessary, if it is apparent from an examination of the MasterCard system in its economic and legal context that it is still capable of functioning without it."

173. In the *MasterCard* CJEU Judgment, the CJEU did not refer to Metropole, but cited both Remia and Gottrup-Klim when defining the ancillary restraint doctrine at paragraph 89, quoted earlier.

174. At paragraph 111 the CJEU stated that in the context of objective necessity the question was whether the counterfactual was realistic and "enabled the MasterCard system to be economically viable". Economic viability necessarily requires consideration of the competitive context in which the activity is carried out. Indeed competitive pressures are likely to be one of the most important aspects of any economic effect on the main operation in the counterfactual world.

175. It is noteworthy that when the CJEU referred to what the General Court had said at paragraphs 89 and 90 of the latter's judgment, it carefully did not endorse the reliance on Metropole or the principle the General Court derived from it. At paragraph 94 it chose to quote and endorse only parts of paragraphs 89 and 90 of the General Court Judgment, and in particular it carefully omitted the parts which purported to rely on and apply the *Metropole* principle for which the Claimants contend:

> "94 In ruling, in [89] of the judgment under appeal, that:
>
> "[o]nly those restrictions which are necessary in order for the main operation to be able to function in any event may be regarded as falling within the scope of the theory of ancillary restrictions,"
>
> and in concluding, in [90] of the judgment under appeal, that:
>
> "the fact that the absence of the MIF may have adverse consequences for the functioning of the MasterCard system does not, in itself mean that the MIF must be regarded as being objectively necessary, if it is apparent from an examination of the MasterCard system in its economic and legal context that it is still capable of functioning without it,"
>
> the General Court did not, therefore, err in law."

176. In my judgement the CJEU jurisprudence clearly establishes that the court can and must take account of competition facing the main operation when considering whether the ancillary restraint is objectively necessary to the main operation, and the passage in *Metropole* relied on by the Claimants is out of line with that jurisprudence. In particular:

(1) Paragraph 18 of *Remia* makes clear that competition is relevant. Indeed the essence of the whole passage from that decision which is quoted above is that it was the competition faced by the purchaser from the vendor which was capable of rendering a non-competition clause necessary as an ancillary restraint. Mr Lowenstein pointed out, correctly, that the relevant competition in that case, to which the Court was referring in paragraph 18, was competition between the two parties to the agreement, not competition from third parties in the market. But this seems to me to be a distinction without a relevant difference. I can see no logical reason for confining the inquiry into the effect of competition to only one source of competition. If competition from the other party to the agreement is relevant in determining whether the ancillary restraint is necessary for the survival of the main operation, it is difficult to see why competition from third parties which makes it equally necessary should be irrelevant.

(2) Similarly *Gottrup-Klim* makes clear at paragraph 31 that the inquiry must address "the economic conditions prevailing on the markets concerned". The prevailing economic conditions will include those which are brought about by competitive activity. The whole passage quoted above illustrates that it was the competitive disadvantages which the cooperative might face if a rival cooperative were used which were capable of taking the restrictive provision outside the scope of Article 101(1).

(3) Equally the references in paragraph 111 of the CJEU *MasterCard* Judgment to "economic viability" dictate that account is to be taken of the economic effect of competition.

(4) The General Court in *Metropole*:

(a) cited *Remia* but stated its reasoning and conclusion in terms which were simply inconsistent with that decision; and

(b) stated at paragraph 109 that the exercise is "relatively abstract" without referring to Paragraph 31 of *Gottrup-Klim* which states in terms that the exercise is not an abstract one and makes clear that it requires examination of the actual economic circumstances.

(5) The CJEU in *MasterCard* reaffirmed that the principles were to be found in *Remia* and *Gottrup-Klim* and carefully did not approve the General Court's reliance on *Metropole* or its assertion that the competitive situation on the relevant market is not part of the analysis.

177. This conclusion seems to me to be consistent with the purpose of the ancillary restraint doctrine and its rationale within the framework of the control of anti-competitive activity laid down in Article 101. Where an operation has a neutral or

positive competitive effect, it is not objectionable; therefore it ought not to be rendered unlawful by reason of some constituent element being a restriction if taken in isolation from the greater operation of which it forms a necessary part. If it is a necessary part of a desirable whole, the restraint "escapes" the application of Article 101(1): it is simply outside the scope of the type of restraints which are offensive to EU competition law. The doctrine is aimed at permitting the main operation where it would be unable to function if the constituent part were removed. That involves choosing a counterfactual which is "realistic". If the main operation would be unable to survive in the realistic counterfactual world as a result of competition, the policy of the doctrine is engaged. There is no logic in drawing a distinction between non survival which arises from something inherent in the structure of the main operation itself and non-survival arising from external pressures on the main operation in the realistic counterfactual world. It is clear from paragraph 111 of the *MasterCard* CJEU Judgment that the inquiry has to address whether the operation is "economically viable". To include economic consideration of all kinds other than competition is illogical, and moreover likely to be impractical in many cases. Further, such exclusion is inconsistent with the concept of the counterfactual being "realistic". An ancillary restraint counterfactual which ignores what would in fact happen when the counterfactual assumptions are made can hardly be regarded as realistic.

178. Mr Lowenstein's explanation of the rationale for the restrictive approach for which he was contending was that at the Article 101(1) stage, all one was concerned with was whether the restraint was necessary for the main operation to function at all, because if it is argued that the restriction is to benefit competition with third parties, that is an argument about the pro-competitive benefit of the restriction, which falls to be analysed under Article 101(3). This echoed what was said in paragraphs 107 and 108 of *Metropole* which immediately precede the passage relied on. But the approach dictated by *Remia* and *Gottrup-Klim* does not cut across the scheme of Articles 101(1) and 101(3) and does not require any weighing up of pro- and anti-competitive effects which is the function of Article 101(3). It requires an analysis of whether the main operation requires the ancillary restraint to be in place in order to be able to operate in the realistic counterfactual world. It starts from the premise that the main operation is desirable in competition terms because it has positive or neutral competitive effects. If that is so, the restrictive part falls outside the scope of Article 101 altogether if it is a necessary part of the desirable main operation. In deciding whether it is necessary, one examines what would happen realistically without it. If competition would kill off the main operation without the restriction being in place, the restriction is necessary for the main operation. That does not involve weighing pro and anti-competitive benefits, or making a value judgement in relation to such benefits; it is a binary question whether the main operation would survive at all in the realistic counterfactual world, taking account of such competitive pressures as would exist in that counterfactual world.

179. Mr Lowenstein also relied on the decision of the CJEU in *Pronuptia de Paris v Schillgalis* (Case 161/84) [1986] ECR 353; [1986] 1 CMLR 414, which was decided after *Remia* and before *Gottrup-Klim*. The case concerned restrictions in franchising arrangements for selling wedding dresses. At paragraphs [14] to [15] the Court identified the legitimate pro-competitive aspects of a franchise distribution agreement in permitting a franchisor to take advantage of his business experience and acumen in building up his know-how and commercial methods, which meant that it was not by

itself a restriction on competition. At paragraphs [16] to [22] the Court identified restrictions in the franchising agreement which were justifiable as objectively necessary for the franchisor's business and fell outside the scope of Article 101(1); these included restrictions on the franchisee from opening a shop in an area where he would be in competition with another franchisee. They were outside Article 101(1) because they were objectively necessary for the franchisor's business in preserving the legitimate protection of his know-how. At paragraphs [23] to [24], on the other hand, the Court addressed a clause which required the franchisee to sell the franchised goods only at the named location, the vice of which was that the franchisee was prevented from doing so at a second location; and because this was a term for all franchisees it involved the franchisor determining the geographical division of the market for the franchised goods. As the Court put it: "The juxtaposition of clauses of this type results in a kind of market partitioning between the franchisor and the franchisees or among the franchisees and thus restricts competition within the network." It was for that reason that the clause was held to be a restriction of competition falling within Article 101(1).

180. In the context of that clause, the Court went onto say in the passage relied on by Mr Lowenstein at [24]:

> "It is of course possible that **a prospective franchisee would not take the risk of becoming part of the chain**, investing his own money, paying a relatively high entry fee and undertaking to pay a substantial annual royalty, unless he could hope, thanks to a degree of protection against competition on the part of the franchisor and other franchisees, that his business would be profitable. **That consideration, however, is relevant only to an examination of the agreement in the light of the conditions laid down in Article 85(3).**" (his emphasis)

181. This does not assist the Claimants or cast doubt on the analysis or conclusions I have reached above. The passage comes at the end of an analysis of what is necessary for *the franchisors'* business and in particular necessary for the existence of such a franchise business which taken as a whole is neutral in competition terms. As the terms of the preceding paragraphs make clear, the passage is addressed to the question whether the franchisor could escape the operation of Article 101(1) by invoking the benefits to a franchisee of such a restriction, so as to justify the restriction *from the point of view of the franchisor's operation as one which attracted franchisees*. In the language of the ancillary restraint doctrine, the "main operation" being considered was that of the franchisor, not the franchisee. In that context, the competition faced by the franchisee was a consideration which fell within Article 101(3) rather than 101(1) because it was a franchisor asserting that the restriction conferred a benefit to it, the franchisor, in attracting franchisees; but that benefit could not take the franchisor outside the scope of Article 101(1) because the franchisor could not suggest that it was objectively necessary for his operation; it was therefore a benefit (to the franchisor) which fell to be weighed in the Article 101(3) exercise. The Court was not concerned with whether the term was objectively necessary for the survival of a franchisee, and the passage relied on was simply not addressed to an issue of whether competition faced by the franchisee made the restriction objectively necessary for the franchisee's operation. It tells one nothing about the relevance or

otherwise of market competition to that question, or to the issue which arises before me.

Competition relevant to restriction of competition?

182. Competition from Visa (and Amex) is an equally relevant factor if the death spiral argument is being considered not for the purposes of the ancillary restraint doctrine, but for the purposes of whether there is a restriction of competition which fulfils Article 101(1).

183. In *Société Technique Minière* (Case 56/65) the CJEU stated that when determining whether there was a restriction of competition within what was then Article 85(1) "the competition must be understood within the actual context in which it would occur in the absence of the agreement in dispute" and that this requires the purpose (or effect) of the agreement to be considered "in the economic context in which it is to be applied". The economic context must take account of the economic effect of competitive activity.

184. The CJEU made clear in the *MasterCard* CJEU Judgment that in order to determine whether the impugned provision has an appreciable adverse effect on the relevant market compared with the counterfactual, it is necessary to take account of likely developments on all markets which might have an effect on the relevant market: see paragraph 177. In this case the relevant market on which to assess whether there is a restriction is the acquiring market, but in order to do so it is necessary to take account of likely developments on the issuing and inter-system market because the two sided nature of the platform results in interaction between the markets: see the *MasterCard* CJEU Judgment at paragraphs 177-179.

185. Accordingly the effect of competition from Visa in the inter-system market is relevant to the assessment of the impact on the acquiring market in the restriction counterfactual world. If the likely development on the inter-system market would be the collapse of the MasterCard scheme, so as to eliminate the MasterCard acquiring market altogether, that is a relevant consideration. Accordingly the death spiral argument is available for the restriction of competition issue just as it is for the ancillary restraint issue.

Visa MIFs in the counterfactual world

186. Mr Lowenstein submitted that if Visa's MIFs were unlawfully anti-competitive, the counterfactual would have to assume Visa MIFs which were lawful. As he put it "two wrongs cannot make a right". Although this appeared to be in issue for most of the hearing, Mr Hoskins ultimately conceded the principle, and accepted that if the court were to find Visa's MIFs to be unlawful, the counterfactual world would involve taking MIFs which Visa could lawfully set, not those which it actually set.

187. It was also common ground that because the inquiry is what one assumes in a hypothetical counterfactual world, it is sufficient for the Claimants' argument that Visa's MIFs be unlawful without regard to complications of whether or when a regulatory body would have so declared them if MasterCard had reduced its MIFs to zero. If competition is to be taken into account in the counterfactual world it can only be lawful competition. Just as the counterfactual hypothesis is of MasterCard

voluntarily adopting a zero MIF, or in the alternative counterfactual a putatively lawful MIF, so too the counterfactual is of Visa voluntarily adopting a lawful MIF, or in the alternative counterfactual a putatively lawful MIF, not that it is forced to by regulatory action.

188. Mr Lowenstein in turn confirmed that he did not seek to *prove* that Visa's MIFs were unlawful and was not inviting the court to make *a finding* that Visa's MIFs were unlawful. Nevertheless, he submitted, this court could and should proceed upon the *assumption* that they were unlawful to the same extent as MasterCard's MIFs because the schemes were materially identical. MasterCard challenged the logic or validity of any such assumption.

189. I have concluded that if the premise is correct, namely that the schemes are materially identical, Mr Lowenstein is correct that I must assume in the counterfactual world that Visa's MIFs would be constrained to the same extent as MasterCard's and there would be no differential which could support the death spiral argument. My reasons, which do not entirely coincide with those advanced by Mr Lowenstein, are as follows.

190. Compared with the counterfactual under consideration of a MasterCard zero MIF, the MasterCard MIFs are a restriction of competition within Article 101(1) (as I have found under issue (2)) unless (a) saved by the death spiral argument or (b) exempt under Article 101(3). One can ignore for present purposes whether the MasterCard MIFs would be saved by exemption under Article 101(3) because if they are exempt under Article 101(3), the death spiral argument now under consideration is irrelevant. So the counterfactual of a MasterCard zero MIF assumes that the materially identical Visa MIFs are a restriction of competition unless saved by an equivalent death spiral argument to the effect that they would have been necessary for the Visa scheme to survive in the face of competition from MasterCard's actual MIFs as set by MasterCard.

191. Such an argument faces two obstacles. First the circularity of reasoning betrays its falsity. Each scheme is only saved from being a restriction of competition if the other is lawful, but the other cannot be lawful if they are materially identical. The lawfulness of one cannot be saved solely by reason of the existence of the other when what has to be assumed in a counterfactual world is that the other is a hypothetically lawful scheme.

192. Secondly the reasoning is internally inconsistent. It starts by assuming a counterfactual in which the MasterCard MIF is set at zero; but it only holds good if the MasterCard MIFs are at a positive level above Visa's because it is only in such circumstances that there could be a Visa death spiral argument which would render the Visa restriction of competition lawful.

193. Put another way, MasterCard's argument involves asserting that it escapes Article 101 in relation to a practice which in fact restricts competition compared with a zero MIF counterfactual by arguing that it would face elimination by reason of competition from a competing scheme which is itself unlawful unless it would be saved because it would be eliminated by competition from MasterCard. If the schemes are identical the circularity of reasoning illustrates that the argument is self-serving. Moreover it is internally inconsistent because the counterfactual assumes a zero MasterCard MIF but

the lawfulness of the materially identical Visa scheme assumes MasterCard's MIFs as actually set in order to make good a Visa death spiral.

194. I have expressed the point in terms of the restriction of competition argument, but it applies logically and in the same way in the context of the ancillary restraint counterfactual. The ancillary restraint counterfactual is a MasterCard zero MIF. MasterCard seeks to justify the MIFs as necessary for the survival of the MasterCard scheme because of competition from Visa's MIFs. But if the schemes are materially identical, Visa's MIFs, which are also a restraint, could only be justified as an ancillary restraint if necessary for the survival of the Visa scheme, which could only be established in the face of MasterCard's MIFs being as set, rather than, as required by the counterfactual world in which the argument arises, a zero MasterCard MIF. In a zero MasterCard MIF world, Visa could not justify positive MIFs as necessary to its survival by reference to competition from MasterCard.

195. This is obviously a sensible result in the context of regulation of competition. In the course of argument I put the example of a manufacturers' price cartel which anti-competitively raised prices for consumers, and asked whether such a cartel could be justified as lawful on the grounds that it was the only way the manufacturers could stay in business in the face of a similar cartel of other manufacturers. Mr Hoskins accepted that such an argument would not be available, but on the grounds that cartels were restrictions *by object*, which were unlawful per se irrespective of effect, which would not apply to a consideration of agreements said to be anti-competitive *by effect* only. This does not strike me as a material distinction. If one posits a "cartel" agreement which on its particular facts had an anti-competitive effect, there is no reason why it should be saved by a rival "cartel" agreement which was anti-competitive by effect any more than if either or both were anti-competitive by object. If it were established that the terms of the anti-competitive agreements were materially identical, it would be a surprising result if each escaped unlawfulness by reference to competition from the other. Indeed it would be a result which is inconsistent with the policy behind Article 101.

196. The analysis also holds good for the alternative counterfactual of a putatively lawful MIF. Suppose, for example, that a MasterCard MIF of 0.5% would be exemptible under Article 101(3). If the schemes are materially identical, the assumption in that counterfactual world would be of a Visa MIF of 0.5% because any higher Visa MIF would be unlawful. Wherever the level of a lawful MasterCard MIF, the lawful Visa MIF in that counterfactual would be the same. There would be a level playing field in which case the death spiral argument would obviously not be available.

197. The CAT came to a different conclusion and accepted MasterCard's argument in the following terms:

> "159. In our judgment, MasterCard is right and Sainsbury's wrong as to the manner in which the counterfactual hypothesis is to be constructed:
>
> > (1) The agreement whose anti-competitive effect we are testing is the agreement described in paragraph 84(3)(iii)

> above, namely the agreement between MasterCard and its licensees to have a default UK MIF.
>
> (2) We stress that we are testing the anti-competitive effect of this agreement. It would be wholly wrong for us to enter upon this inquiry presuming the default UK MIF to be anti-competitive. The whole point of the counterfactual exercise we are undertaking is to provide an analytical framework whereby the effect of an agreement can be tested by hypothesising its absence.
>
> (3) That being the case, it would be wrong in principle to make any presumption as to the constraints on rivals to MasterCard, like Visa, that is not rooted or based on fact.
>
> 160. We reject, therefore, any suggestion that Visa's Interchange Fees should be presumed, in the counterfactual world, to be the same as MasterCard's."

198. To my mind this approach does not dispose of the issue. The Tribunal did not abstain from making presumptions; it made a presumption about Visa's MIFs in the counterfactual, namely that they would be as set. That must involve one of two assumptions: either it involves assuming that the lawfulness of Visa's MIFs is irrelevant to the argument, a proposition which I have rejected and which ultimately was not pursued by MasterCard; or it assumes that Visa's MIFs as set were lawful, which for the reasons I have endeavoured to explain is not a sound assumption if the premise of Mr Lowenstein's argument is correct, namely that there is no material distinction between the schemes.

199. I return, therefore, to the critical question whether the premise of Mr Lowenstein's argument is correct, namely that the schemes are materially identical. This cannot be a matter of assumption; it must depend upon the evidence before me.

200. There was no focus on the detail of the Visa scheme in the evidence or argument before me. If in the many trial bundles there is material identifying the detailed working of the Visa scheme, such as its scheme rules, its card make-up, functionality and features, its issuer and acceptance network, its detailed individual MIFs, its scheme fees etc, none of it was drawn to my attention or relied on. As I clarified with the parties at the outset, and the parties agreed, material would only be treated as put in evidence at the trial if it was referred to in the course of the hearing or in the written evidence the Court was asked to read.

201. Mr Lowenstein put the features of the Visa scheme which were sufficient to make it materially identical at a very high level of generality. In the Claimants' written opening the point was put in this way:

> "213. The Court does not have to make a *finding* that Visa's MIF would be constrained (or how it would be constrained); it need only work on the counterfactual assumptions that (a) the MasterCard and Visa schemes are very similar (b) they are direct competitors with approximately the same market share

> and (c) that, therefore, if one scheme is unlawful it is more likely than not that the other will be too."

202. When pressed in the course of oral submissions on what features of the Visa scheme he relied on, Mr Lowenstein submitted that the identity which was material for these purposes was that the Visa scheme was a four party scheme with an honour all cards rule for credit and debit cards in which Visa set a MIF to be paid to issuing banks, and retailers were charged a MSC by acquirers for which the MIF was a floor.

203. In taking this approach Mr Lowenstein argued that the only material identity which needed to be assumed was that which was relevant to the question of a restriction of competition at the Article 101(1) stage, which was where the death spiral argument arose for consideration; and that the burden of proof lay on MasterCard to point to material differences in the schemes, a burden which it had not sought to discharge.

204. I cannot accept that this is the right approach in either respect. In order for the premise to hold good, the features of the two schemes must be *materially* identical. In this context what is material is whether and to what extent the Visa MIFs as set constituted an unlawful restriction of competition infringing Article 101; or, put another way, what MIFs could lawfully have been set by Visa without infringing Article 101. That requires a consideration of all the features of the scheme which might affect the lawfulness of Visa MIFs, not just those which arise under Article 101(1) issues; it includes those which are relevant to Article 101(3) issues as they would apply to the Visa scheme. Unless the features of both schemes are identical in all respects which would affect the outcome of that legal inquiry, they are not *materially* identical. If, for example, there were features of the Visa scheme which would impact on the putatively lawful level of MIF determined as exemptible under Article 101(3), which differed from the MasterCard scheme, the schemes would not be materially identical for the purposes of the present inquiry. If Visa credit card MIFs were a restriction of competition at the levels set but would have been lawfully exemptible at say 0.7%, to take a hypothetical example, that is the lawful level of Visa MIF which would have to be taken as that with which MasterCard would have been competing, in a MasterCard zero MIF counterfactual, for the purposes of analysing the death spiral argument; or with which a putatively lawful MasterCard MIF, which on this hypothesis might be might be lower and different, would have been competing in the putatively lawful counterfactual. That would be the Visa MIF with which to populate what Mr Lowenstein called the counterfactual world of lawfulness. It is not sufficient, as Mr Lowenstein argued, to posit material identity between the schemes only in respect of aspects which are relevant to the restriction of competition issue under Article 101(1) and ignoring aspects which may affect a lawful level which is exemptible under Article 101(3).

205. As to the burden of proof on the material identity of the schemes, it is ultimately the Claimants who would fail on the relevant issue if the burden were not discharged. It is true that insofar as the issue arises for the purposes of the ancillary restraint argument, that is an argument on which MasterCard bears the evidential burden of proof. However the issue also arises for the purposes of the restriction of competition argument, on which the Claimants bear the burden of proof; and because MasterCard potentially succeeds on the Article 101(1) issue if the death spiral argument works for either ancillary restraint (making the MIFs necessary for the main operation) or

restriction of competition (making the counterfactual one in which there is no acquiring market), it is the Claimants who must ultimately establish material identity between the schemes for the purposes of the death spiral argument. Moreover, even for the purposes of the ancillary restraint argument, the evidential burden would fall on the Claimants to establish the unlawfulness of Visa's MIFs and so therefore, in the light of the way the argument has been put, would the evidential burden on material identity of the schemes. This is because the default position for the realistic counterfactual is the real world, and the court treats conduct as lawful unless and until it is shown to be unlawful. If the Claimants had not asserted the unlawfulness of Visa's MIFs, on the grounds of material identity, MasterCard would not have needed to address the question and would not have failed in discharging its evidential burden on the ancillary restraint issue merely by failing to adduce evidence of Visa lawfulness.

206. In these circumstances I do not feel able to hold that the schemes were materially identical. The features which Mr Lowenstein selected as all that were necessary to constitute material identity are by no means all those which might affect the lawful level of Visa MIFs, including in particular those which might have a bearing on Article 101(3) issues. Indeed they did not purport to be, because Mr Lowenstein submitted that the only relevant identity was for Article 101(1) purposes. I might have been more attracted to his forensic point that MasterCard had not sought to identify material differences, irrespective of the burden of proof, if he had been advocating material identity for Article 101(3) purposes.

207. The Claimants also referred to a few strands of evidence as positively showing material identity, again in the context of their argument that the only identity which was material was that relevant to Article 101(1) issues. In my judgement none of these strands, singly or cumulatively, came close to establishing material identity for Article 101(3) purposes. In particular:

(1) Mr Lowenstein pointed to paragraph 655 of the *MasterCard* Commission Decision which stated that "MasterCard's MIF is mirrored by very similar interchange agreements adopted under the Visa Scheme". This is, of course, aimed at the position between 1992 and 2007, not, for the most part, the current claim period. In any event it is at such a high level of generality as to go no further than the inadequate general features of identity on which Mr Lowenstein relied.

(2) The same is true of the Claimants' reliance on the terms of the (subsequently annulled) OFT decision of 6 September 2005 which identified the features of the two schemes at this generic level of similarity for a period when they were both described as member associations made up of the banks who were issuers and acquirers with a significant number of members in common.

(3) Mr Lowenstein also relied on paragraph 88(a) of MasterCard's written opening skeleton which said, in a section addressing the way in which MasterCard had historically gone about setting its MIFs, "Visa had similar default rules and set similar interchange fees to MasterCard for equivalent credit card products." Again this generic level of similarity is insufficiently specific to be determinative of all the similarities or differences which might influence an exemptible level under Article 101(3).

(4) The Claimants relied on a passage in Mr Willaert's evidence about the level of interchange differential at which switching to Visa would occur in which he said that "the functionality and level of acceptance of MasterCard and Visa is identical". However Mr Willaert was not there addressing his mind to differences in the schemes which might be material to the lawfully exempt levels of MIFs, but merely whether there were features of difference which might be material to his view of the level at which switching would occur. He was not suggesting material identity of the schemes in the sense in which "material" matters for the purposes of the present argument.

(5) The Claimants also referred to passages in the evidence of Mr Tittarelli that he "logically" expected the regulators to apply to Visa whatever decision would have been applied to MasterCard and on the evidence of Mr Perez that he "wanted" equal treatment. But an expectation of logical application or a desire for equal treatment is not the same as identity of outcome. The witnesses were not asked about identity, and in particular whether aspects of the schemes which had a bearing on the 101(3) question were the same, because it was the Claimants' case that the only material identity which need to be established was that relevant to Article 101(1) issues.

(6) Reliance was also placed on contemporaneous MasterCard documents prepared in anticipation of the adverse *MasterCard* Commission Decision, and in its wake. In particular the following passages were relied on:

(a) from a MasterCard note prepared for Unicredit:

> "Visa may potentially be able to operate with a higher IF level for some time (up to one year or more) but is ultimately expected to have to fall in line with the MasterCard decision."

(b) From an internal document dated 25 February 2008 prepared as a recommendation to the executive committee:

> "A differential with Visa could also affect revenues in the short run, although at a much lower scale than the Amex threat. The market will still expect MasterCard and Visa to be at comparable level at domestic levels in the mid/long term."

(c) From a Project Forward document:

> "Market is increasingly factoring in that MasterCard and Visa's IC could drop further in the near future."

(d) From a MasterCard internal Q&A document briefing employees on how best to respond to issuer queries:

> "MasterCard Europe continues to expect that the Commission will promptly hold all four-party systems to

> the same standard so that there will be a level playing field in the European payments industry."

(e) From a transcript of Mr Perez's statement to MasterCard investors:

> "we [MasterCard] expect our competitors, who operate four-party systems, will have to self assess based on the Commission's ruling today."

(7) It is fair to observe that the statements by MasterCard, in the face of the Commission Decision, that it would expect the Commission to constrain Visa in the same way, may have been motivated by damage limitation as much as genuine belief that that is what would occur; and there was a flavour of this in one of Mr Titarelli's answers that it was an expectation in the sense that they didn't want to tell the customers that Visa was going to have a competitive advantage over MasterCard for a time. It is also questionable whether any such expectation would have been justified in the light of the actual conduct of the regulators, who did not treat Visa and MasterCard in the same way prior to introduction of the IF Regulation as is apparent from the regulatory history set out earlier in this judgment. But in any event, these broad statements of expectation upon which Mr Lowenstein relied, which were either qualified or merely by way of broad generality, cannot be taken as sufficient to establish material *identity* between all those aspects of the schemes which might affect exemptible levels of the MIF over the whole claim period. General remarks about Visa's MIFs "falling in line" or being at a "comparable level in the mid/long term", which were not addressed to the point here in issue are not sufficient to support a finding of material identity for Article 101(3) purposes.

208. In response to questioning on this issue by the court, Mr Lowenstein did in the course of his final speech submit briefly, and in the alternative, that in any event there was material identity for Article 101(3) purposes because "if the schemes are materially identical for Article 101(1) purposes it is very hard to see how that would be different [for 101(3) purposes]" and "the Article 101(3) issues do not relate to matters which are scheme specific, for example issuer pass-through and the number of always-card against switching transactions will be the same [for both schemes]".

209. I am afraid that again I find myself unable to accept the submission. As is apparent from what I say later in this judgment when addressing exempt and exemptible levels of the MIF, the nature and extent of issuer pass-through is an important element in the Article 101(3) analysis. Mr Lowenstein asserted that issuer pass-through to cardholders must be the same for both schemes, but I do not understand why that should be so. The extent of pass-through of the interchange fee to cardholders is likely to be affected by the rewards and benefits attached to particular cards in particular schemes and be scheme specific. MasterCard operated premium credit cards during the period, branded as World or World Signia or World Elite, for which much higher MIFs were charged than for other credit cards (for example the UK MIF for chip and pin credit cards transactions in 2010 was 0.8% for standard cards, 1.3% for World cards and 1.5% for World Signia cards). Whilst issuers had some latitude as to exactly what benefits to offer with such premium cards, MasterCard set the rules concerning what sort of customers could hold such cards, the minimum spend on the cards and the percentage of the spend which had to

be offered by the issuer to the cardholder in the form of rewards: see for example paragraph 81 of CAT Judgment. There was also evidence before me that at various times during the claim period about one third of credit and charge cards in the UK were premium cards, but that they were mostly MasterCard cards because although Visa offered a premium card it had only a small market share, likely to be less than 1% of the market. Premium cards are not the only cards by which rewards and benefits are passed through from issuers to customers, but the mix of premium and non-premium cards is potentially relevant. The mix of such cards, and the extend of the rewards offered, is scheme specific, and influences both the weighted average of the MIFs charged and the extent of issuer pass-through, both of which inform the exempt or exemptible level of a MIF for the purposes of Article 101(3). It simply cannot be assumed that the pass-through to cardholders was identical or similar in both schemes.

210. In this context Mr Lowenstein relied on a remark in opening by Mr Hoskins, in response to a question of mine, that the data which would be applicable to the exempt or exemptible level of a Visa MIF would be the same as for MasterCard because the MIF data was based on merchant data, not MasterCard or Visa data. It would not be right, however, to treat this as a concession on a point which was not even raised by Mr Lowenstein until final submissions. Mr Hoskins no doubt took that stance because Dr Niels did not make any adjustment to his adjusted MIT MIF to take account of anything less than 100% issuer pass-through, whereas Mr Lowenstein's case (which I have accepted when considering the Article 101(3) analysis in the later section of my judgment) was that issuer pass-through was less than 100%.

211. Mr Lowenstein also submitted that a conclusion that MasterCard's MIFs were capable of being saved by reference to Visa MIFs which might themselves subsequently be held to be unlawful, would entail a risk of inconsistent judgments dictated by an accident of case management, from which the Court should draw back; and one which was all the more abhorrent if Visa were then able to justify the lawfulness of its MIFs before Phillips J on the hypothesis of competition from MasterCard MIFs which had only been held to be lawful on the hypothesis that Visa's MIFs were lawful.

212. The Court is always reluctant to reach a conclusion which may give rise to a risk of inconsistent findings. But it is a commonplace in complex commercial litigation that the court will sometimes reach conclusions on the same point as has been or will be dealt with by another court. Sometimes the evidence is not the same and/or the parties are not the same. There is sometimes an unavoidable risk of inconsistent judgments.

213. The risk of inconsistency in this case does not point in one direction any more than the other. If I were to assume that Visa's MIFs were unlawful and Phillips J were to find that they were not unlawful, the inconsistency would work against MasterCard.

214. The risk of inconsistent judgments in this case does not arise from an "accident" of case management. None of the parties to either set of proceedings supported the idea of their being heard together. That did not put these Claimants at an insuperable disadvantage in the current context. They shied away from asking me to make any findings about the lawfulness of Visa's MIFs and instead sought to make good their

case by advancing what they contended were logical assumptions which the court was bound to make. In this trial they could have adduced and relied on the necessary evidence in relation to the Visa scheme and invited me to make findings about the lawful level of Visa MIFs by reference to that evidence, at least so as to establish material identity. That need not have involved the same evidence as that which would be before Phillips J, and no findings of mine would be binding on Visa or the claimants in those proceedings; but nevertheless there was an opportunity for the Claimants to address the issue in evidence and argument before me. The risk of inconsistency to which Mr Lowenstein refers arises not so much out of case management but from the Claimants' approach to how to prove their case and meet MasterCard's defences before me.

215. It may be that Mr Lowenstein's reluctance to ask me to make any findings about the lawfulness of the Visa MIFs, prompted perhaps by my pressing him during the course of the hearing as to whether I was being asked to make such findings, arose from a concern that it might involve pre-judging the Visa trial and reaching a conclusion on the basis of different evidence and argument. If so, that would itself be a recognition that there are aspects of the evidence about the Visa scheme in that trial which are relevant to the lawfulness of the Visa MIFs and which I cannot assume would produce the same answers for the MasterCard scheme. That is inconsistent with the schemes being materially identical for present purposes.

216. I should record that in any event I had some difficulty with Mr Lowenstein's disavowal that he was seeking any finding that the Visa MIFs were unlawful. The argument is dependent on making a finding, not an assumption, that the schemes were materially identical. If they were materially identical, my finding that MasterCard's MIFs were unlawful would inevitably amount to a finding that the materially identical Visa Scheme's MIFs were equally unlawful. Mr Lowenstein's disavowal may be explained by his submission that I had to assume at this stage of the analysis a restriction of competition by MasterCard and all he was asking me to do was assume a similar restriction of competition by Visa; but for the reasons I have tried to explain, that is not sufficient to treat the Visa MIFs in the counterfactual as constrained to the same level as MasterCard's.

217. Mr Lowenstein argued in the alternative that if the Visa Scheme were not materially identical, the death spiral argument must still fail. He submitted that there would have to be some aspect of the Visa scheme which prevented its MIFs, taken by themselves, from restricting competition which is missing from the MasterCard scheme; yet if that were the case, MasterCard could have adopted that aspect as part of its own scheme, and so MasterCard's MIFs will fail the proportionality requirement of objective necessity, as they could be rendered non-restrictive like Visa's by similar means.

218. There are three answers to this argument:

(1) The counterfactual is of no MIF with a prohibition on ex post pricing or a zero MIF, but otherwise with all the existing features of the existing MasterCard scheme. If one were to posit MasterCard adopting some new and different features for its scheme which were present in the Visa scheme and relevant to the lawfulness of the Visa scheme, that would involve choosing a different fact-specific counterfactual, which would require separate consideration on its

own terms. The Claimants have not sought to identify or analyse any such different counterfactual.

(2) The argument assumes that the only question relevant to the lawfulness of Visa's MIFs is the Article 101(1) issue of restriction of competition. But as I have explained, if the Visa scheme has features which would not prevent its MIFs being a restriction of competition and exempt, but would allow for a different exemptible level under Article 101(3) it would be that different putatively lawful level which would have to be compared with a MasterCard MIF of zero or a (different) putatively lawful level for the purposes of addressing the death spiral argument.

(3) The argument also assumes that whatever distinguishing features exist in the Visa scheme, it would be open to MasterCard to adopt them. That is an assumption which cannot be made in the absence of evidence, including as a starting point identifying what those features are. This is not an argument which can be made good merely by logical reasoning at an abstract level.

219. Accordingly, in agreement with the conclusion of the CAT, but for different reasons, the death spiral argument falls to be addressed on the hypothesis that in the counterfactual world Visa's MIFs would have been set at the level which in fact occurred.

Death spiral: would the MasterCard scheme have survived in the UK and Ireland?

220. The evidence strongly supported the conclusion that if MasterCard had applied a zero MIF throughout the claim period, both Visa's MIFs and Amex's merchant fees would have remained at or near to their actual levels. It is the Visa MIFs which are here relevant because although MasterCard contended (correctly in my view) that its demise would have been hastened by competition from Amex, it is not suggested that competition from Amex alone would have caused such extinction unless the competition from Visa was sufficient to do so. The CAT reached a similar conclusion in relation to Visa's MIFs at paragraph 116. The evidence which supports that conclusion, including that of past behaviour of both MasterCard and Visa in the face of MIF changes by the other, was set out at length in MasterCard's written closing submissions; it is not necessary to recite it in this judgment.

221. The real battleground on this issue was whether, in those circumstances, the MasterCard scheme would have survived. A few points of principle need to be addressed before considering the evidence:

(1) The question is not whether the scheme would have been commercially less successful, but whether it would have existed at all: see *MasterCard* CJEU Judgment at paragraph 91. If the scheme would have survived but with a much smaller share of the market, the ancillary restraint doctrine would not be engaged, because the restraint would not be necessary for the existence of the main operation. Equally it would not prevent there being a restriction of competition because it would leave intact a MasterCard acquiring market, albeit a smaller one. If that were to occur the balancing of pro and anti-competitive benefits would arise and would fall to be determined within the

framework of Article 101(3), not 101(1). The question is a binary one: would the MasterCard scheme have survived at all?

(2) The focus is upon survival of the MasterCard four party scheme in its existing form, adjusted only to change its MIF in the counterfactual world. This disposes of the argument advanced again by the Claimants in this context which involved reliance on the evidence of the MasterCard witnesses that MasterCard would have done something to preserve its UK business, without identifying what. I have addressed the evidence above when considering whether there is some other relevant counterfactual. That is the proper context in which it falls to be considered, not the context of the death spiral argument. This is because if the alternative involved something other than the existing four party scheme, it is not part of the counterfactual world being considered. If, for example, MasterCard would have survived as a three party scheme, that is irrelevant to the current inquiry: it would involve a different counterfactual, not advanced by the Claimants, which would fall to be addressed on its own terms. Similarly if the survival of the MasterCard scheme depended upon significant changes to the model or the scheme rules, that would involve a different counterfactual which is not in play in these proceedings. The question is whether the MasterCard scheme in its current form but adjusted only for a zero MIF, would have survived in a counterfactual world of unconstrained Visa MIFs. That question is not disposed of by MasterCard's unspecific evidence that it would have done something to stay in business.

(3) If the competitive pressures would have resulted in the extinction of the MasterCard scheme over the course of the claim period, then subject to two observations, it is irrelevant how quickly that would have occurred. If they would have killed the MasterCard scheme, it does not matter whether it would have been a quick death or a slow death. The two observations are these. First, the period of time over which the issuers would have perceived that the differential would continue to exist bears upon the question whether issuers would have switched to Visa. For these purposes the counterfactual world assumes a differential over the whole claim period, and so must assume a perception on the part of issuers of such a differential over the whole claim period. Secondly, if the effect of Visa competition would have been only to produce a slow decline in the MasterCard scheme, that may inform the question whether it would have been sufficient to be terminal or whether other developments might have occurred to prevent the competition having a terminal effect.

222. It is instructive to look first at the sums of money involved for issuers in a differential between MasterCard zero MIFs and Visa actual MIFs. The CAT took Visa's weighted average credit card MIFs over its claim period to be 0.8%. In fact Visa's average was higher than this throughout almost all the claim period, between 2006 and 2014, with the average being brought down by the lower rates in 2015-2016 under the IF Regulation. I had evidence of a figure for 2012 of about 0.84%. If one were to take 0.84% as illustrative, it would reflect a difference of around £441 million per annum to all issuers in 2007, rising annually over the period (£616 million, for example, in 2011). For debit cards, taking the evidence before me of a weighted average for Visa of 0.3% in 2012, the difference would be an annual figure of £226

million for all issuers. These are annual figures; an issuer would look prospectively at the cumulative effect on revenue over the whole period in deciding whether to switch to Visa.

223. Looking at it from the perspective of individual issuers, there can be little doubt that the economic effect on the larger issuers would give rise to a very large incentive to switch. In 2007 HSBC's gross dollar value of UK MasterCard transactions was about $44 billion for credit cards and $72 billion for debit cards. At 0.84% and 0.3% respectively, that would represent about $370 million and $216 million respectively in lost interchange fees if MasterCard's MIFs were zero compared with Visa. That is for a single year. The effect over time would run into several billions of dollars. Even a relatively small issuer would suffer a significant loss of revenue. Conister Bank Ltd, for example, one of the smallest issuers in 2007, with gross dollar value of $20.9 million for all cards, would suffer an annual loss of over $100,000 if one assumed for these purposes a weighted average for Visa across both types of card of 0.5%. Again the cumulative effect of an annual figure of this size over the claim period would be substantial.

224. The cost to issuers of switching would involve (a) the administrative costs of replacing customers' cards and (b) any additional costs in acquiring and running a processing platform for Visa cards. As to the former, switching might take the form of immediate replacement of all MasterCard cards amongst customers; or what was described as "forward flow", namely switching at the natural expiry of the cards in the system, which would occur over a period of two to three years. The costs of forward flowing to Visa cards would likely not be significantly greater than those of reissuing MasterCard cards for those issuers already using Visa's processing platform. Most MasterCard issuers are likely to fall into this last category of already having Visa processing platforms: so far as credit cards are concerned, it was Mr Douglas' unchallenged evidence that most issuers issued both Visa and MasterCard credit cards during the claim period; very few were exclusive to one or the other, and most were already familiar with Visa cards and operationally set up to issue them to take advantage of the best offer from each for credit products. Moreover all major UK issuers except Barclaycard process credit transactions on outsourced processing platforms such as Tsys and First Data, which would make switching between schemes straightforward from the issuer's perspective. As to debit cards, the majority of retail bank issuers issuing MasterCard credit cards are likely already to have been issuing Visa debit cards to its customers from 2010 or so, because of Visa's dominance of the debit card market following the collapse of Maestro. The switching costs to issuers, particularly if by forward flowing, are therefore unlikely to have formed a serious deterrent to switching if the price differential justified it. The collapse of Maestro between 2009 and 2011, which I consider further below, shows that issuers were prepared to bear the costs of switching, whether the switch was on that occasion motivated by a price differential or differences in functionality or both.

225. The evidence of the MasterCard witnesses, in particular Mr Titarelli, Mr Lane, Mr Douglas, and Mr Willaert, was that if the UK MIF had been reduced to zero, MasterCard would have lost its entire UK business. Although they were speaking from their experience of dealing with issuers rather than of being issuers (with the exception of Mr Douglas who had himself worked in UK retail banking before joining MasterCard in 2005) their experience made them well placed to judge issuers'

behaviour. Their evidence was convincing on this point. By contrast, the Claimants did not seek to adduce evidence on the point from any issuer or any witness with relevant experience of issuers.

226. The experts approached it from an economic perspective. Both experts believed that a material differential between Visa and MasterCard MIFs could lead to very substantial switching, sufficient to give rise to market exit.

227. Dr Niels opined that "If MasterCard's domestic MIFs were materially lower than Visa's, MasterCard would be likely to lose all or most of its market share, as issuers and/or consumers would switch towards Visa (and Amex), as happened in the UK debit card market." Mr Dryden was more qualified, stating in his second report that "…I note that if the Court was to consider that the prohibition on ex-post pricing counterfactual should be assessed assuming Visa is unconstrained, then I consider that it is likely that this could have a substantial commercial impact on MasterCard, and cannot exclude the possibility that it might be driven from the market over some period of time." When questioned by the Court, Mr Dryden accepted there was a "very high probability" of a "very substantial shift" in these circumstances and it was a "possibility" that MasterCard would be driven out of the market.

228. Mr Dryden returned to the topic in his sixth report when addressing Dr Niels' conclusion that the differential of 0.3% posited by the CAT Bilaterals counterfactual would be sufficient for collapse, saying that "while Dr Niels may be correct in his conclusion…I do not think there is sufficient information to know that he is correct." He identified four issues on which he thought there was insufficient evidence, which are potentially relevant for the differential in the zero MIF counterfactual. The first was that "it is not clear why some issuers (especially those with lower spending customer bases) might not keep some of their customers (the lower spenders) on MasterCard at least for a period of time." Mr Dryden does not suggest that this point would prevent collapse, merely that it might delay it "for a period of time". Given the counterfactual assumes a substantial differential between the MasterCard MIF and the Visa MIF over the whole period of the claim (around 10 years), it is clear that collapse would occur over this period. Mr Willaert convincingly explained, based on his experience of actual migrations between credit card schemes, that the cost of flipping lower spenders would not prevent this from happening. Banks did not in practice migrate only part of a portfolio: if they decide to switch schemes they migrate all their customers.

229. Mr Dryden's second point was that "there would be issuers with very low spending customer bases who might fall far enough below the average spend not to [switch] at least for a period of time." Again, Mr Dryden did not suggest that this would prevent a collapse; merely that it might delay it. The size of the sums involved indicate that for even the smaller issuers the migration would make financial sense. If there were a rump of one or two issuers, merchants would be unlikely to continue to accept such cards: this is the "spiral" element in the death spiral argument. In any event, if all that remained were one or two issuers issuing a very small number of cards, it is not realistic to think that the scheme in its current recognisable form would have been maintained by MasterCard for the benefit of them or their cardholders. If anything were to be salvaged of MasterCard's UK business it would have to be some different model.

230. Mr Dryden's third point was that that "various aspects of product differentiation (i.e., the fact that the MasterCard and Visa products are not identical) could be a relevant factor that could lead (at least some) issuers to still issue cards of a scheme with lower interchange fees (at least [to] some cardholders." This is unspecific and speculative, and as Mr Dryden fairly accepted in his fifth report, the existence and materiality of such distinctions was outside his expertise.

231. Fourth, Mr Dryden suggested that brand loyalty on the part of some customers to MasterCard would mean that banks would continue to offer MasterCard cards to those customers. This theoretical possibility was ruled out as a practical or realistic one by Mr Willaert's evidence that whilst issuers will obviously take into account cardholders' preferences for brand and particular product features, if they stand to make a lot more money from one card this will inevitably dictate their decision and override cardholder preferences for brand/product features. On the basis of his experience from working with issuers and having gone through many migrations from Visa to MasterCard, the number of customers who might wish to stay with a particular scheme out of brand loyalty would be "very, very limited". This limited number of such customers would not prevent a complete migration from one scheme to the other because of the expense and work involved in maintaining a scheme just for those few customers.

232. In cross examination Mr Dryden raised a further point, suggesting that issuers would wish to maintain a second four-party scheme in the market so as "to maintain a degree of leverage in their dealing with the other card scheme". This was speculation outside the scope of his expertise, and did not address the countervailing considerations which would affect issuers, including that this would involve collective action by issuers and that the alternative four party scheme would have to be "maintained" by the issuers receiving no MIF. It is not supported by the evidence of those with experience of issuer behaviour.

233. I conclude, therefore, that in the zero MIF counterfactual world with Visa MIFs unconstrained, the MasterCard scheme would not have survived in the UK in a materially and recognisably similar form. On that hypothesis:

(1) The MIFs as set were objectively necessary as an ancillary restraint; and

(2) The MIFs as set were not restrictive of competition because in the restriction counterfactual, there would not have existed lower MasterCard MIFs (nor lower Visa MIFs).

234. It seems that the CAT was of the same opinion: it is because a zero MIF world would have threatened the very existence of the MasterCard scheme that they concluded that bilaterals would have emerged to prevent a Visa monopoly: see paragraph 174 and the paragraphs dealing with the CAT Bilaterals counterfactual summarised above.

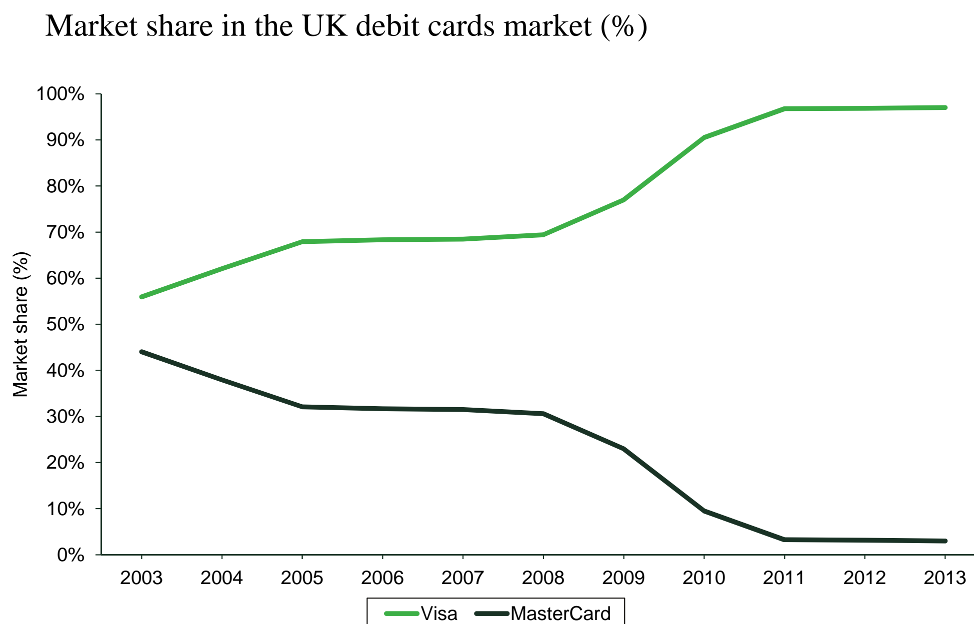
235. I have reached this conclusion without the need to address the effect of competition from Amex, but it is clear that such additional competition would have contributed further to the inevitable demise.

Maestro

236. I have also reached this conclusion without taking into account the fate of the Maestro scheme in the UK, which formed the subject matter of a good deal of disputed evidence and argument at the trial. MasterCard submitted that the demise was mainly due to the interchange fee differential between the Maestro MIF (which was not then set by MasterCard) and the Visa Debit MIF, and relied upon the dramatic loss of market share as demonstrating that even a modest difference in interchange fees leads to extensive switching. The Claimants, on the other hand, submitted that the switch was primarily driven by differences in functionality and factors other than the price differential, and accordingly provided no relevant guidance in the context of the current issue.

237. The differential between Maestro and Visa Debit increased to 4.3 pence per transaction with effect from 1 January 2007. This is equivalent to about 0.09%. Mr Willaert explained that this differential was worth around £70 million per annum to Maestro issuers. In April 2007 MasterCard launched its own Debit Card at an ad valorem rate which was equivalent to a little more than Visa's debit fixed rate; the issuers were resistant to the ad valorem element and it was relaunched a few months later with a fixed price MIF very similar to Visa's.

238. In the last quarter of 2007 both HSBC and RBS announced their decision to transfer their debit business from Maestro to Visa Debit. Between them they represented about 90% of Maestro's business. By 2009 MasterCard had gained control over Maestro pricing, and the MIFs for both Maestro and Debit MasterCard were set at a level which was competitive with Visa Debit, but by that stage the switching had taken hold and its effects were being felt. MasterCard's share of the UK debit card market declined from 2008 dropping to only to 3% by 2011, whilst Visa's share of the UK debit card market increased to 97%, as shown by the graph below.



239. Mr Willaert's evidence was that without the competitively priced Debit MasterCard alternative, it was "inevitable" that MasterCard market share would have fallen to zero. Mr Dryden agreed that if it had not been priced competitively, then MasterCard would not even have retained 3% of the market. Mr Dryden also said "it would seem to me entirely plausible that [Visa's higher interchange fees] was a very significant contributor, perhaps the dominant contributor to [this] outcome"; and agreed in cross examination that given that the value of switching was £70 million in one year, it was no surprise that Maestro's market share collapsed thereafter because it was economic sense for the issuers to switch at that level of differential.

240. Each of the factual witnesses from MasterCard who addressed this topic gave evidence that the switching from Maestro to Visa Debit was primarily due to the interchange fee differential:

(1) Mr Willaert described the interchange fee differential as the "determining factor" and said that "of course" issuers would switch for higher economics.

(2) Mr Douglas explained the significance of interchange fees from both the perspective of having been an issuer at NatWest/RBS and from working at MasterCard; and described the interchange fee differential as the "main problem" which led to MasterCard losing major issuer bank clients.

(3) Mr Perez's evidence was that it was as a result of default interchange fees being too low that MasterCard was haemorrhaging major issuers and market shares to Visa Debit.

(4) Mr Sidenius, who was involved in costs studies for Maestro rate setting, stated that "UK Maestro ultimately lost market share because [of the difference in interchange fees] to Visa, since issuers could receive a significantly higher contribution to their costs from Visa than UK Maestro".

241. There was extensive cross examination of these MasterCard witnesses by reference to contemporaneous documents, to the effect that other factors were responsible for the switch, including in particular a document headed "UK Debit strategy" dated January 14 2008 and "slide 33" from a set of slides dated 31 August 2009.

242. The 2008 document stated that the HSBC/RBS switch was the result of a combination of factors. It identified the fee differential as one of two economic factors affecting the decision, the other being the possibility of incentives given by Visa to the banks in the impending Visa IPO. As a matter of "Product offer", Visa Debit was more attractive because it was lower risk as an established product compared with Debit MasterCard; and the lower international acceptance of Maestro outside Europe, particularly in the US put it at a competitive disadvantage in the UK market. There was also identified a regulatory motive for the banks, who were both prominent participants in S2 Card Services which set the Maestro MIF, in joining Visa debit as an established product rather than switching to another MasterCard product with a higher interchange fee.

243. Slide 33 was headed "Reasons for the portfolio losses in Debit". Its headline summary was "Multiple factors influenced HSBC and RBS's decisions to migrate

their debit portfolios from [MasterCard], notably overall economics, acceptance and marketing."

244. As Mr Willaert correctly observed, it is important to distinguish between (a) reasons why the banks chose to abandon Maestro and (b) reasons why they chose Visa Debit over Debit MasterCard; but the distinction is not a clean one because MasterCard had launched MasterCard Debit to sit alongside Maestro compared with a single Visa offering. Focusing on those which were relevant to a switch away from Maestro, rather than being specific to the Debit MasterCard as a potential replacement, under the three epithets identified as "notable" in the slide 33 headline, the factors were:

(1) Overall economics: the "uncompetitive pricing" of Maestro;

(2) Acceptance: "[T]he UK was still Maestro based, providing strong UK acceptance, but inconsistent throughout Europe and little across other Global markets (with the US representing a key acceptance gap)";

(3) Marketing: "poor Maestro marketing platform and marketing support available".

245. In relation to acceptance, Mr Willaert gave three reasons why wider overseas acceptance of Visa Debit than Maestro was not a major factor namely (a) 98% of the debit volume at that time was domestic (b) Maestro was accepted overseas "where it mattered" (for example in large merchants in New York) and (c) if lower global acceptance were significant, it would be expected that Maestro would have suffered in other European markets, but that has not been the case; in Germany and the Netherlands, for example, Maestro is still one of the main debit cards issued by banks. This last point is a powerful one: where there is no price differential in Netherlands and Germany, Maestro has held its market share, suggesting that the price differential was the single most important factor in the UK. The detail of this evidence was not challenged, but I bear in mind that Mr Willaert was not at MasterCard at the time of the switch and that the acceptance deficiencies of Maestro were recorded as one of the relatively few contributing factors in both the contemporaneous documents identified above, suggesting that they were regarded as a significant factor. This impression is reinforced by a later UK Debit Strategy document of 24 October 2011 in which overseas acceptance was described as "the main weakness" of Maestro versus Visa debit and Debit MasterCard (although the document recorded that there had been some decline in acceptance over the intervening years based on a belief that Maestro was being phased out). Limited international acceptance was, in my judgement a significant factor in the decision to switch away from Maestro.

246. The documents suggest that other factors were also considered significant, including the inferior marketing of Maestro, the influence of other Visa financial incentives to the banks, and the downside of the MasterCard strategy of seeking to maintain both the Maestro and MasterCard brand, with a recognised difficulty in communicating a dual brand strategy to consumers.

247. In the CAT, the evidence relating to the Maestro decline included the same documents, and evidence from some of the same witnesses as before me. The CAT considered the evidence at paragraphs 251 to 258 and reached the conclusion at

paragraph 259 that the interchange fee differential was not the main cause of Maestro's decline but merely one of a number of factors which led to switching. Its reasoning is contained in the following passages:

> "258. We find that:
>
> (1) Unsurprisingly, sophisticated Issuing Banks like HSBC and RBS do not look only at one factor. The Interchange Fee they are likely to be paid will, obviously, be a significant factor – but, at the end of the day, it is just one consideration amongst many.
>
> (2) In this case, the significance of the Interchange Fee differential between MasterCard's offering and that of Visa was complicated by two additional factors:
>
> (i) MasterCard's offering was based on <u>two</u> products (Maestro and Debit MasterCard), with <u>different</u> Interchange Fee rates. As we have noted, the difference between Maestro's Interchange Fee and that of Visa was significant (see paragraph 250 above). But – as the MIF rates in paragraph 206 above demonstrate – the MIF for Debit MasterCard was significantly higher than that for Maestro, and so correspondingly closer to the Visa debit MIF. Although we appreciate that Table 8 above sets out the "blended" MIF for all relevant cards over the entire claim period (and not just for the time when MasterCard was engaged in the procurement process with HSBC and RBS), the figures are nevertheless instructive. The blended MIFs paid by Sainsbury's over the claim period were:
>
> (a) 0.36% for all Debit MasterCard transactions.
>
> (b) 0.19% for all Maestro transactions.
>
> (c) 0.26% for all Visa debit card transactions.
>
> Slide 33 shows that MasterCard's offering to HSBC and RBS involved a potentially higher MIF for Debit MasterCard transactions than offered in the case of Maestro transactions. The problem for MasterCard was that the "mixed" *ad valorem* plus flat fee rate it was proposing was meeting with significant Merchant push-back, doubtless because Merchants disliked the *ad valorem* element.
>
> (ii) The Interchange Fee was not the only financial consideration in favour of Visa Debit: it is clear that Visa put forward other financial incentives to tempt RBS and HSBC to transfer their portfolios.

(3) Slide 33 demonstrates a whole range of other factors that MasterCard considered would have influenced RBS and HSBC to go to Visa rather than stay with MasterCard.

(4) Cross-examination also established that Maestro (though not Debit MasterCard) suffered a number of shortcomings compared with Visa Debit. Mr Douglas, Mr Perez and Mr Willaert all accepted that Maestro had a limited international acceptance, particularly in the USA. [176] MasterCard had approximately 23 million locations worldwide, whilst Maestro had just 10 million locations. [177] Despite these witnesses' explanations that international spending represented a relatively small share of spending by cardholders, and the suggestion that Maestro found acceptance "where it mattered" (i.e. in airports and major cities), we nevertheless consider that this was a major contributory factor which led to the decision of HSBC and RBS to reject Maestro in favour of Visa Debit.

(5) Maestro also suffered from a number of other less significant shortcomings compared with Visa Debit. For example, Mr Douglas conceded that Maestro was less suitable for use in online transactions (a mode of distribution which was beginning to gain importance in 2007). The documentary evidence also indicates that the Maestro card was less able to process recurring payments, which would have reduced its convenience for some Cardholders.

Conclusion on the Maestro example

259. The evidence relating to Maestro was described by Mr Hoskins in opening as the "prize evidence" in the case. We find the contention that it was the Interchange Fee differential between Visa and Maestro that was the main cause of the collapse of the Maestro market in the UK to be unsubstantiated by the facts, and we reject it. Helpful although we found the evidence of MasterCard's witnesses in general, we do not accept their evidence on this point, preferring the analysis in MasterCard's own contemporaneous documents. We find that MasterCard has established no more than that Maestro's lower Interchange Fee was one of a number of factors which led to the decision of HSBC and RBS to reject MasterCard's bid in the procurement processes. Taking the evidence as a whole, we consider that the combined Maestro/Debit MasterCard offering was unattractive to these banks compared with the simplicity of the well-established Visa Debit offering."

248. The Tribunal referred at paragraph 258(2)(i) to the average interchange fees which Sainsbury's had paid for different types of debit cards over the claim period: an average of 0.36% for Debit MasterCard, 0.19% for all Maestro transactions and 0.26% for Visa Debit. While the Tribunal noted these were averages over the entire claim period (2006-2015), it describes them as "instructive" and appears to have

treated them as showing that banks had chosen Visa Debit over Debit MasterCard despite Debit MasterCard having higher interchange fees. If so, the evidence before me shows that the Tribunal was mistaken. The average interchange fee figures used by the Tribunal were produced by the Tribunal itself after the trial and were not, therefore, the subject of evidence or submissions. As a result, the Tribunal appears to have been unaware that, as explained by Mr Willaert in his evidence to me, in July/August 2007 the average interchange fee for Debit MasterCard was set at an almost identical level to that for Visa Debit, and as can be seen from a MasterCard 2011 analysis of the debit card market, the average interchange fee for Debit MasterCard remained close to the same level as Visa Debit until January 2013. It was only after January 2013 that Debit MasterCard began to offer materially higher rates than Visa Debit. It is this which results in the average interchange fees quoted by the Tribunal being higher for Debit MasterCard than Visa Debit. Looking at a single average for the entire claim period, therefore, concealed the fact that Debit MasterCard and Visa Debit had comparable rates from 2007 to 2013. It was not, therefore, the case, that the HSBC/RBS decision to move to Visa Debit rather than to Debit MasterCard was despite Visa Debit having lower interchange fees. When the decision to migrate was made at the end of 2007 (and for the following five years), Visa Debit and Debit MasterCard had close to identical rates. Therefore, all this shows is that, having decided to migrate from Maestro (with its low interchange fees), faced with two cards with almost identical interchange fees, RBS and HSBC chose to migrate to the established Visa Debit product rather than Debit MasterCard for reasons other than a MIF differential. This does not provide any indication that the lower interchange fees offered by Maestro were not an important factor in the decision to move from Maestro.

249. My conclusion on the evidence before me is that Maestro's uncompetitive interchange fee pricing was a very significant factor in the issuers' decision to switch away, quite possibly the single most influential one, whilst not being the only significant one. This is in line with Mr Dryden's evidence that it was "entirely plausible that [the interchange fee differential] was a very significant contributor, perhaps the dominant contributor to [this] outcome." He also said that given that the value of switching to the issuers as a whole was about £70 million, it was no surprise that Maestro's market share collapsed at that level of differential.

250. This is similar to the conclusion reached by the CAT but perhaps with a difference of emphasis which accords the fee differential more influence in the outcome.

251. The Maestro experience lends support to my conclusion that for a zero MIF counterfactual, wholesale switching would have taken place so as to lead to the collapse of the MasterCard scheme. In the counterfactual I am considering, the differential would be much greater than the Maestro differential: about 9 times greater for the credit card MIF and three times greater for the debit card MIF. The issuer loss would be very much greater than the £70 million per annum which Mr Dryden thought plausibly explained the Maestro switching. The Maestro experience supports the conclusion that the much larger differential would be fatal.

Ireland

252. Although I did not have equivalent data for issuers' revenues for Ireland, the other considerations in the above analysis hold good for Ireland as for the UK and my conclusions are the same (for the period from 20 January 2009 which is in issue). They are supported by the evidence of Mr Douglas who addressed the issue in relation to Ireland and explained how the Irish domestic debit card scheme, Laser, suffered from the higher interchange fees of Visa Debit. I accept his evidence that unless MasterCard had had MIFs at a competitive level with Visa in Ireland it would have expected to lose its entire business. It would have done so in a world in which the MasterCard MIF was zero and Visa unconstrained.

Conclusion on Issue (3)

253. I conclude, therefore, that in the zero MIF counterfactual world with Visa MIFs unconstrained, the MasterCard scheme would not have survived in the UK or Ireland in a materially and recognisably similar form. On that counterfactual hypothesis:

(1) the MIFs as set were objectively necessary as an ancillary restraint; and

(2) the MIFs as set were not restrictive of competition because in the restriction counterfactual, there would not have existed lower MasterCard MIFs (nor lower Visa MIFs).

Article 101(1) Issue 4: Death spiral argument addressed to the putatively lawful MIF

254. There are potentially two remaining questions: (1) what is the putatively lawful (lower) level of MIF; and (2) would the MasterCard scheme have collapsed in a counterfactual world with such maximum lawful MIFs and Visa MIFs unconstrained.

255. I have answered the first question in my analysis of the Article 101(3) issues later in this judgment, in which I conclude that the MIFs as set were below the exempt and exemptible level, save for the EEA debit card MIF for the earliest part of the claim period prior to June 2008. In other words there is no putatively lawful level capped below the level at which MasterCard MIFs were actually set. It follows that there is no putatively lawful lower level of MIF than that actually set with which to populate the alternative counterfactual and the death spiral argument does not arise in that context.

256. In case I am wrong in that conclusion, or in my rejection of the CAT Bilaterals counterfactual, I propose to answer the second question by identifying the level of interchange fee differential which marks the dividing line between extinction and survival for the MasterCard scheme.

257. This is obviously not an exercise which permits mathematical precision, but my assessment is that a differential of 0.2%, would be sufficient to cause issuers to switch to Visa so as to lead to the collapse of the MasterCard scheme for UK and Ireland, for the following reasons:

(1) In deciding whether to switch, issuers would mainly be driven by the perceived difference in the revenue streams from the two schemes. This

would be substantial over a period of years and would easily outweigh costs of switching. Taking HSBC's gross dollar value of MasterCard transactions in 2007 of about $44 billion for credit cards and $72 billion for debit cards, the revenue loss at 0.2% would amount to $232 million. That is for a single year. The effect over time would easily exceed a billion dollars. Even one of the smallest issuers in 2007 with gross dollar value of $20.9 million for all cards, would suffer an annual loss of over $40,000. Again the cumulative effect of an annual figure of this size over the claim period would be substantial. Looking at the entire cohort of issuers as a whole it is clear that the very substantial sums involved at a differential of 0.2% would provide a very powerful incentive to switch.

(2) The evidence of the Maestro decline indicates that a price differential of just under 0.1% was the single most important factor, although not the only factor, which led to switching in that case.

(3) The evidence of Mr Willaerts and Mr Douglas, which was adduced after and in response to the CAT Judgment and addressed the CAT Bilaterals counterfactual on the (questionable) assumption that it involved a differential of 0.3%, was that switching would start to occur at 0.05-0.1% and that at 0.3% it would be bound to occur to an extent which would eliminate the MasterCard scheme. I found this cogent and convincing evidence that wholesale and ultimately fatal switching would occur at a differential somewhere between 0.1% and 0.3%. The Claimants sought to criticise Mr Willaert in cross-examination for failing to provide any detail or examples to support this evidence, but the criticism was misplaced. Mr Douglas, whom the Claimants chose not to cross examine on this evidence, supported his views by an exposition of the financial analysis which issuers would carry out and gave a number of specific examples of switching taking place at substantially lower differentials than the 30 basis points considered by the Tribunal. The hypothesis of fatal switching at a differential of 0.3% was supported by Dr Niels.

(4) Although the figures used in (1) above apply only to the UK, the other considerations apply equally to Ireland.

258. This conclusion is not necessarily inconsistent with the CAT Judgment. The CAT reached the conclusion that if bilateral agreements at an interchange fee of 0.5% emerged, the differential between this weighted average and Visa's MIFs expressed as a weighted average would not be sufficient to lead to a MasterCard scheme collapse: see CAT Judgment at paragraph 261. The CAT took Visa's weighted average to be 0.8% although that would be an underestimate because for the whole period other than 2015-2016 Visa' MIF was higher than 0.8% with the average being brought down by the lower rates set in 2015-2016 under the IF Regulation; for example it was about 0.84% for 2012. But in any event the CAT's reasoning was not simply that the difference was between 0.5% and 0.8% and that such a difference of 0.3% was insufficient for wholesale switching. On the contrary the conclusion was based on

(1) the Tribunal's assessment that issuers would perceive the differential as short term because Visa would not be able, or inclined, to maintain its MIF at 0.8% (paragraph 261(6)); this was because if MasterCard abandoned its

"monolithic" and "one size fits all" MIF in favour of bilaterals, which would lead to different and innovative pricing structures within the MasterCard scheme, Visa would come under commercial pressure to follow suit (paragraph 261(2)); and

(2) the comparison would not be between 0.5% and 0.8% because the repackaging involved would provide other income to issuers making the apparent difference less "stark": paragraph 261(7)(i) and (ii).

259. This reasoning can only apply in the Bilaterals counterfactual being considered by the Tribunal, involving innovative pricing structures in response to the abandonment by MasterCard of its process of setting a MIF and the emergence of bilateral agreements. That is not the counterfactual I am considering, having rejected the CAT Bilaterals counterfactual. In the counterfactual I am considering MasterCard would still be setting the MIF in just the same way as now, albeit at a lower putatively lawful level, and there would be no restructuring of the market in accordance with different and innovative pricing structures.

260. The CAT also supported its conclusion by holding that an interchange fee at 0.5% would be enough to enable issuers to cover their costs and make a profit, so that it would not have led them to "drift away from the scheme": paragraph 261(7)(iii). However this does not address the effect of the differential: as Mr Douglas confirmed, if issuers would make *more* profit from the rival scheme, that is what causes the switching.

The Article 101(3) Issues

261. The rationale of Article 101(3) is expressed in paragraph 33 of the Article 101(3) Guidelines in the following terms:

> "33. The aim of the Community competition rules is to protect competition on the market as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources. Agreements that restrict competition may at the same time have pro-competitive effects by way of efficiency gains. Efficiencies may create additional value by lowering the cost of producing an output, improving the quality of the product or creating a new product. When the pro-competitive effects of an agreement outweigh its anti-competitive effects the agreement is on balance pro-competitive and compatible with the objectives of the Community competition rules. The net effect of such agreements is to promote the very essence of the competitive process, namely to win customers by offering better products or better prices than those offered by rivals. This analytical framework is reflected in Article 81(1) and Article 81(3). The latter provision expressly acknowledges that restrictive agreements may generate objective economic benefits so as to outweigh the negative effects of the restriction of competition."

262. In order to qualify for exemption under Article 101(3), an anti-competitive restriction must meet four cumulative conditions. There is an issue as to three of them in their application to the MasterCard MIFs, which are that to qualify for exemption, any given MIF must:

(1) contribute to improving the production or distribution of goods or to promoting technical or economic progress; I will use the shorthand "conferring relevant benefits" to capture this requirement and refer to it as the benefits requirement; and

(2) allow consumers a fair share of the relevant benefits; I will refer to this as the fair share requirement; and

(3) impose on the undertakings concerned only restrictions which are indispensable to the attainment of these benefits; I will refer to this as the indispensability requirement.

263. A number of points of principle arise.

Causation

264. The relevant benefits must be causally linked to the MIF; it is not sufficient to identify benefits which result from the use of cards generally or the MasterCard scheme generally. Only benefits specifically produced by the MIF can be taken into account. This is because it is the particular restrictive agreement itself which requires justification for exemption under Article 101(3); and if it has not escaped Article 101(1) altogether as a necessary ancillary restraint, it is the pro-competitive benefits of that restriction which fall to be analysed and weighed against its anti-competitive restrictive effect. This is well established: see the Article 101(3) Guidelines paragraphs 50-51, the *MasterCard* General Court Judgment at paragraph 207 and the *MasterCard* CJEU Judgment at paragraph 232.

265. The causal link must also be sufficiently direct to be capable of proof. The Article 101(3) Guidelines explain:

> "54. The causal link between the agreement and the claimed efficiencies must normally also be direct. Claims based on indirect effects are as a general rule too uncertain and too remote to be taken into account. A direct causal link exists for instance where a technology transfer agreement allows the licensees to produce new or improved products or a distribution agreement allows products to be distributed at lower cost or valuable services to be produced. An example of indirect effect would be a case where it is claimed that a restrictive agreement allows the undertakings concerned to increase their profits, enabling them to invest more in research and development to the ultimate benefit of consumers. While there may be a link between profitability and research and development, this link is generally not sufficiently direct to be taken into account in the context of Article 81(3)."

The benefits requirement: benefits to whom and on which markets?

266. Economists draw a distinction between "Total User Surplus (TUS)", sometimes also referred to as consumer welfare, and "Total Welfare (TW)". The Claimants contended that TUS was the relevant measure in this case; MasterCard contended that TW was the relevant measure. The essential distinction for the purposes of this case is that TUS benefits would be limited to those conferred on consumers, namely cardholders and merchants; whereas TW benefits would potentially include those conferred on issuers, acquirers and MasterCard itself, including their profits, as well as any wider benefits to others from the MasterCard scheme.

267. In Case T-86/95 *Compagnie Générale Maritime Belge v Commission* paragraph 343, the CJEU held that regard should be had to the advantages arising from the agreement in question, not only for the relevant market, but also, in appropriate cases, for every other market on which the agreement in question might have beneficial effects, and even, in a more general sense, for any technical or economic progress not specifically linked to the relevant market. Other case law of the CJEU has made clear that the objectives of Article 101 extend to the public interest, the interests of individual undertakings, and the economic well-being of the European Union: see in particular *Hoechst AG v Commission* Case C-46/87 paragraph 25; *TeliaSonera* Case C-52/09 at paragraph 22; *Roquette Frères SA* Case C-94/00 at paragraph 42; and *T-Mobile Netherlands*, Case C-8/08 at paragraph 38.

268. The wording of Article 101(3) recognises that the relevant benefits may be wider than those enjoyed by consumers. It provides for the exemption of a restriction "which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit", which necessarily implies that "the resulting benefit" is a wider concept than the consumer benefit which must constitute a fair share of it, i.e. a part of a greater whole.

269. The Article 101(3) Guidelines support this approach: see in particular paragraphs 13, 33, and 84-85.

270. In the MasterCard CJEU judgment, the Court held that in the case of a two-sided market such as the MasterCard scheme, the relevant consumers are not only those subject to the restriction, but the other group of consumers associated with the system: see paragraph 237.

271. In the CAT Judgment, the Tribunal made observations at paragraph 289 with which I agree:

> "(1) We consider that an "exemptible" MIF must, as a starting point, reflect the fact that it represents a price in three markets: it is the price paid by Merchants/Acquiring Banks in the acquiring market; it is the price received by Issuing Banks in the issuing market; and it is a price that affects inter-scheme competition, in that the relative Interchange Fees between schemes (e.g. as between MasterCard and Visa) will be a factor (but no more than that) bearing on Issuing Banks as to what card types they issue.

> (2) In other words, the MIF acts as a "pivot" or the "see-saw" between various markets. For this reason, a MIF that is calibrated by reference to one market only, ignoring the others, is fundamentally inappropriate. This approach is consistent with the Court of Justice's dicta at paragraphs 237-242 of its MasterCard judgment. …"

272. The benefits requirement is not, therefore, confined to benefits arising solely on the acquiring market. Subject to the important proviso that the benefits must have a direct causal link with the MasterCard MIFs (not just the scheme), it may take into account (i) benefits to all consumers on both sides of the market, merchants and cardholders; and (ii) benefits conferred on those using the Visa system insofar as the MasterCard MIF can be said to be a direct cause of such benefits through inter-system competition; and (iii) wider benefits by way of technical and economic progress.

273. It is not the Claimants' case that TUS is always the full extent of the relevant measure for Art 101(3) purposes. They submitted that the measure depends on the relevant benefits in the particular case, and that in this case TUS is the relevant measure because:

(1) profits for those who are parties to the restrictive agreement are not within the pool of relevant benefits; and

(2) any wider benefits of the scheme or payment cards generally are not directly linked to the MIF and are anyway not identified, quantified or quantifiable; reliance on the benefits of the system output of the scheme as a whole are insufficient to establish exemption.

274. The Claimants submitted that both aspects are clear from the *MasterCard* Commission Decision and General Court and CJEU Judgments. As to the exclusion of benefits conferred on those who are party to the restrictive agreement, this is made clear by the terms of the Commission Decision at paragraph 693:

> "[A]ny transfer which results from a restriction of competition must be more than compensated by benefits for somebody else other than the undertakings participating in the restrictive arrangements. The increase of sales volumes in MasterCard's scheme is clearly to the advantage of MasterCard's member banks [ie qua issuers, as they then were]. An increase of system output only contributes to appreciable objective advantages if parties other than the organisation's member banks benefit from it."

275. This is also made clear in the MasterCard General Court Judgment at paragraphs 206 and 221 approving this aspect of the Commission Decision and supported by the CJEU authorities there cited: Case T-65/98 *Van Den Bergh Foods v Commission* [2004] 4 CMLR 1 [139] and (as there cited) Cases 56/64 and 58/64 *Consten and Grundig v Commission* [1966] CMLR 418, 478; and Case T-7/93 *Langnese-Iglo v Commission* [1995] 5 CMLR 602 paragraph 180. It is also supported by the MasterCard CJEU Judgment at paragraphs 234-235. What those authorities establish is that only objective benefits are relevant for Art 101(3) purposes, by which is meant

that what may appear as subjective benefits from the perspective of the parties to the restrictive agreement (of which increased profits are a definitional example) do not count. The point is made explicit in paragraph 49 of the Article 101(3) Guidelines which is to the effect that profits made by the participants are not objective benefits and are irrelevant for Article 101(3) purposes.

276. In my judgement the Claimants' submission on this point is sound. MasterCard is correct in its general approach that consumer welfare does not form the totality of welfare benefits which are potentially relevant, as the wording of Article 101(3) makes clear, and as indeed the Claimants concede: see the authorities considered above. However benefits to the parties to the restrictive agreement are excluded. This follows as a matter of principle as well as being supported by the authority cited. It is difficult to see why the profits made by parties to an anti-competitive agreement should be included within the pool of relevant pro-competitive benefits which fall to be taken into account in determining whether they outweigh the anti-competitive effects on those adversely affected by the restriction. If the agreement in question is an anti-competitive restriction, the profits thereby made by the parties cannot easily be categorised as pro-competitive benefits or "efficiencies" in order to undertake the balancing exercise which forms the rationale behind Article 101(3). Moreover, if such profits were relevant benefits, it would have the surprising result that the greater the profit from the restrictive agreement, the easier it would be to establish exemption on the grounds that such profits were benefits which outweighed the anti-competitive effects. Of course what is done with revenues received by the parties to the restrictive agreement is capable of conferring relevant benefits on others which fall to be taken into account; but any benefit retained in the hands of a party to the anti-competitive restriction is not a relevant benefit for Article 101(3) purposes.

277. As to the second aspect, the Commission, General Court and CJEU rejected MasterCard's reliance on the benefits of the system output of the scheme as a whole as sufficient to establish exemption: see the Commission Decision at paragraphs 674, 688-693, the General Court Judgment at paragraphs 207, 220, 221, 226ff and the CJEU Judgment at paragraph 234. There is no room for consideration in this case of some more general social benefits beyond those to the MasterCard merchants and cardholders. This was the system output argument rejected in the Commission proceedings, and generally the problems of identification, and of the need for a direct causal link to the MIF, have no more been overcome before me in relation to any of the MIFs with which I am concerned than they were in those proceedings in respect of the intra EEA MIFs. For example, the wider social costs of cash, such as tax evasion or the cost of printing money, which are reduced by card use, are to a significant extent charged by banks to users through bank charges. There is no element which can be quantified as being a direct result of the MIF.

278. Accordingly the relevant benefits to be considered in this case are those conferred on merchants and cardholders only.

The fair share requirement: a fair share of what? And what share is "fair"?

279. Paragraph 85 of the Article 101(3) Guidelines states:

> "The concept of '*fair share*' implies that the pass-on of benefits must at least compensate consumers for any actual or likely

> negative impact caused to them by the restriction of competition found under Article 81(1). In line with the overall objective of Article 81 to prevent anti-competitive agreements, the net effect of the agreement must at least be neutral from the point of view of those consumers directly or likely affected by the agreement. If such consumers are worse off following the agreement, the second condition of Article 81(3) is not fulfilled. The positive effects of an agreement must be balanced against and compensate for its negative effects on consumers. When that is the case consumers are not harmed by the agreement. Moreover, society as a whole benefits where the efficiencies lead either to fewer resources being used to produce the output consumed or to the production of more valuable products and thus to a more efficient allocation of resources."

280. This invites a comparison between (1) the disadvantages to the MasterCard merchants of paying the MIF and (2) the benefits conferred by the MIF on all those who are relevant consumers for the purposes of the benefits requirement. The former must be balanced by the merchants getting a fair share of the latter. This necessarily involves identifying (3) what benefits the MasterCard merchants are getting from the MIF and (4) what share is to be regarded as a "fair" share.

281. As to (4), a fair share for the merchants must not leave them worse off as a result of the restrictive agreement; in other words the fair share requirement will not be met unless the MasterCard merchants obtain greater benefits from the MIF than the anti-competitive disadvantage it imposes on them: "the net effect of the agreement must at least be neutral from the point of view of those consumers directly or likely affected by the agreement. If such consumers are worse off following the agreement, the second condition of Article 81(3) is not fulfilled": paragraph 85 sup.

282. This is a minimum threshold for meeting the fair share requirement, but it is not necessarily the totality of the inquiry. The burden borne by merchants in paying the MIF must generate for them a fair share of all the relevant benefits conferred on others as well as themselves. If merchants receive benefits which match the restrictive burden on them, in theory they may still be receiving less than their fair share of the overall benefits. That is why the inquiry at the benefits requirement stage encompasses relevant benefits to others, and the inquiry at the fair share stage is as to a fair share of those overall benefits.

283. There are two classes of beneficiary of the MIF other than merchants who fall to be considered. The first is the issuers. Insofar as issuers receive profits as a result of the MIF, that may affect whether the merchants are getting a fair share of the benefits generated by the MIF. If the MIF creates an unfair degree of profit for issuers, merchants will not be getting their fair share of the benefits conferred by the payment of the MIF, even if they are receiving benefits which match the burden imposed by their paying the MIF.

284. The second category of beneficiary is the cardholders. Cardholder benefits fall into two categories:

(1) The benefits to cardholders attributable to the MIF include the advantages of card use from the consumers' point of view. Just as the MIF contributes to merchant benefits by increasing system output, as I explain below, so it also contributes to the benefits to cardholders through the same mechanism by increasing the merchant acceptance of cards. These cardholder benefits include:

(a) the convenience and greater security of not carrying cash (credit and debit cards);

(b) facilitation of online sales (credit and debit cards);

(c) the ability to purchase goods and services on credit (credit cards only);

(d) consumer protection rights (credit and debit cards).

(2) Additionally cardholders enjoy benefits and rewards from the use of certain MasterCard cards. Insofar as these can be attributed to the MIF, they are relevant benefits. Whether they qualify depends upon the extent to which issuers pass on any part of the MIF to their customers in the form of card benefits or rewards, or by charging less. This is what was described as "issuer pass through". The extent to which issuer pass through occurs was a matter of controversy between the parties and the experts which I address below.

285. These cardholder benefits are unlikely to affect the fair share question when it is kept in mind that it is only benefits directly caused by the MIF which are relevant. Insofar as they are benefits to cardholders as a result of the effect of the MIF on system output, the effect similarly benefits merchants by increasing the merchant benefits. Insofar as they are benefits to cardholders in the way of lower costs or rewards (eg airline flight points): if there is no issuer pass through of the MIF in the form of lower costs or rewards, they are not benefits to cardholders directly attributable to the MIF; and insofar as there is issuer pass through of the MIF to confer such benefits on cardholders, it would not be such as to render the merchants' benefits from the MIF an unfair share of the overall benefits provided that the threshold requirement is satisfied and merchant benefits at least matched the MIF: if the merchants are paying no more than the value of the benefit they receive from the MIF, I would not regard it as unfair that cardholders may also benefit to some extent from the MIF. There is nothing in the evidence to suggest that in those circumstances any additional benefit to cardholders would be disproportionately unfair.

286. I should record that MasterCard submitted that the case law leaves open the issue of whether a global approach can instead be taken, assessing all benefits (enjoyed by cardholders and merchants) against all detriments. MasterCard's submission was that if it were necessary to decide the issue (which it did not invite the court to do), there is no requirement to establish that the benefits of the MIF to merchants exceed the disadvantage to merchants; it is sufficient that the benefits to all relevant consumers exceed the disadvantages to merchants. This was said to be expressly stated in paragraph 241 of the MasterCard CJEU and to follow as a matter of logic that if it were necessary to prove that the benefits to merchants exceeded the disadvantages to them, there would be no need to consider any other relevant market. Had I been asked to decide this point I would have rejected it. Paragraph 85 of the Article 101(3)

Guidelines makes clear that it is a minimum condition of fulfilment of the fair share requirement that the net effect on the consumers who are subject to the restriction must be positive. The passage referred to in the MasterCard CJEU Judgment is addressed to the benefit requirement, not the fair share requirement. The argument from logic does not hold good, because as I have explained, net compensatory effect on the consumers affected by the restriction is a necessary condition for fulfilment of the fair share requirement, but not, as a matter of principle, a sufficient condition. As a matter of principle, if merchants were to bear an unfair proportion of the cost compared with others on whom the restriction conferred relevant benefits, they would not be getting a fair share of the benefits. As a matter of logic, therefore, it is, or at least may be, necessary to quantify the benefits to others who are beneficiaries of relevant benefits in accordance with the benefits requirement. However for the reasons I have identified it is not necessary to do so in the particular circumstances of this case.

287. Accordingly in the particular circumstances of this case I regard the only relevant questions under the fair share requirement to be (1) whether the benefits to MasterCard merchants from a MIF at any given level (if any) match the cost to those merchants of the MIF at that level and (2) whether the MIF at that level generates unduly high profits for issuers so that merchants are not getting a fair share of the benefits generated by a MIF which matches the value of the benefit to them conferred by the MIF.

Differentiated MIFs for different merchants?

288. When assessing the benefits conferred on merchants by the MIF it is the position of MasterCard merchants as a whole which must be considered, not individual merchants or groups of merchants. It is not material that the benefits produced by a restrictive agreement do not entirely compensate each particular consumer if the average consumer does enjoy that compensation and the agreement therefore produces a beneficial or neutral effect on the market generally: see Case T-131/99 *Shaw and Falla v Commission* at paragraph 163 and the Article 101(3) Guidelines at paragraph 87. Mr Lowenstein argued that to be Article 101(3) compliant it was necessary to set MIFs for different size categories of merchant, who had different cost/benefit ratios from use of cards. Larger merchants, for example, would have lower costs of cash through economies of scale and so gain a smaller benefit from a customer using a card in place of cash. This approach is not only contrary to principle and authority but impossible of application. Mr Lowenstein chose the merchant size categories which were adopted by the Commission's 2015 Survey (see below), but there was no logic or principle to such a choice. I can see no principled basis for subcategorising merchants so as to require differentiated MIFs for each category stopping short of examining the position of every single individual merchant.

The indispensibilty requirement

289. Fulfilment of the indispensability requirement must be "realistic and attainable", not "hypothetical or theoretical". The Article 101(3) Guidelines state:

> "75. The first test contained in the third condition of Article 81(3) requires that the efficiencies be specific to the agreement

> in question in the sense that there are no other economically practicable and less restrictive means of achieving the efficiencies. In making this latter assessment the market conditions and business realities facing the parties to the agreement must be taken into account. Undertakings invoking the benefit of Article 81(3) are not required to consider hypothetical or theoretical alternatives. The Commission will not second guess the business judgment of the parties. It will only intervene where it is reasonably clear that there are realistic and attainable alternatives. The parties must only explain and demonstrate why such seemingly realistic and significantly less restrictive alternatives to the agreement would be significantly less efficient."
>
> …
>
> 80. The assessment of indispensability is made within the actual context in which the agreement operates and must in particular take account of the structure of the market, the economic risks related to the agreement, and the incentives facing the parties…"

290. There are two aspects to the indispensibilty requirement. First, if a MIF at a particular level satisfies the fair share requirement, it will only be indispensable if the benefits cannot be provided by a realistic alternative to a MIF. My findings in relation to counterfactuals are dispositive of this aspect of the indispensability requirement. Insofar as there are relevant benefits conferred by the MIF, the MIF is indispensable to conferring those benefits because there is no other realistic counterfactual other than a zero or lower MIF. There is no other realistic counterfactual in which something other than a MIF could confer the relevant benefits if it be established that the MIF confers them.

291. The second aspect of indispensability arises in relation to issuer profits. If a MIF generates an equivalent level of benefits for merchants, it does not follow that it is necessarily indispensable to conferring those benefits. If the MIF creates an unfair degree of profit for issuers, it will not be indispensable to the benefits conferred on merchants by the payment of the MIF, even if merchants are receiving benefits which match the burden imposed by their paying the MIF.

The Article 101(3) exercise

292. Accordingly the exercise required in this case in determining what level of MIF, if any, qualifies for exemption involves:

(1) identifying what relevant benefits are conferred by the MIF on MasterCard merchants (the benefit requirement);

(2) quantifying the relevant benefits of the MIF to those merchants, in order to determine whether the value of the benefits exceeds the amount of the MIF (the fair share requirement);

(3) assessing issuer pass through not only as part of the quantification of benefits *caused by the MIF*, but also to determine whether the issuer profit prevents a MIF which generates equivalent benefits to merchants from satisfying the fair share and indispensability requirements.

Burden of proof and approach to the evidence

293. There was a dispute between the parties as to the burden of proof and approach to the evidence. This is important because there are evidential difficulties which infect the Article 101(3) issues. The data upon which the issues turn was in significant respects lacking or incomplete. A number of issues had to be addressed at a level of generality which reflected not only the paucity of data but also the nature of the exercise and the constraints of the legal process. Time and resources did not allow for the analysis of every permutation of the many interconnected issues. To take one example, the parties addressed their arguments, and the experts their evidence, with a view to determining the level of an exemptible MIF as two single figures in each territory, one for credit and one for debit. Although the data used was taken from various points of time over the claim period, it was often treated as if it reflected the position throughout, and there was no attempt to identify different exemptible/exempt MIFs for different parts of the period. Equally, although in practice there were many MIFs for both credit and debit cards at any given time, broken down, for example by transaction type, there was no attempt to identify more than a single MIF as a blended weighted average of such MIFs when examining both the MIFs as set by MasterCard and those levels which would be exemptible. It was a recurrent theme of Mr Lowenstein's submissions on many aspects of the Article 101(3) arguments that MasterCard had not adduced any or any sufficient evidence to address a point with the result that it should be determined in the Claimants' favour.

Burden of proof

294. There are two aspects to the issue of exemption:

(1) MasterCard contends that the MIFs as set met the criteria for exemption. The Claimants challenge this. This gives rise to issues 1(f) (g) and (h). It was common ground that MasterCard bears the burden of proof on these issues.

(2) Issue 2 requires the determination of the positive the level of the MIF, if any, which could lawfully have qualified for exemption, i.e. the exemptible level. MasterCard submitted that on this issue the burden of proof lay on the Claimants. The Claimants submitted that it lay on MasterCard.

295. MasterCard is correct in contending that the Claimants bear the burden of proof in relation to the exemptible level of the MIF. The issue of exemptibility is only relevant to the quantum of the assessment of damages. If the MIFs as set are not exempt, it follows that any exemptible MIF must be lower. In those circumstances the Claimants would have established the necessary ingredients of tortious liability, namely breach of duty and the suffering of some damage (subject to arguments in relation to pass through to customers which were rejected by the CAT and with which I am not concerned in this phase 1 trial). Whilst exemption of the MIFs as set is a liability issue, the exemptibility of a lower MIF is relevant solely to quantification of

damages. It is trite law that a claimant bears the burden of proving the extent of its loss.

296. Mr Lowenstein argued that once it was established that the MIF as set was unlawful, the Claimants had established their loss at the full amount of the MIF element of the MSCs which they had paid, and that if MasterCard sought to challenge that fact by asserting that it could and would have charged a lawful lower MIF, it was for MasterCard to prove such assertion as the party putting it forward. He also relied upon Article 101(2) which has the effect of rendering the MIFs void if they are not exempt under Article 101(3). He submitted that when it came to compensation this made the starting point that the Claimants are entitled to the full amount of the MIFs (indirectly) paid through the MSC.

297. I cannot accept that this is the right approach. The Claimants do not establish that the extent of their loss is the full amount of the MIF merely by establishing that the MIFs as set were unlawful. The extent of their loss is measured by the extent of MasterCard's tortiously unlawful activity, as required by the principles of causation. It is for the Claimants to establish the extent of their loss by reference to the extent of the unlawfulness. Put another way, their loss is to be measured not by the amount of the MIF they were required to pay, but the amount of the MIF they were unlawfully required to pay.

298. The position is no different from that of any claimant tortiously induced to pay a price for goods or services, for example by tortious misrepresentation. He does not prove his loss at the total amount paid for the goods or services merely by establishing the tortious inducement and the fact of payment; he must prove that he was induced to pay more for the goods or services than he otherwise would in the absence of the tort, usually by proving he has paid more than the market value, the difference being the measure of his loss: see for example McGregor on Damages 19th edn. at paragraph 47-055. If he makes no attempt to do this he has not proved his loss. In this case, the market value of the services for which the Claimants have had to pay by indirectly bearing the MIF can be treated as that which MasterCard could lawfully have charged by setting an exemptible MIF. It is for the Claimants to establish as their measure of loss the difference between this market value and their actual payment.

299. Article 101(2) does not affect this analysis. Its effect is to avoid the relevant restrictive agreement. If there were a claim for restitutionary relief by a party to such an agreement, Article 101(2) might well be the starting point. The Claimants, however, were not party to the agreement in the Scheme Rules by which the MIF was set, and do not make any restitutionary claim. The infringement of Article 101 is a tort, and it is this tort which founds the Claimants' claim for damages. The voiding effect of Article 101(2) cannot affect the requirement for the Claimants to prove their loss in a tortious claim for damages. Article 101(2) is not the "starting point" for, or indeed relevant to, such quantification.

300. This analysis accords with the way the Claimants pleaded their claims in their Statements of Case. Taking the Record Shop 2 Ltd Particulars of Claim as representative of all actions, as the parties did (despite that being the action which settled before trial), paragraph 37 claimed the "Overcharge" as damages, which was defined as the amount of the MSC "over and above the amount which would otherwise have prevailed had there been no such infringements". Paragraphs 41 and

42 gave particulars in terms which advanced a primary case and an alternative case. The primary case is that the Overcharge is the full amount of the MIFs because in accordance with the MasterCard Commission Decision and its read across to UK and Irish domestic MIFs, the MIFs should not have existed or should have been set at zero. The alternative case is that the Overcharge is the difference between the MIFs as set and what the Court holds to be lawful exemptible levels. This plea of quantification of damage correctly recognises that it is for the Claimants to establish the extent of the "Overcharge" above the level which could lawfully be exempt.

301. I do not here intend to express any view on whether the measure must take account of what MasterCard would lawfully have charged or what it could lawfully have charged, if it be different, which is not within the issues in the phase 1 trial. If the correct question were what MasterCard would have charged it is still constrained by what it could lawfully have charged and that is issue 2 which I have to decide. It remains an essential element of the Claimants' quantification of their loss.

302. Mr Lowenstein submitted that this analysis would result in the peculiar position that the burden of proof would be on different parties on the same issues which were being tried at the same time. It would lie on MasterCard on each of the criteria when seeking to prove exemption but on the Claimants when seeking to prove exemptibility. Each party would be carrying the burden of proof on the issues at the same time. This is indeed the result on many of the issues which arise under Article 101(3). However the principled allocation of the burden of proof should not be discarded merely because of apparent difficulties or anomalies in its application. It is not unheard of for one party to bear the burden of proof on a particular issue for one purpose and the other for another purpose. If the burden of proof is determinative of the issue, the consequence is that each party fails where it bears the burden.

Approach to the evidence

303. Whether a restriction produces relevant pro-competitive effects which outweigh its anti-competitive restrictive effects involves examination of four elements in relation to the benefits. The Article 101(3) Guidelines identify them (as "efficiencies") in paragraph 51:

> "51. All efficiency claims must therefore be substantiated so that the following can be verified:
>
> (a)The *nature* of the claimed efficiencies;
>
> (b)The *link* between the agreement and the efficiencies;
>
> (c)The *likelihood* and *magnitude* of each claimed efficiency; and
>
> (d)*How* and *when* each claimed efficiency would be achieved."

(emphasis in original)

304. Before the Commission, MasterCard had sought to rely on the benefits of the scheme as a whole, or "system output", in claiming exemption (exemptibility at any lower level of MIF was not in issue). In rejecting this argument the Commission said at paragraph 686 that "robust empirical evidence" was required and referred at paragraph 695 to "some form of convincing empirical evidence" and at paragraph 690 to a "detailed, robust and compelling analysis that relies in its assumptions and deductions on empirical data and facts".

305. Mr Lowenstein referred to these passages to support a submission that there was a particularly rigorous evidential burden on MasterCard in all aspects of the Article 101(3) issues. This to impose greater weight on the language used than it will bear. The passages are directed to a party in breach of Article 101(1) seeking to establish exemption, not to a lawful level of exemptibility for a damages claim, where different considerations are at play, as I consider below. The language used was in contradistinction to what was characterised as mere "assertion" on the part of MasterCard, an argument without any evidential basis at all. In the context of exemption the requirement for "substantiation" is no more than a requirement for evidence, and the suggestion that it needs to be empirical and convincing means no more than that it must be based on evidence, not speculation, and be sufficient to convince the court to the requisite standard of proof which is the balance of probabilities. If the epithet "robust" is intended to add more and connote an enhanced standard of proof, it is difficult to discern any legal basis for such an approach, and especially so when it comes to exemptibility which was not being considered by the Commission.

306. When it comes to the burden on the Claimants to prove their loss, however, they are entitled to invoke the long established principles that the court takes a pragmatic approach. In particular:

(1) Only as much certainty and particularity is insisted on in proof of damage as is reasonable, having regard to the circumstances and to the nature of the acts by which the damage is done: ***Ratcliffe v Evans*** [1892] 2 QB 524, per Bowen LJ at pp 532-533; ***Devenish Nutrition Ltd & Ors v Sanofi-Aventis SA & Ors*** [2007] EWHC 2394 (Ch), per Lewison J at paragraph 30.

(2) The fact that it is not possible for a claimant to prove the exact sum of its loss is not a bar to recovery. Where, as in this case, the assessment of damages inevitably involves an element of estimation and assumption, restoration by way of compensatory damages is often accomplished by "sound imagination" and a "broad axe": see ***Watson Laidlaw & Co Ltd v Pott Cassells and Williamson*** [1914] S.C (H.L.) 18, per Lord Shaw at 29-30; ***Devenish*** per Lewison J at paragraphs 27-29 (cited with approval in ***Morris-Garner v One Step (Support) Ltd*** [2016 EWCA] Civ 180); and ***Devenish*** on appeal [2008] EWCA Civ 1086, per Arden LJ at paragraph 110 and Tuckey LJ at paragraph 159. The "broad axe" metaphor appears to originate in Scotland in the 19th century. The more creative painting metaphor of a "broad brush" is sometimes used. In either event the sense is clear. The Court will not allow an unreasonable insistence on precision to defeat the justice of compensating a claimant for infringement of his rights.

(3) This is well recognised as a technique which may be necessary in assessing damages for breach of Article 101. In a Commission Staff Working Document Practical Guide on Quantifying Harm in Actions for Damages based on Articles 101 and 102, C(2013) 3440, the Commission said:

> "16. It is impossible to know with certainty how a market would have exactly evolved in the absence of the infringement of Article 101 or 102 TFEU. Prices, sales volumes, and profit margins depend on a range of factors and complex, often strategic interactions between market participants that are not easily estimated. Estimation of the hypothetical non-infringement scenario will thus by definition rely on a number of assumptions. In practice, the unavailability or inaccessibility of data will often add to this intrinsic limitation.
>
> 17. For these reasons, quantification of harm in competition cases is, by its very nature, subject to considerable limits as to the degree of certainty and precision that can be expected. There cannot be a single 'true' value of the harm suffered that could be determined, but only best estimates relying on assumptions and approximations. Applicable national legal rules and their interpretation should reflect these inherent limits in the quantification of harm in damages actions for breaches of Articles 101 and 102 TFEU in accordance with the EU law principle of effectiveness so that the exercise of the right to damages guaranteed by the Treaty is not made practically impossible or excessively difficult."

Footnote 15 to paragraph 16 provided:

> "The limits and implications of such assessment of a hypothetical situation have been recognised by the Court of Justice (in the context of quantifying loss of earnings in an action for damages against the European Community in the agricultural sector): 'the loss of earnings is the result not of a simple mathematical calculation but of an evaluation and assessment of complex economic data. The Court is thus called upon to evaluate economic activities which are of a largely hypothetical nature. Like a national court, it therefore has a broad discretion as to both the figures and the statistical data to be chosen and also, above all, as to the way in which they are to be used to calculate and evaluate the damage', see joined cases C-104/89 and C-37/90 *Mulder and others v Council and Commission* [2000] ECR I-203, 79."

307. However, where the court is compelled to use a broad brush in the absence of precision in the evidence of the harm suffered by a claimant, it should err on the side of under-compensation so as (a) to reflect the uncertainty as to the loss actually suffered and (b) to give the defendant the benefit of any doubts in the calculation: ***SPE International Ltd v Professional Preparation Contractors (UK) Ltd*** [2002] EWHC 881 (Ch), per Rimer J at paragraph 87, approved by the Court of Appeal in ***Blayney (t/a Aardvrk Jewelry) v Clogau St David's Gold Mines Ltd*** [2002] EWCA Civ 1007, [2003] F.S.R. 19, per Sir Andrew Morritt V.-C. at paragraphs 31-34.

The benefits requirement: identifying the relevant benefits to merchants

308. MasterCard submitted that merchants who accept MasterCard credit and debit cards enjoy the following appreciable objective advantages, some of which apply to both credit and debit cards, others to credit cards only:

(1) the avoided costs to merchants of other payment methods, namely (a) cash, (b) cheques (c) other more expensive cards, in particular Amex and Diners Club; (credit and debit cards);

(2) the competitive advantage over merchants who do not accept such cards; this was referred to as "business stealing"; (credit and debit cards);

(3) facilitating online spending and e-commerce; (credit and debit cards);

(4) guaranteed payment; under the Scheme Rules, the issuer bears the risk of fraud (credit and debit cards), or of cardholder default at the expiry of the credit period; (credit cards only);

(5) the avoided cost of providing credit (credit cards only); this is (a) the interest cost of the credit period, borne by the issuer and (b) the avoided cost of a merchant credit system for customers, whether by way of store card or other scheme;

(6) increased or earlier spending (credit cards only), where the availability of credit causes a customer to make a purchase he would not otherwise have made, or would not otherwise have made then.

309. The Claimants accepted that merchants enjoyed a number of these benefits from the use of cards. However they challenged the existence or relevance of four categories, namely business stealing, online sales, guaranteed payment and increased earlier sales as a result of the availability of credit. They also disputed that any benefits to merchants were directly caused by the MIF. It is convenient to address the causation question before returning to address particular disputed merchant benefits.

Benefits caused by the MIF?

310. MasterCard submitted that these were all benefits to merchants which were at least to some extent the result of the charging of a positive MIF, for the following reasons:

(1) Payment systems are two-sided platforms with cardholders on one side and merchants on the other. The platform is two-sided because the more users

there are on one side, the more attractive the platform is to the other side. The more consumers with a MasterCard payment card, the more attractive it is for retailers to accept MasterCard cards. The more retailers who accept MasterCard cards, the more attractive it is for consumers to carry MasterCard cards.

(2) Schemes therefore compete amongst themselves by offering higher MIFs in order to encourage banks to issue their cards.

(3) Higher MIFs allow issuers to offer lower costs or higher benefits to their cardholders. In particular, MIF revenues allow issuers to avoid annual card fees, offer lower rates of interest and fund cardholder rewards which incentivise cardholders to hold cards and use cards more frequently. Higher MIFs therefore encourage greater use of payment cards.

(4) Greater use of payment cards increases the volume of benefits that merchants obtain as a result of accepting such cards. Insofar as a higher MIF creates more benefits for cardholders and merchants, those benefits satisfy the causation condition.

311. The Claimants objected that this was a rehash of the "system output argument" which had been advanced by MasterCard in the Commission proceedings and rejected by both the Commission and the General Court; and that it fell into the error of confusing benefits conferred by the scheme with those caused by the MIFs, it being only the latter which were relevant.

312. In my judgement these are not sound objections. MasterCard's argument that charging positive MIFs led to an increase in the use of cards and therefore an increase in the amount of the benefits enjoyed by merchants as a result of the use of cards is made good on the evidence before me. So too is its case that because cardholders received benefits from issuers which were funded by the MIF, the benefits to merchants of card use are to some extent directly caused by the MIF. That does not mean that all the benefits enjoyed by merchants are directly attributable to the level of MIFs charged by MasterCard. It does, however, mean that a MIF at some positive level is directly causative of some benefits to merchants. That is the starting point for the Article 101(3) process. There then remains to be addressed the difficult quantification exercise involved in valuing those merchant benefits which are directly attributable to the MIF. This raises difficult questions, which I address below, but none of them were issues which MasterCard sought to address before the Commission, or which the Commission, General Court or CJEU needed to address. The unsuccessful argument advanced by MasterCard before the Commission was that that the MIF contributed to an increase in the use of cards ("system output") and that that was in itself sufficient to prove exemption for the MIFs at the levels set. There is nothing in the Commission decision or General Court Judgment which precludes the conclusion on the evidence before me that a positive MIF contributes to some extent to merchant benefits.

313. Mr Lowenstein argued, in reliance on evidence from Mr Dryden and Rochet & Tirole 2008 (see below) that maximising system output can be positively deleterious rather than beneficial. The theory, in a nutshell, is that payment card systems can exploit merchants' fears of losing business, so as to cause them to be willing to pay

higher interchange fees than are justified by the benefits received by taking a card payment in place of cash payment. This was characterised as the "must take cards" phenomenon. The view that this creates system "inefficiencies" assumes (a) that business stealing is an irrelevant merchant benefit, and (b) that merchant benefits are to be measured by reference only to the difference between cash and card transactions, neither of which are correct assumptions for the reasons which I explain below.

314. I turn now to consider the merchant benefits alleged by MasterCard whose existence or relevance was in dispute.

Other payment methods

315. It was common ground that the avoided cost of cash sales was a relevant benefit to merchants. This is the basis for the MIT MIF methodology which Mr Dryden and the Claimants adopted. However it makes no allowance for the saved costs of other forms of purchase. Merchants receive a benefit from MasterCard card acceptance by virtue of the reduction in the number of transactions which would otherwise take place with three party scheme cards, predominantly Amex but also Diners Club. The merchant service fee for these cards is considerably greater than the MIF element of the MSC for MasterCard cards.

Business stealing

316. The competitive advantage of accepting MasterCard cards may be expressed in two ways which are opposite sides of the same coin. Merchants who accept either debit or credit cards (or both) benefit from a competitive advantage over their rivals because they gain sales from rivals who do not accept cards; and they avoid the loss of sales to card-accepting rivals which would occur if they did not accept cards.

317. This was the view of Dr Niels and was supported by evidence which emanated from a number of the Claimant retailers. Mr Dryden said in his report that he regarded it as plausible that merchants who accepted cards gained incremental sales from other merchants who did not, and in cross examination accepted this as not merely plausible but "likely". In my judgement these are real and valuable benefits to merchants who pay the MIF. Not all merchants took credit cards during the claim period. For example the supermarket chains Aldi and Lidl, with whom a number of the Claimants were competing, did not do so for much of the claim period. When Aldi chose to accept cards from 11 October 2014, its decision was explained as a means of winning more business from its rivals. I have little doubt that taking cards conferred a competitive advantage on merchants which translated into incremental sales.

318. However Mr Dryden opined, and the Claimants submitted, that such business stealing was not a relevant benefit for the purposes of Article 101(3) because the relevant pool of merchants whose benefit fell to be considered was all merchants, not just merchants who took MasterCard cards; business stealing is a zero sum game amongst all merchants because insofar as business is stolen by card taking merchants from those not taking cards, any advantage for the former category is matched by an equivalent disadvantage to the latter.

319. I am unable to accept this argument in the context of either the benefit requirement or the fair share requirement. What are being considered for the purposes of the benefit requirement are "efficiencies" i.e. benefits from the standpoint of what contributes to greater competition. The MIF is borne only by those who take MasterCard cards. Such cards promote competition amongst all merchants, whether or not they take those cards. They do so by being attractive to those providing goods and services because they assist in promoting sales to customers. They are in this respect no different from the many commercial tools by which providers of goods and services seek to make themselves more competitive by comparison with their rivals: they may compete on price, on quality of service, by providing car parking, helpful staff, attractive retail layouts, by advertising or promotions and in numerous other different ways. Accepting cards is just another one of these competitive tools available to merchants.

320. The competitive benefit is not negated by the fact that the competitive advantage of taking such cards is enjoyed by the merchants who take them at the expense of those who do not; indeed it is the very fact that the benefit is gained at the expense of a competitor which makes it competitive. The fallacy in the Claimants' approach is to treat business stealing as neutral in terms of pro-competitive or anti-competitive effect. It is not. It reflects increased competition which benefits some at the expense of others. That is the very nature of competition.

321. The pro-competitive advantage of taking cards amongst all merchants results in a gain for those who win out in such competition, namely the merchants who take MasterCard cards. It is they alone who pay for the MIF and, to the extent that the MIF is causative of the benefits, it is they who enjoy the competitive benefits of the MIF. It is therefore legitimate and sound in principle to take account of the value to those merchants of business stealing as one of the benefits which may contribute to a justifiable level of MIF for those merchants to bear.

322. This approach is supported by paragraph 84 of the Article 101(3) Guidelines which provides:

> "The concept of "*consumers*" encompasses ***all direct or indirect users of the products covered by the agreement***, including producers that use the products as an input, wholesalers, retailers and final consumers, i.e. natural persons who are acting for purposes which can be regarded as outside their trade or profession. ***In other words, consumers within the meaning of Article 101(3) are the customers of the parties to the agreement and subsequent purchasers.***" (Emphasis added.)

323. This focuses on those consumers who use the products covered by the agreement i.e. MasterCard cards. It focusses on those who suffer from the anti-competitive effects of the restrictive agreement, whether directly or indirectly. Merchants who choose not to take MasterCard cards are entirely unaffected by the restrictive effect of the MIF on merchants (or acquirers) who do.

324. This is not to ignore the position of potential consumers in any consideration of benefits or restrictive effects. It is of course legitimate to take account of those

merchants who do not take MasterCard cards if that is the result of the restrictive agreement, i.e. if the burden of the MIF outweighs the benefits of accepting cards. However the exercise is still to evaluate the benefits which such merchants would obtain from taking cards. It is the merchant benefit of accepting MasterCard cards which falls to be considered, because that is the benefit enjoyed or potentially enjoyed by "consumers" of the subject matter of the restrictive agreement.

325. This approach is also supported by paragraph 236 of the MasterCard CJEU Judgment where the Court said:

> "…it is the beneficial nature of the effect on all consumers ***in the relevant markets*** that must be taken into consideration…" (emphasis added).

326. It is common ground that there are three relevant markets in the present case, the inter-system market for payment cards, the issuing market and the acquiring market. There is no relevant market of all merchants. Merchants who do not accept payment cards do not fall within the inter-system market, the issuing market or the acquiring market. They may potentially be participants in the acquiring market, but only as potential MasterCard accepting merchants, for which purpose it is only the benefits as a potential card accepting merchant which are relevant.

327. This is also the correct approach when considering the fair share requirement. The fair share requirement is that those adversely affected by the restriction which offends Article 101(1) should get a fair share of benefits flowing from it. That focuses on the position of merchants who bear the MasterCard MIF, not those who do not. The latter are not subject to the anticompetitive effects of the MIF and Article 101(3) is not concerned to accord them a fair share of anything.

328. Once it is recognised that it is only relevant to look at merchants who accept payment cards, it is obvious that incremental sales which those merchants obtain or retain at the expense of merchants who do not accept such cards are a relevant benefit.

Online sales

329. It is well known that online sales account for an increasing and substantial proportion of merchants' retail sales. As Mr Dryden confirmed, merchants offer online sales because they expect it to be profitable and may see it as a way of taking business from competitors. Card use undoubtedly facilitates such sales. It is not feasible to pay online by cash and even "secure payment methods" such as PayPal are often backed by cards rather than cash.

G*uaranteed payment*

330. In The Cat Judgment, the Tribunal identified the guarantee of payment as a particular (and obvious) benefit in relation to fraud or default at paragraph 216(3)(ii):

> "The payment guarantee is also important in cases of fraud and Cardholder default. Fraud is a problem in the case of both credit and debit cards. Where a card is only ostensibly valid

> (i.e. is a "clone" or forgery) or where the card is valid, but has been stolen from the Cardholder, the Cardholder typically does not pay. As between the Issuing Bank and the Merchant, this loss is typically borne by the Issuing Bank, to the obvious benefit of the Merchant."

331. I agree. In relation to the fraud guarantee, the Claimants suggested in cross-examination of some MasterCard's witnesses of fact that, even absent the MIF, MasterCard would have taken other steps to deploy measures to combat fraud, such as education programmes, or by including requirements in the Scheme Rules for merchants to adopt procedures in the use of cards to minimise fraud. This did not address the central benefit to merchants, however, which is the guarantee of payment by the issuing bank despite the fraudulent use of a card presented to the merchant. While Mr Willaert accepted that MasterCard would have sought to deploy anti-fraud technology even if interchange revenue had not been available, it was never put to Mr Willaert that MasterCard or issuing banks would or could continue to honour the fraud guarantee. Indeed, Mr Willaert, while accepting that anti-fraud technology could still be deployed, maintained his evidence that in a hypothetical world without interchange, MasterCard would have to make changes to allow the Scheme to remain competitive such as changing the scheme rule providing for a payment guarantee.

Increased or earlier sales from availability of credit

332. Mr Dryden accepted in cross examination that the availability of credit is likely to result in an aggregate increase in sales to merchants. This reflects both impulse buying, and buying on credit more generally where the consumer could not afford to pay immediately and would not save up to make the same purchase. Again the evidence from a number of the Claimant retailers and their internal documentation supported this conclusion that the use of credit cards was regarded as leading to an overall increase in sales. Average transaction values for credit cards are greater than for debit cards, suggesting that people spend more if they have access to credit. I agree with the conclusions of the CAT on this point expressed at paragraph 219(2)(ii) of their Judgment:

> "(ii) Some of the main benefits to Merchants, which we consider they would perceive and value, are…
>
> (a) Merchants benefit from customers being able to purchase goods and pay next month at no cost – which is the facility which the interest-free period provides. Moreover, Merchants do not have to bear the costs of setting up their own credit facility for their customers. ….
>
> (b) For the Merchant, the benefit is not only that the Merchant receives payment now, whereas the Cardholder pays later, but also, there are some transactions that either would not take place at all absent the provision of a credit-free period or which would take place, but in a manner less advantageous to the Merchant. By way of example, we have seen that the average transaction value in a

> Sainsbury's store using a MasterCard credit card is nearly £6 higher than what is spent using a Maestro debit card, and there is a similar differential between Visa credit and Visa debit cards."

333. Apart from generating sales which would not otherwise have occurred, the evidence suggested that merchants also perceived advantages from the availability of credit in bringing forward purchases which would only have occurred at a later date. A sale today has a higher net present value to a merchant than a sale at some point in the future; this is in substance the time value of the price over the period between the sale and the expiry of credit.

334. MasterCard also submitted that there was an additional benefit to merchants from impulse sales on cards, both credit and debit, even where credit was not required, because some customers do not carry around sufficient quantities of cash and would not go to the inconvenience of getting the cash, for example, from an ATM. There was no satisfactory evidence that this was a significant phenomenon. If consumers use a card in place of cash just because they do not have cash in their pocket, that begs the question whether they would have returned with cash later to make the same purchase in the absence of possession of a card. I am not satisfied that this translates into a real or significant benefit to merchants in the form of increased sales.

Conclusion on merchant benefits

335. The MIF directly contributes to some extent to benefits to merchants in the form of:

(1) the avoided costs of other payment methods, namely (a) cash, (b) cheques and (c) other more expensive cards, in particular Amex and Diners Club; (credit and debit cards);

(2) the competitive advantage over merchants who do not accept such cards; (credit and debit cards);

(3) facilitating online spending and e-commerce; (credit and debit cards);

(4) guaranteed payment in the case of fraud (credit and debit cards) or default (credit cards only);

(5) the avoided cost of providing credit (credit cards only);

(6) increased and earlier spending (credit cards only).

Quantification of benefits and fair share

336. Two alternative methodologies were canvassed as potential ways in which to quantify the exemptible level of the MIF. The first is the Merchant Indifference Test ("MIT"), also known as the tourist test. It takes its name from the premise that the only benefit to merchants of taking cards which can justify an interchange fee is the amount which would make the merchant indifferent to whether the customer paid in cash or by card. To avoid taking account of the advantages of repeat trade, the customer is assumed to be a tourist. The premise is that the merchant's incremental

cost of processing a cash payment is greater than that of processing a card payment, and it is the difference between the two which makes him indifferent to the method of payment if it has to be paid by way of a MIF. As described by Mr Dryden, in its most basic form the MIT is applied as follows:

> "F.5 A MIT-compliant level of MSC is equal to the difference between a merchant's incremental costs of processing a cash payment, on the one hand, and a card payment, on the other. Such costs are sometimes referred to generally as "costs of payment" or "incremental cost".
>
> F.6 A MIT-compliant level of MIF is then the MIT-compliant level of MSC less the elements of the MSC other than the MIF (that is, the scheme fee paid to MasterCard and the acquirer's own mark-up, collectively referred to as the "acquirer margin")".

337. The second approach canvassed is a benefit-cost balancing approach. This involves trying to identify the costs of producing the benefits to merchants which the MIF confers, based on the costs incurred by issuers in creating those benefits or at least some of them.

338. Regulators have in the past used both methods and continue to do so. Regulators in America and Australia, for example, use a cost based methodology. The Commission used to do so. It now applies a MIT MIF methodology.

339. Interchange fees, and these methodologies, have been the subject matter of a considerable body of published academic work by economists, to which the experts and the parties made extensive reference. It is convenient to start with a brief overview of four of the important developments in that academic work.

Academic papers

340. Professor William Baxter's 1983 paper "Bank Interchange of Transactional Paper: Legal and Economic Perspectives" ("Baxter 1983") provided a theoretical explanation of, and justification for, interchange fees, in the context of a broader historical survey of payment systems. As Mr Dryden summarises it, the paper:

> "provided the insight that buyers' incentives to use payment cards may not be aligned with merchants' interests. Merchants may benefit when a buyer pays with a card instead of cash. Yet it is the buyer who makes the choice of which payment instrument to use for a given transaction. If the merchant does not charge the buyer different prices for the goods or services purchased depending on the choice of payment instrument, the buyer will not take into account the merchant's benefits of the various payment alternatives. The buyer will only take into account his or her own costs and benefits, which (except by coincidence) will not be the same as the merchants'. The result

> is that the buyer may fail to choose the payment instrument that is optimal for the merchant and buyer jointly.
>
> On the basis of this insight, Baxter concluded that the proportion of purchases paid for by card could fall below the level at which the joint benefits of merchants and buyers would be maximised. This provides an economic rationale for an interchange fee (including a MIF): a subsidy, directed from the merchant to the cardholder, paid in the form of a MIF via the Acquirer and Issuer, could in principle address this problem by aligning buyers' incentives when choosing between payment instruments with merchants' benefits of accepting each method of payment."

341. It can be seen that as the origin of the MIT MIF methodology this makes certain basic assumptions. It assumes that the only benefits to merchants which can justify a MIF are the avoided transactional costs of a cash purchase. It also assumes that the MIF has complete pass through via acquirers and issuers to the cardholder, so that it is the passed though MIF which incentivises the cardholder to use his card to an extent which aligns the benefit of card use to the cardholder with that to the merchant.

342. A paper by Professors Jean-Charles Rochet and Jean Tirole of the Toulouse School of Economics first published in 2008, although republished again in the years to 2011 ("Rochet & Tirole 2008"), addressed the justification for the MIT MIF as a "tourist test". The tourist test was a response to what was described as the "must take cards" argument advanced by regulators and retailers, namely that merchants could not afford to refuse to accept cards because it put them at a competitive disadvantage with other retailers; and so were forced to pay a higher fee than that which reflected the cash/card alignment benefit of customers paying by card. Rochet and Tirole identified the tourist test as a valid proxy for establishing a MIF by eliminating any such consideration because it assumed a customer who was already in the store and who had not therefore been attracted to the merchant by the fact that it took cards. Rochet & Tirole concluded that the tourist test was in theory an exact measure of TUS if the "must take cards" factor was eliminated in this way.

343. It is immediately apparent that the MIT MIF methodology which this encapsulates is inadequate for present purposes. The exercise required by Article 101(3) does have to take account of the competitive advantages of taking cards; payment by card offers real attractions to the merchants' potential customer base which makes merchants who accept cards more attractive, as the "must take cards" argument recognises. This competitive advantage is a benefit which falls to be taken into account for the purposes of the Article 101(3) exercise, but is left entirely out of account by the tourist test.

344. Professor Rochet produced a further paper in 2010, co-authored by Professor Julian Wright of the National University of Singapore ("Rochet & Wright 2010") which focused specifically on credit cards. It drew the distinction between use of credit cards for "ordinary purchases" where the customer might as happily use a debit card or cash, and credit purchases where credit was necessary or a factor in the sale taking place, such as impulse purchases, or purchases for which the customer does not have the cash or funds immediately available. The authors expressed the view that

taking credit cards allowed merchants to make sales they would not otherwise have made and this was the major reason why they accepted such cards and were prepared to pay higher interchange fees for doing so than for debit cards. The authors made a number of other points amongst which are these:

(1) If the costs of credit card use are higher than for debit card use, the use of credit cards for "ordinary" purchases, i.e those which would occur in any event without the need for the credit facility, is inefficient. Higher interchange fees incentivise issuers to offer rewards in the way of cash back, bonuses or other benefits, equivalent to negative fees, and this encourages the use of credit cards for ordinary purchases. Since a merchant cannot distinguish between the ordinary purchases and those which are driven by the availability of credit, it can only achieve the same benefit by its own system of store credit, which would have the same effect.

(2) A monopoly card network will therefore set its fees too high for overall efficiency because it will generate these inefficient ordinary purchases on credit card. A regulator should therefore impose a cap. The cap might be set by reference to the cost to the issuer of providing credit, or the avoided cost to the merchant of not having to provide in-store credit. The latter should be used because it is informationally challenging to calculate the issuer cost, which will only provide the lower bound of possible interchange fees which will maximise TUS.

(3) If issuing is competitive, the cost/benefit to *issuers* of extending credit on credit cards should be neutral: the interest charged to consumers should be the equivalent of the cost in terms of the time value of money and processing and default costs.

345. Professor Tirole produced a further paper in 2011 ("Tirole 2011"). In that paper he emphasised that the tourist test failed to take into account the benefits which accepting cards conferred on merchants in avoiding missed sales in two different ways. First it ignored the competitive advantage of accepting cards, whereas the fact that a merchant accepted cards was a significant benefit in increasing sales. Secondly, where credit cards were used, the merchant received advantages from sales which would not otherwise have taken place. In both these respects the relevant comparison for the benefit conferred by cards was with no sale taking place, not a cash sale; this had been underexplored in the economic literature and was not taken account of in the tourist test. The conclusion was that an interchange fee which reflected the benefits to merchants of card use lay somewhere between that derived from the tourist test, and what merchants were in fact prepared to pay because of the "must take cards" considerations of maintaining the competitive position vis a vis their rivals in attracting customers to shop with them. The paper also considered the tourist test on its own terms, and concluded that for various reasons it was probably a conservative test for a socially desirable interchange fee if the measure was total welfare: amongst other things it did not take account of the beneficial impact on social welfare of the long term impact of industry profit on "entry, innovation and end-user welfare", or of the social disadvantages of cash use such as tax evasion.

346. In 2015, Professors Marc Rysman and Julian Wright produced a further paper based on research funded by Visa ("Rysman & Wright 2015"). Amongst other things

it recorded that following a survey of the published literature, an issuer cost based approach to regulating interchange fees was not supported by any economic theory in any of the literature.

The 2015 Commission Survey and The Deloitte study

347. The MIT methodology depends upon data establishing and categorising merchant costs in order to analyse the benefits to them of card use. In 2015 the Commission published its Survey on merchants' cost of processing cash and card payments, Final results, (the "Commission Survey"). This was based on a survey of merchants' costs of processing payments by cash and cards undertaken by Deloitte on the Commission's behalf (the "Deloitte Study"). The Commission quantified what the MIT MIF would be based on that data. Although the underlying data is not all available, the Commission Survey is sufficiently detailed to provide the best data available for calculating merchant benefits from card use and therefore the best starting point for quantification of any exempt or exemptible MIF. It is supplemented by the data contained in the survey responses of these particular Claimants, which have been disclosed in the proceedings, and by data from these Claimants in response to a Request for Further Information served by Visa in the Visa proceedings.

348. The Commission originally intended to collect information from a large representative sample of European merchants. However it soon discovered that it would not be possible to carry out the survey on such a large scale because much of the detail required to apply the MIT test was not readily available to merchants. Accordingly the study targeted 500 merchants in the EEA area, who were all large merchants. The Commission complemented this with a less detailed survey targeted at a wider and more representative group of merchants. The response rate for this wider survey was poor (about 1,300 responses out of almost 600,000 merchants approached) and the Commission concluded that it could not extrapolate any reliable results from this wider survey. Accordingly it based its conclusions as to the appropriate MIT MIF on the survey from the large merchants. The study took almost 7 years to complete, having commenced in 2008. In the event only 254 of the large merchants who were targeted completed the survey to the required standard.

349. In line with the basic MIT methodology the Commission estimated the cost function for cash and cards, comprising fixed and variable costs. The Commission excluded fixed costs. Whether a cost is fixed or variable depends upon the timeframe being considered for the analysis. The Commission considered short term (single transaction), medium term (3-4 years) and long term. The first two were based on the so called "arithmetic" analysis which used the merchant's own categorisation in their survey responses as to what costs they deemed to be fixed or variable. The long term analysis by the Commission used a so called "econometric" analysis which does not rely on the merchant's own judgements as to the fixed versus variable cost split.

350. The Commission's results were as follows:

(1) Medium term (arithmetic):

Credit cards: - (i.e. minus) 0.4% to (+) 0.13%;

Debit cards 0.06% to 0.16%;

(2) Long term (econometric)

(a) Credit cards: 0.19% to 0.47%

(b) Debit cards: 0.19% to 0.46%

The rival submissions of the parties

351. The approach advocated by Mr Dryden and the Claimants was to apply a strict MIT MIF approach, applying the tourist test. Mr Dryden's approach was based on his opinion that "MIFs are capable of generating one specific benefit, namely aligning buyers' incentives in choosing between different payment instruments with merchants' costs of accepting those different payment instruments". On the basis of this premise, he then created his own framework for analysis which involved identifying two necessary conditions which had to be fulfilled if a MIF was to satisfy the criterion for exemption:

(1) Necessary Condition 1 was that the introduction of a small MIF (i.e., increasing the MIF from zero to a small level) must produce some benefit, i.e. some increase in TUS. This involved meeting 5 sub-conditions:

(a) the merchants' cost of accepting a cash payment must exceed the cost of accepting a card payment (excluding the MIF);
(b) merchants must lack the practical ability or incentive to charge different prices depending on buyers' choice of payment instrument;
(c) issuers must to some degree pass the MIF through to cardholders and any pass-through must be of a nature that could cause buyers to respond by increasing card use;
(d) buyers must actually have at least some degree of responsiveness to that pass-through in the form of greater card use;
(e) the number of switching transactions must be sufficiently large relative to the number of always-card transactions.

(2) Necessary Condition 2 was that the MIF must not be set too high, because at a certain point increases in the MIF will start to reduce TUS, and ultimately TUS will be lower than it would be under a prohibition on *ex-post* pricing.

352. This approach is unsatisfactory in seeking to determine whether the MIFs as set by MasterCard were exempt, or what level of MIF, if any, would be exemptible. In treating the only relevant merchant benefit as the alignment benefit of cash switching to cards it suffers from two fundamental flaws:

(1) It ignores Amex and PayPal as competing payment methods, which are not subject to the Article 101 constraints. They are free to set their merchant fees on any commercial basis they choose. In ignoring them, Mr Dryden creates an artificial division between "always cash", "switching" and "always card" transactions. If the MIT MIF is set too low, transactions which Mr Dryden categorised as to be ignored as "always card" transactions will become Amex or PayPal transactions rather than MasterCard (or Visa) transactions, with merchants paying the higher charges levied by these schemes.

(2) It ignores a large number of relevant merchant benefits which fall to be taken into account as identified above, and in doing so is out of line not only with the legal framework of Article 101(3) but also with the academic economic literature since the original Rochet & Tirole 2008 tourist test analysis.

353. MasterCard advocated the approach adopted by Dr Niels, which was to start with the Commission's MIT MIF but to make a number of adjustments to reflect what were said to be imperfections and errors in using it as a guide to an exemptible level of MIF; and to use a cost based "benefit-cost balancing" approach as a cross check.

354. There are serious flaws in an issuer cost based approach, just as there are in a pure MIT MIF approach. In particular:

(1) It uses costs as a proxy for benefits.

(2) It fails to address the causation question as to whether those benefits derive from the MIF rather than the scheme. If, for example, all an issuer's costs of providing credit were covered by charges made by issuers to cardholders, it could not be said that the MIF was causative of all the benefits merchants received from purchases on credit; the MIF would only be causative to the extent that it increased system output and so conferred benefits of greater card use than would otherwise have occurred without it.

(3) It either has to leave out of account costs incurred which confer benefits on both cardholders and merchants, which is in practice unrealistic, or has to allocate such costs between them on an arbitrary basis.

355. In my judgement, the best available approach to quantifying an exempt or exemptible level of MIF is to use the MIT methodology and the Commission Survey results as the starting point; to adjust the Commission Survey results to take account of other relevant benefits to merchants, and of points made by the experts; this gives the best approximation of the value of benefits to merchants from card use; to assess the extent to which that quantification of benefits to merchants from card use is attributable to a MIF rather than simply the scheme as a whole; and last to consider whether and to what extent an issuer cost approach provides a useful cross check on the adjusted MIT MIF results.

Adjustments to the Commission's MIT MIF figures

356. The following issues arose:

(1) Should the MIT MIF be calculated using the Commission's medium term or long term data?

(2) Should the MIT MIF be adjusted for the size of merchants used in the survey?

(3) Should account be taken of other benefits of credit cards?

(4) Should account be taken of online sales?

(5) What is the appropriate approach to calculation of the average transaction value (the "ATV")?

(6) Should front-office costs be excluded from calculation of the MIT MIF?

(7) What is the appropriate acquirer margin for calculation of the MIT MIF?

Long term or medium term?

357. Dr Niels' view was that the long term figure was the most appropriate. Mr Dryden accepted that the appropriate approach was to look at the data for "the longer term" but did not accept that the medium term figures were inappropriate. His view was that the medium term figures captured the necessary variable costs and that the assumptions underlying the econometric method, on which the long term figures were based, "may not hold".

358. In my judgement there are two reasons why the long term (econometric approach) is preferable to the medium term arithmetic approach "slightly" favoured by Mr Dryden. It is more likely to capture all costs which vary over time; and it avoids reliance on subjective classification by merchants of costs as fixed or variable (which is both difficult and subject to potential bias).

359. As to the first, the Commission recognised that the categorisation of costs as fixed or variable was critical to its calculations of the MIT MIF because in addressing the costs of cash saved by card transactions they included only variable costs and excluded fixed costs. Costs which are treated as fixed costs over a short period become variable over a longer period. For example if a cash register requires replacement once a year, the costs of doing so are fixed costs if the time horizon taken is less than a year but a variable cost if a period of longer than a year is taken. The proportion of merchants' fixed costs is higher for cash than for cards; accordingly if the exercise does not account for the full range of costs which vary over time, it will systematically underestimate the appropriate MIT MIF.

360. In principle all costs of accepting cash should be taken into account in determining the MIT MIF, even if they recur only in the longer term than every 3 to 4 years. There are some costs which will only be variable if looked at over a period of greater than 3 to 4 years. Costs of cash acceptance include both goods (registers, counterfeit machines etc) and services (e.g. cash transportation). The goods may need replacing less often than 3 to 4 years. Similarly, contracts for services may be for longer periods than 3 to 4 years. A medium term approach would categorise such costs as fixed when they are in reality part of the costs of accepting cash which are saved by taking cards.

361. As to the second (subjective classification):

(1) The econometric method eliminates the risk of error or bias in using the subjective classification by merchants. The difference between the methods is that the arithmetic relies solely on the merchants' classification, whereas the econometric method takes all merchants' costs and then by comparing different merchants calculates the extent to which these costs would change as payment methods change.

(2) The classification exercise is very different from that which would be familiar to finance directors and departments in relation to audited annual accounts or

other accounting treatments. If the approach were similar to that used in the preparation of annual accounts the results would be likely to understate variable costs because generally the approach would be to take a shorter time horizon for variable costs than is required for the MIT MIF exercise.

(3) The responses of some individual Claimants illustrate the unreliability of subjective judgements. In evidence before me were answers which had been given by the Claimant merchants to the Request for Information in the Visa proceedings, which amongst other things required the Claimants to categorise costs as fixed or variable. There were significant differences between the ways individual Claimants categorised particular costs in its RFI response from the way that the same Claimant categorised them in response to the Deloitte Survey. There were other anomalies in the responses to the Deloitte Survey from particular Claimants.

(4) The Claimants argued that these discrepancies were not significant because the Commission excluded outliers in reaching its results. However whilst the Commission explains that it excludes outliers in conducting its econometric analysis there is no indication that it did so for its arithmetic analysis.

(5) The Claimants also suggested that the relatively large sample size should have minimised the effect of such errors. That may be so to some extent, but the risk of bias was mainly in favour of understating variable costs, by comparison with the usual accounting exercise of finance departments. The invitation letter received by many of the Claimants explained that the survey concerned interchange fees which had been found to restrict competition, and that the information provided could have a significant impact on the analysis of future interchange fees. Moreover, merchants were informed by Deloitte about the purpose and methodology of the study prior to submitting their responses, and would naturally have desired an outcome in which the MIF was as low as possible. I do not mean to say that any of the Claimants consciously misrepresented the figures, and no such suggestion was made by MasterCard or put to any of the Claimant witnesses. However the sampled population of all those who responded to the Deloitte Survey were being asked to make a judgement when conscious that their interests were served by choosing the lowest end of the range for variable costs, and the subjectivity of such judgement is therefore more likely to have underestimated than overestimated the extent of such costs.

(6) The criticisms which Mr Dryden levelled at the econometric method are not wholly without force. The method assumes that the merchants' current total costs reflect their long term costs. This will not hold good for merchants who were in a material state of transition. Nevertheless, given the number and variety of different of merchants surveyed, there is no reason to suspect any bias in either direction from using the stated assumption as a reasonable one.

362. This conclusion is in line with what Dr Niels said was the common approach adopted by regulators, which was to use a long term horizon.

Adjustment for merchant size

363. I have already explained that as a matter of law Article 101(3) is concerned with a fair share for all relevant consumers as a group, not individual consumers. The present exercise is therefore to determine the exempt/exemptible MIF for an average merchant.

364. This also accords with the economic literature. Rochet and Tirole 2008 makes it clear that the MIT should be based on the average merchant:

> "In this case the average merchant (among those who accept cards) is ex post indifferent as to the means of payment chosen by the consumer. This implies that unless all retailers are identical, some would want to reject cards ex post. Efficiency cannot require that the tourist test be met by all participating merchants because cardholders must internalize the welfare of the average merchant and not of the marginal one, who values card payments less than the average merchant. Capping merchant discounts at the convenience benefit of the most reluctant merchants provides the cardholder with an incentive for under consumption of card payments." (page 26)

> "Third, merchants are heterogeneous, and an IF that properly guides cardholders' decisions must reflect the average, not the marginal merchant benefit. This implies that the merchants who benefit least from the card, say the large retailers, are likely to fail the tourist test at the social optimum." (page 29)

365. This last passage reflects the fact that because of economies of scale the costs of large merchants will be lower than those of the average merchant.

366. The Commission's 2015 Survey was based on a survey of large merchants only. The Survey explains that merchants were divided into eight size classes according to turnover:

Class 1: below €1 million
Class 2: between €1 million and €2 million
Class 3: between €2 million and €5 million
Class 4: between €5 million and €10 million
Class 5: between €10 million and €20 million
Class 6: between €20 million and €50 million
Class 7: between €50 million and €200 million
Class 8: above €200 million

367. However, Deloitte only obtained useful data for size classes 6, 7 and 8 (all but 8 respondents were in these categories). As a result the Commission's MIT MIF will understate the MIT MIF for an average merchant because economies of scale mean that the incremental cost of cash saved by smaller merchants will be higher than that for larger merchants. This is well illustrated by the median marginal cost of cash for sizes 6 and 7 being about 50% higher than that for size 8.

368. There are limitations in the data available which make it difficult to make any precise adjustment for this. There is none available for sizes 1 to 5, either in terms of

their costs or as to what proportion they form of the total card accepting merchant cohort. Dr Niels' solution was to take a cost of cash based on sizes 6 and 7, on the basis that the costs for the size 6 and 7 merchants were much higher than for the size 8 merchants, and it could be assumed that as one went down the class sizes the merchant costs would continue to increase. The statistical data for putting classes 6 and 7 as a proxy for the average merchant's costs was simply not available. Nevertheless I am satisfied that Dr Niels' approach is the most reasonable available one in the circumstances, because the cost differences amongst the merchants who were surveyed show a dramatic increase in costs as the size of merchant reduces. Figure 11 in the Commission's Survey illustrated that of the sampled group (sizes 6, 7 and 8):

(1) the MIT MSC calculated by the Commission for merchants in class sizes 6 and 7 is larger by a factor of about three than that of the MIT MSC for merchants in class size 8 only;

(2) The greatest number of merchants had a MIT MSC in a range between 0 and 0.5% - with a mid-point of 0.25%.

(3) Around 15% of merchants had a MIT MSC of between 0.5% and 1.0% - with a mid-point of 0.75%. This mid-point is three times the mid-point of the largest group of merchants.

(4) Around 6 to 7% of the merchants had a MIT MSC of between 1.0% and 2.0% - with a mid-point of 1.5%. This mid-point is six times the mid-point of the largest group of merchants.

(5) Around 5% of merchants had a MIT MSC of between 2.0% and 5.0% - with a mid-point of 3.5%. This mid-point is 14 times larger than the mid-point of the largest group of merchants.

(6) Around 2% of large merchants had a MIT MSC in excess of 5.0%. The lower end of this range (5.0%) is 20 times the mid-point of the largest group of merchants.

Adjustment for other merchant benefits

369. I have already concluded that merchants receive other benefits from the use of MasterCard cards, of which the MIF is to some extent directly causative. Save for the avoided cost of cash sales, none are captured in the MIT MIF methodology used by the Commission 2015 Survey. They include the following:

(1) the avoided costs of other payment methods, in particular Amex and Diners Club (credit and debit cards);

(2) the competitive advantage over merchants who do not accept such cards (credit and debit cards);

(3) facilitating online spending and e-commerce (credit and debit cards);

(4) guaranteed payment in the case of fraud (credit and debit cards) or default (credit cards only);

(5) the avoided cost of providing credit (credit cards only);

(6) increased and earlier spending (credit cards only).

370. How are these to be quantified? Dr Niels has made an adjustment to the Commission's MIT MIF figures to take account of credit functionality for the purpose of assessing an adjusted credit card MIT MIF. Once adjusted in this way it is, of course, no longer a "MIT MIF" because the MIT test is a tourist test which looks only at the avoided cost of cash. I shall for convenience call it an adjusted MIT MIF.

371. Dr Niels identified the proportion of transactions which depend on credit based on the percentage of cardholders who do not pay off their cards at the end of the interest-free period. These are cardholders who are categorised as "revolvers". For these consumers he has used the cost of Amex as a comparator, on the basis that the customers require the deferred payment element of credit and the alternative would be the use of a more expensive three party scheme card, namely Amex. For the proportion of transactions which do not use the extended credit facility, where cardholders are "transactors" who pay off the balance at the end of the month without incurring interest, Dr Niels uses cash as a comparator.

372. For transactors, the use of Amex as a comparator was justified on the following basis. In accordance with Rochet & Wright 2010, Dr Niels took as the starting point for his adjustment in relation to credit functionality, the comparator of merchants providing credit themselves, through store cards. He then took as a proxy for the cost to merchants of offering store credit themselves, the costs of accepting Amex. Dr Niels' analysis of the cost of store credit to a number of the Claimants who offer store credit shows that it is cheaper for merchants to accept credit cards, including Amex, than offer store credit themselves. Because Amex is cheaper than providing store credit, the use of Amex as a proxy will produce a lower adjusted MIT MIF. The use of Amex as a comparator also captures some of the cost saving benefit that merchants obtain from customers using MasterCard/Visa rather than Amex.

373. I accept Dr Niels' reasoning and conclusions on this issue. However, it is important to note that it will still produce a level that is too low because:

(1) It ignores the benefit of the competitive advantage of taking cards. The MIT analysis seeks to identify the level at which a merchant would be indifferent, and therefore focuses on the transactional costs that a merchant can avoid by accepting payment cards. The benefits of business stealing in increasing sales are additional to the transactional costs which the merchant has avoided.

(2) It also understates the true cost of store credit being avoided.

Online sales

374. Mr Dryden's argument against including online sales as a comparator in the calculation of the MIF was his conclusion that the only relevant benefit to merchants was avoiding the costs of cash, and cash is not a realistic alternative for online sales. I cannot accept this reasoning. Even accepting the MIT MIF on its own terms, it ignores the fact that consumers have a choice to make purchases online or in a shop.

If they purchase in a shop, they have a choice between paying by cash or using a payment card. If a sale takes place online using a card rather than in a shop using cash, then the card is used as an alternative to cash. Moreover, the methodology which is required is not simply the tourist test but an analysis of merchant benefits from card use. The fact that cash is not generally used for online purchasing (although it sometimes may be, for example for pay-on-delivery pizza orders) only serves to emphasise the advantage merchants obtain by taking cards. Online sales account for a significant and increasing proportion of merchant sales, from which a merchant may only benefit, generally speaking, by taking cards.

375. Dr Niels accounts for the benefit of online sales in his calculations in the following way. For the relevant proportion of online sales, for both credit and debit cards he changed the comparator from cash to Amex and PayPal, appropriately weighted by an estimate of the online market shares of each in the relevant market.

376. It was contended by the Claimants that the use of PayPal as a comparator is inappropriate, because 65% of PayPal accounts are in any case linked to a payment card. The point was that for these accounts, switching from PayPal to payment by a credit card is unlikely, as the customer will in any case obtain the rewards and other incentives available from using a payment card. These points do not invalidate Dr Niels' methodology. They do not touch on the 35% of PayPal transactions which are not linked to a payment card. The 65% of PayPal transactions linked to a card would likely include a proportion of accounts linked to debit cards. Credit cards also have some advantages from the cardholder's perspective over payment made using PayPal, including the availability of protection under the Consumer Credit Act 1974, s.75 so that customers buying online benefit from direct credit card use rather than via PayPal. The use of PayPal as a comparator actually results in a lower MIT MIF calculation than would be the case if Dr Niels had instead used only Amex as a comparator because Amex is more expensive to merchants than PayPal.

377. Again, I accept Dr Niels' reasoning and conclusions on this issue.

ATVs

378. In calculating a MIT MIF the experts have had to use a figure for average transaction values in order to correlate costs with a MIF expressed as a percentage of transaction value.

379. Mr Dryden uses an ATV of €25 - which is the average 2012 European transaction value for cash and card transactions as reported in the 2015 Commission Survey. Using the same 2012 average exchange rate used by Mr Dryden this equates to £20.30. This ATV for all transactions (both cash and card) is referred to as the "retail ATV". Mr Dryden uses the retail ATV for Europe as a whole in order to calculate the MIT MIF for the UK, Ireland and cross-border transactions.

380. Dr Niels uses separate ATVs, specific to the relevant type of card (credit/debit) and specific to the relevant territory (UK/Ireland/EEA). This card specific ATV is referred to as the "card ATV". For example, the equivalent UK debit card ATV is £46 and the UK credit card ATV is £60.

381. I prefer Dr Niels' approach on this issue for the following reasons:

(1) Mr Dryden's reason for using the retail ATV is that in calculating the MIT MIF, one should only be looking at those transactions which will switch from cash to card if the MIF is increased from zero to the MIT MIF and it is the ATV of those "switching" transactions which is relevant. Mr Dryden concludes that these "switching" transactions will on average be lower value transactions, so the ATV of these "switching transactions" will be below the actual card ATV. However this analysis ignores all benefits other than the transactional benefit to merchants of a payment being made by card *rather than cash*. Moreover, even if one were just focused on transactional benefits (and for the reasons set out above, other benefits are also relevant), the actual benefit to merchants will not just arise from transactions switching from cash to card, but also transactions switching from other more expensive payment methods (such as Amex or Paypal) to card. As Mr Dryden acknowledged, his structure of "switching transactions" and "always card" transactions took no account of the fact that if MasterCard had an uncompetitive interchange fee then transactions would switch to Amex. If account is taken of the possibility of switching to other payment methods (such as Amex), Mr Dryden's justification for using a lower ATV cannot stand; the ATV should reflect the transactions which might switch to these alternatives. The card ATV is a better indication than the retail ATV of the average value of all transactions which will switch to alternative payments.

(2) Mr Dryden's approach does not take account of a clear benefit which merchants receive from accepting cards, namely the higher transaction values on card transactions. For credit cards, a significant part of this higher average transaction value is likely to consist of additional expenditure i.e. expenditure which would not have taken place if credit had not been available. There is also the transactional benefit to a merchant from receiving larger payments with cards. The relevant UK ATV for cash is less than £10, whereas the relevant UK ATV for credit cards is £60. Put another way, by using the retail ATV, Mr Dryden is comparing the cost to a merchant of a single cash payment of £20.30 compared to a single card payment of £20.30. However, in the real world, the average benefit a merchant receives is processing a single card payment of £60 compared to six cash payments of £10. Since many costs are dependent on the number of transactions rather than the value of the transaction, Mr Dryden's approach does not capture a significant part of the actual benefit which merchants receive from accepting cards.

(3) It is appropriate to use the relevant country ATV rather than a pan-European ATV, since the benefit to UK merchants is based on the actual usage of debit and credit cards in the UK, rather than in other countries across Europe.

Front Office Costs

382. In the Commission Survey the marginal costs of both cash and card payments are driven by only a few of the costs categories. This does not include "front office costs" because in the Survey's words "front office time costs are rather similar for cash and cards". For these purposes "front office costs" means the cost of the staff time involved in processing the payment part of the transaction. The Commission's analysis took account of the front office costs of processing card transactions and cash transactions for face-to-face transactions, but not self-service tills or online

transactions. These are substantial omissions – the data for one of the Claimants, Asda, for example, shows that around [redacted] of transactions in store are at self-service tills and [redacted] of transactions by value are online. For other merchants online sales will be a much higher proportion. The average cost of processing self-service transactions or online transactions will be lower than the cost of processing face-to-face transactions precisely because there is no front office cost involved in processing the transaction. Consequently, by looking just at face-to-face transactions, the Commission has overstated the average cost of processing transactions.

383. If there were the same overstatement in the average cost of processing both cash and card transactions, this would not matter, since under the MIT MIF, we are concerned with the difference in the cost. However, the overstatement will be much greater in relation to card transactions, since online transactions will largely be card transactions (or an alternative like PayPal), since cash is not a realistic option for most online transactions and there are no front office costs for online transactions. A similar issue arises in relation to self-service tills i.e. it is likely that a higher proportion of card transactions take place at self-service tills (which again result in no front office costs being incurred) than face to face.

384. The front office costs as a whole make a difference of 3 basis points. Unfortunately the detailed data necessary to make the appropriate adjustment for front office costs savings due to use of cards is not available. One of the Claimants in its response to the Commission identified that self-service checkouts account for the following approximate transaction volumes – cash 9%, debit card 14%, credit card 12%. According to the UK Cards Association, 9% of debit card transactions and 24% of credit card transactions are online. Using those figures as a guide, I conclude that an adjustment of 1 basis point is required to account for the difference in front office costs from the use of cards.

Acquirer margin

385. The acquirer margin forms part of the calculation of the MIT MIF in the following way. The comparison between the costs of cards and other methods of payment is intended to arrive at a figure which values the benefits which the merchant receives. A MIF which equates to that figure would cause the merchant to pay more than the value of such benefits because the merchant pays the MSC, which comprises both the MIF and the margin of the acquiring bank. The experts and the Commission have therefore deducted an estimated acquirer margin from their calculated MIT MSC, in order to arrive at the compliant level of MIF. It follows that the larger the assumed acquirer margin, the smaller the adjusted MIT MIF would be.

386. The Commission Survey found that for the size 6 to 8 merchants which participated in the survey the acquirer margin was 0.06% of the transaction value. In seeking to derive a MIT MIF for the average merchant what is required is an average acquirer margin for all merchants. This would likely be larger than the acquirer margin for size 6 to 8 merchants because the largest merchants are likely to be better able to negotiate down the margin charged to them by their acquiring banks.

387. Dr Niels used the figure of 25% of the total MSC which is a whole market figure he took from the Commission's July 2013 Impact Assessment accompanying the

proposal for the Interchange Fee Regulation. Mr Dryden by contrast used the Commission's figure of 0.06% of the transaction value.

388. Dr Niels' approach results in a larger acquirer margin and therefore a lower figure for the MIT MIF than would have been the case had he followed Mr Dryden's approach. MasterCard was content that I should adopt such approach and I will do so.

Conclusions on the adjusted MIT MIF

389. Applying these conclusions to adjust the MIT MIF to reflect the value to merchants from use of cards, the appropriate per transaction values are those set out at tables 6.5 & 6.6 (UK), 6.8 & 6.9 (Ireland) and 6.11 & 6.12 (intra EEA) in Dr Niels' first report, using medium PayPal costs and adjusted downwards by two basis points to reflect the fact that he has adjusted for front office costs by adding a full 3 basis points whereas I have concluded that a 1 basis point adjustment is appropriate:

UK Credit	**0.95%**
UK Debit	**0.75%**
Irish Credit	**0.93%**
Irish Debit	**0.78 %**
EEA Credit	**1.31%**
EEA Debit	**0.74 %**

Business stealing

390. These figures do not take account of the benefit to merchants of the competitive advantage of taking cards over merchants who do not, i.e. "business stealing". There is little empirical data available to me to enable the value of this benefit to be accurately quantified. However it is clear that the competitive advantage of taking cards is a real and substantial benefit to merchants, which for the reasons I have explained is a relevant benefit. It would therefore be wrong to ignore it in any quantification exercise required by Article 101(3).

391. The "must take cards" attitude adopted by most larger retailers suggests that they put a significant value on the competitive advantage over those who do not take cards. The statistics set out in the introductory section of this judgment illustrate that acceptance of cards by merchants is widespread. There were during the claim period a few major retailers in the UK who did not accept cards (e.g. Aldi and Lidl) but most retailers are prepared to pay the interchange fees which are set. I do not confuse a willingness to pay the MIF with an acceptance that the charge is reasonable; nor do I conclude that such willingness determines the issue whether the charge is anti-competitive; nor do I equate the amount which merchants are willing to pay with the value to merchants of taking cards. However I cannot accept Mr Lowenstein's submission that willingness to pay has nothing to do with benefits because it is "ransom pricing". The so called "ransom" is a price paid for a perceived benefit, and the perceived benefit is the competitive advantage which a card taking merchant has over one who does not take cards; or, which is the other side of the coin, the

disadvantage he will suffer by not taking cards against merchants who do. When Aldi chose to accept cards from 11 October 2014, its decision was explained as a means of winning more business from its rivals. A number of internal documents disclosed by Claimants indicate that they regarded taking cards as conferring a competitive advantage which translated into increased sales. Mr Dryden's evidence was that "merchants would stand to lose a large amount of business if they did not adopt MasterCard at all".

392. How is this benefit to be quantified? The authors of Rochet & Wright 2010 expressed the view not only that taking credit cards allowed merchants to make sales they would not otherwise have made, but also that this was the major reason why they accepted such cards and were prepared to pay higher interchange fees for doing so than for debit cards:

> "Thus offering credit allows an individual merchants (sic) to make sales that they otherwise would not make. The ability to make these sales is, we think, the major reason explaining why merchants accept credit cards and indeed are willing to pay higher fees to do so compared to the fees paid to accept debit cards, and why prior to the widespread use of credit cards, store credit was much more widely used than today (Evans and Schmalensee, 2005, pp 48-51)"

393. In other words the authors recognised that the credit functionality and business stealing aspects of accepting credit cards were a benefit to merchants which they valued as more significant than the other benefits (such as avoided costs of cash) and justified the differential interchange fee over debit cards. The difference between the weighted average MIF for MasterCard credit cards in the UK and that for debit cards for the claim period was of the order of 0.6%. Dr Niels' adjustment for the credit functionality of credit cards makes a difference of only 0.18%, which suggests that business stealing justifies the remainder.

394. I am satisfied that the value to merchants of the competitive advantage over rivals in accepting credit cards increases the adjusted MIT MIF values I have arrived at by at least 0.4%. This is a rough and ready approach but one which is required by the exigencies of the available data, and in which if anything I have erred in favour of the Claimants.

395. For debit cards, the position is not quite the same. The competitive advantage of accepting debit cards is a real one: customers perceive security and convenience benefits in carrying and using debit cards rather than cash, and thereby obtain consumer protection remedies for defective goods and services. Online sales are facilitated by debit card use. However accepting debit cards is unlikely to confer the same competitive advantage value to merchants as does accepting credit cards; for a debit card purchase the customer can make the same purchase in cash at a rival store, whereas the availability of credit for credit cards makes the difference for transactors between making a purchase and not, and for revolvers gives an advantage over cash by virtue of the interest free period (which is not captured in Dr Niels' adjustment for credit functionality).

396. In relation to debit cards I would increase the adjusted MIT MIF figures identified above by at least 0.2% to reflect the value of the competitive advantage of taking cards. Again this is a rough and ready approach but one which is required by the exigencies of the available data, and in which if anything I have erred in favour of the Claimants.

397. Accordingly the value to merchants of accepting cards under the adjusted MIT MIF methodology is at least

UK Credit	**1.35%**
UK Debit	**0.95%**
Irish Credit	**1.33%**
Irish Debit	**0.98 %**
EEA Credit	**1.71%**
EEA Debit	**0.94 %**

Issuer pass through adjustment

398. The level of pass through of the MIF by issuers to cardholders is relevant to three aspects of the exemption/exemptibility quantification exercise:

(1) The causation question. Efficiencies must be directly caused by the MIF, not merely by the card scheme. The figures arrived at immediately above represent the level of MIF which would match average merchant benefits from MasterCard card use. Because they are based on an adjusted MIT MIF methodology, they assume that the MIF is fully passed through from the issuers to the merchants via the cardholder. The underlying premise in the Baxter MIT MIF methodology is that the interchange fee is paid by the merchant and passed back through to it in the form of benefits via the acquirer, issuer and cardholder. That assumes that the MIF is all used by the issuer to provide incentives to the cardholder to use cards so as to produce the merchant benefits. To the extent that issuer pass through is less than 100%, the benefits are not attributable to the MIF.

(2) The fair share requirement. For the reasons explained above, the merchant benefit caused by the MIF must exceed the amount of the MIF paid by the merchant. This is a threshold requirement, but it is not the end of the fair share inquiry. If the MIF creates an unfair degree of profit for issuers, merchants will not be getting their fair share of the benefits conferred by the payment of the MIF, even if they are receiving benefits which match the MIF as a result of paying it.

(3) The indispensability requirement. For similar reasons, if the MIF is generating unfair issuer profit, it could not be said that a MIF at that level is indispensable to conferring the merchant benefits.

399. Issuers potentially pass through the MIF to cardholders by spending it to cover the cost of providing cards to customers and administering their use. These costs include:

(1) administrative costs of issuing cards and processing transactions;

(2) the costs of guaranteed payment, including fraud write offs, fraud detection and collection and mitigation and avoidance of fraud;

(3) the costs of providing credit including bad debt write off and the cost of funding interest free periods;

(4) the cost of rewards and benefits offered to cardholders, which take many forms; insurance and airline points are but two examples;

(5) cardholder compensation for defective goods and services;

(6) staff, advertising and other variable costs.

400. Quantification of pass through is difficult to estimate. It cannot be an exact exercise because the MIF is not an isolated pot of money treated as such by issuers; they derive other revenues from their card business, for example interest income and card fees. Neither expert in his reports sought to quantify the extent of issuer pass through other than in adjectival terms: "very high" per Dr Niels, and "a significant proportion" per Mr Dryden.

401. In his report Mr Dryden drew attention to three sources of potentially helpful data:

(1) The Commission conducted an econometric analysis in 2006 of the relationship between interchange fees and cardholder fees for both credit and debit cards which suggested that an increase in the interchange fee would result in cardholder fees reducing by about 2.4% of the IF increase. The pass through which this might imply is not a secure indication of issuer pass through generally for the purposes of the current litigation. It takes account only of reduction in card fees not other forms of benefits to cardholders. It is not in any way representative of the position in the UK, where the issuer's income from card fees is much lower than in the EEA area: something of the order of 10-15% as opposed to over 40% in Europe.

(2) An analysis of debit interchange fees in the US by Evans Chang and Joyce applied an indirect method of measuring how announcements of proposed caps on debit interchange fees in the US affected the price of issuers' shares. The authors inferred that 80% of debit card interchange fee was passed through to buyers.

(3) PwC analysed research conducted in 2001 by Research International which asked 648 respondents about their likely response to price change in credit cards, including the introduction of a transaction charge of 0.25% on all credit cards. The conclusion was that the introduction of such a charge would decrease the total transaction volume on credit cards by 26%. This suggests

that in the UK the MIF subsidisation of costs which would otherwise have to be recouped in card fees has a very significant impact, implying a high level of pass through.

402. Dr Niels based his opinion that pass through was very high on economic theory and the competitive nature of the issuing market: as a matter of economic theory, in a perfectly competitive market suppliers set prices equal to marginal costs; and a single cost change to an industry which is highly competitive results in all or almost all of the cost change being passed on to the consumer; there are a large number of issuers in the UK and in general the UK market is regarded as highly competitive, particularly for credit cards; the FCA November 2015 report concluded that there was strong competition in the credit card market, with competition focussing on rewards and introductory promotional offers; over half of consumers claimed that they shopped around when choosing their credit card with 66% of those using price comparison websites; the competition intensified from the late 1990s with monoline issuers and retailers entering the issuing market; the combination of a large number of competitors, high levels of switching and issuers competing strongly on rewards suggests a highly competitive market in which the economic theory supports high pass through. In cross examination Dr Niels described the level as “very high” but he couldn’t “pinpoint a number, whether it was 80%, 90% or 100%”. He drew attention to publicly available information showing that four issuers, RBS, Capital One, Tesco and M & S Bank had reduced or removed their reward offerings in late 2015 and 2016 following the cap imposed by the European IF Regulation. He was cross examined on one of these (Tesco) which indicated that the reduction in rewards did not approach the level of even 80%; but in my view these examples provided no firm empirical basis to support or undermine his estimate. They are not a representative sample and do not reflect the end point in any reduction of benefits. His estimate of 80%-100% was not based on any identified data or calculations.

403. Mr Dryden did not attempt any estimate of the relevant percentage. He made a further point in relation to pass through, which was that it was not enough for the MIF to be passed through by issuers to cardholders in the abstract; any pass through must be of a nature that could cause cardholders to respond and they must at least have some degree of responsiveness to that pass through. In other words the pass through of the MIF must be such as to incentivise card use. This is sound in principle, because a MIF which does not translate into card use cannot have a direct causative effect on merchant benefits arising out of card use. Mr Dryden and Dr Niels accepted that pass through for credit cards, which were stand-alone products, met this hurdle but Mr Dryden opined that for debit cards it “may not”. He identified three reasons why the responsiveness of debit cards to changes in the interchange fee may be less than that of credit cards:

(1) Whereas a credit card is a stand-alone product, a debit card is tied to a current account and therefore comes bundled with the services attached to such an account. It is “not obvious” that banks would respond to a change in the interchange fee by altering or introducing standing or per transaction fees for debit cards rather than other parts of the bundle of services; the MIF could be passed on through the reduction of some other personal fee related to current accounts.

(2) Customers in the UK have an expectation of free banking which makes it less likely that any reduction of the MIF would be passed through in the form of explicit charges for debit card adoption or usage

(3) Issuers benefit from customers' debit card use because their costs of processing are lower than the costs involved in customers using cash. If this remained true with a lower MIF, issuers would have an incentive to promote debit card use even without the MIF, e.g. by charges for the personal current account.

404. Dr Niels disagreed. He drew attention to the fact that some debit cards involve reward schemes which are readily responsive to changes in interchange fee. The MasterCard witnesses also gave as an example of pass through money spent by issuers on innovation in relation to contactless payments.

405. There is some force in the points made by Mr Dryden, which lead me to conclude that the extent of effective issuer pass through for debit cards is less than that for credit cards.

Always card and switching transactions

406. Mr Dryden's analysis involved as his Necessary Condition 1E that if pass through is less than 100%, it is necessary that the number of "switching transactions", i.e. purchases which would switch from being made from cash to card must be sufficiently large relative to the number of "always card" transactions (i.e. transactions that would always be made with a card). Mr Lowenstein devoted a number of submissions towards seeking to establish that this condition was not fulfilled. In my judgement this analysis does not assist the debate. Mr Dryden's framework assumes that the only relevant benefit to merchants is the alignment benefit of not taking cash. For reasons I have explained, this is a false premise for the Article 101(3) exercise. The error may be illustrated by one of Mr Lowenstein's arguments in this context: he submitted that on the basis of the evidence most credit cards transactions did not involve substitution for a cash payment: that 40% of transactions using credit cards were by revolvers, and so by definition were transactions which did not involve switching from cash because those who needed credit could not have paid in cash; and that for the other 60% who did not need credit, the transactors, the vast majority would otherwise have paid with a debit card rather than cash. This illustrates both the fundamental flaws in Mr Dryden's framework of Necessary Conditions. It simply ignores the merchant benefits from the extension of credit which credit cards provide, and all the other relevant merchant benefits from the use of both credit and debit cards which I have identified. Moreover it ignores Amex as a competitor; whilst a transaction which is dependent on credit will not switch from MasterCard to cash, the evidence established that if MasterCard could not set interchange fees for premium cards at a competitive level for issuers, MasterCard would have lost at least a significant proportion of its premium business to Amex, and possibly all of it. This is a considerable part of MasterCard's credit card business in the UK, up to 45% of which was estimated by Project Porsche to be in "the Amex sweet spot". I was invited by Mr Lowenstein not to make any finding as to the extent of the loss of business to Amex because the evidence on the issue was directed to the death spiral argument in respect of which Amex competition was not determinative, and because it would be an issue in Phase 2. I shall accept the

invitation because the point I am here addressing is merely illustrative of the flaws in the principle underlying Mr Dryden's framework.

Issuer profits

407. The mere fact that banks make profits does not, of course, mean that issuer pass through of the MIF to cardholders is less than 100%: If the MIF represents only 20% of card related income, it may all be passed through to cardholders and the profit generated by other revenues, for example interest charged. It would be a non sequitur to assume that if the MIF were reduced the income could be made up elsewhere, such as in card fees, for example.

408. I have not had substantial evidence of issuer profits or issuer finances which might assist on this question. Neither side called any witness with substantial contemporaneous experience as an issuer. The documentary evidence was exiguous. There was a MasterCard document based largely on 2006 data which estimated that MIF revenues typically represented about 30% of issuers' credit card income for EEA transactions, and that profits were about 33%. This was not however a sound guide to the position in the UK, as Mr Douglas explained. It estimated that card fees accounted for 51% of income, whereas in the UK the figure for that point of time was probably closer to 10-15%: there are generally no card fees for debit cards and only some for some credit cards. Mr Sidenius, who accepted that he did not have detailed knowledge of actual issuer profitability, estimated that an issuer would typically have made a profit of low 20s% to 40% on its UK credit revolving cards prior to the global financial crisis but the figure would be lower since then. Mr Douglas gave an estimate of 10% to 40% for issuers' margins which he estimated would vary from issuer to issuer. Both suggested that interchange fee might account for about 20% of an issuer's UK card related income. The FCA November 2015 report suggests that issuer profit on credit cards is not significantly driven by interchange revenue, but rather by interest payable by revolvers on credit balances.

Conclusions on issuer pass through and issuer profits

409. Doing the best I can, my conclusions are that the degree of issuer pass through is likely to be at least 75% for credit cards and at least 40% for debit cards. These percentages are intended to reflect the causative effect of the MIF in incentivising card use. The level of profit for issuers is not such as to violate the fair share or indispensability requirements. A profit at levels which varied across the market between 10% and 40% is not indicative of an unreasonable return on capital for a bank and would not of itself represent such a degree of profit as to cause the fair share or indispensability requirement to be breached if the threshold test of merchant benefit neutrality were fulfilled.

410. Accordingly the value of merchant benefits caused by the MIF using the adjusted MIT MIF methodology, rounded to the nearest basis point is

UK Credit	**1.01%** (1.35% x 75%)
UK Debit	**0.38%** (0.95% x 40%)
Irish Credit	**1.00%** (1.33% x 75%)

Irish Debit **0.39%** (0.98 % x 40%)

EEA Credit **1.28%** (1.71% x 75%)

EEA Debit **0.38%** (0.94 % x 40%)

Benefit cost balancing approach

411. This exercise was only undertaken by Dr Niels for the UK MIF because data was not available for the Irish or EEA MIFs.

412. For credit cards Dr Niels took particular heads of costs which are incurred by issuers in conferring benefits on merchants without generating revenue for issuers, namely (1) transaction processing costs; (2) costs of the payment guarantee, i.e. credit and fraud write offs and the costs involved in mitigating those risks; and (3) the cost of interest free credit. This was the method adopted by MasterCard as part of its process in setting the MIF for credit cards and was used by the Commission in its Visa 2002 Decision. The costs used by Dr Niels were based on two studies carried out for MasterCard by EDC in 2005 and 2008. These are likely to underestimate the costs for the period shortly after that because the global financial crisis meant that credit write-off peaked in 2010, but there is no reason to treat them as unrepresentative across the whole of the claim period.

413. The three heads of costs add up to 2.11% of total transaction value in the 2005 study and 2.41% in the 2008 study. Dr Niels then adjusted these to reflect the fact that the costs are incurred in conferring benefits on cardholders as well as merchants. The benefit to merchants from these costs is only a proportion of the costs. He takes a figure of "at least "25% or 50%", which he describes as "conservative"; applied to the 2008 study figures this would produce a range of 0.75% to 1.31%.

414. This exercise is of limited value as a cross check. An issuer cost based approach is not supported in any of the academic literature as having any sound theoretical basis. Rysman & Wright 2015 describe it as "not supported by any economic theory" and Tirole as "unfortunately bears little relationship with the theoretically correct level". It does not capture all costs and costs are not to be equated with value to merchants. Moreover, and critically, the figures of 25% to 50% were not underpinned by any calculations or data analysis and seemed no more than figures plucked out of the air.

415. For debit cards the methodology was different. EDC conducted a full end to end study of the costs to issuers of a debit card transaction in 2006, which produced an ad valorem estimate of 0.34%. This too is of limited assistance because it fails to distinguish between the cost to issuers and the benefit to merchants, and fails to take any account of the benefit conferred on cardholders by the costs incurred by issuers.

416. The most that can be said of the figures produced by Dr Niels' issuer cost based approach is that they suggest that the exempt/exemptible MIF levels calculated by the adjusted MIT MIF methodology are not wholly out of line with an approximately appropriate proportion of the costs involved in conferring those benefits on both merchants and cardholders.

Conclusion on exempt and exemptible levels

417. It is appropriate to use slightly different figures for exemption and exemptibility, to reflect the fact that the burden of proof and approach to the evidence is different. The figures arrived at above are those which are appropriate when considering exemption, because where in doubt I have erred in favour of the Claimants. When considering exemptibility, rather than exemption, where the evidential approach and burden of proof involve resolving doubts in MasterCard's favour because it is a damages issue, the figures require upward revision: the extent of issuer pass through and the value of the competitive advantage over rivals may in each case be greater than the adjustments I have used in arriving at these figures. I would allow a 10% margin in MasterCard's favour to take account of these factors.

418. Accordingly I conclude that below the following levels the MIFs as set would be **exempt** under Article 101(3):

UK Credit	**1.01%**
UK Debit	**0.38%**
Irish Credit	**1.00%**
Irish Debit	**0.39%**
EEA Credit	**1.28%**
EEA Debit	**0.38%**

419. Applying a 10% margin and rounding to the nearest basis point, the following levels of MIF would be **exemptible** under Article 101(3) for the purposes of calculating any damages claim:

UK Credit	**1.11%**
UK Debit	**0.42%**
Irish Credit	**1.10%**
Irish Debit	**0.43%**
EEA Credit	**1.41%**
EEA Debit	**0.42%**

420. These compare with the MIFs as set by MasterCard, expressed as a single weighted average for each year varying as follows:

UK Credit	0.87% to 0.92%
UK Debit	0.24% to 0.28%
Irish Credit	0.87% to 0.95%

Irish Debit	0.22% to 0.28%
EEA Credit	0.8% to 1.2% until June 2008 and 0.3% from July 2009
EEA Debit	0.5% to 1.15% until June 2008 and 0.2% from July 2009

421. It follows that the MIFs as set were below the exempt and exemptible level, save for the EEA debit card MIF for the earliest part of the claim period prior to June 2008.

A footnote on merchant pass through

422. In this phase 1 trial, I have not been asked to address the extent to which the MIF borne by merchants is passed on to customers, both cardholders and non-cardholders, in the form of retail pricing. It was assumed in argument before me that that is a question which affects only quantum of damages recoverable by the Claimants. However it is not self-evident to me that it is not also relevant to the Phase 1 issues I have been addressing. If the merchants pass some of the cost of the MIF on to cardholders, the fair share condition would be focusing on a different level of benefit/burden to both merchants and cardholders. Because these matters were not argued, and may arise in consumer claims against MasterCard, I express no view upon them.

Conclusion

423. The issues in Phase 1 will be answered in accordance with this Judgment.

Appendix

Intra EEA Debit card MIFs

Debit MasterCard MIFs

Fee Tier	2007 (%)	2009 (%)	2010 (%)	2012 (%)			2013 (%)		2014 (%)		2015 (%)
Chip	0.80	0.31	0.30	0.30	0.25	0.25	0.23	0.25	0.25	0.25	0.25
Electronic / Enhanced Electronic	0.95	0.37	0.31	0.31	0.25	0.25	0.23	0.25	0.25	0.25	0.25
Merchant UCAF	0.95	0.36	0.31	0.31	0.25	0.25	0.23	0.25	0.25	0.25	0.25
Full UCAF	1.15	0.38	0.32	0.32	0.26	0.26	0.24	0.26	0.26	0.26	0.26
Base	1.20	0.45	0.33	0.33	0.27	0.27	0.25	0.27	0.27	0.27	0.27
PayPass		0.27	0.26	0.26	0.25	0.25	0.23	0.25	0.25	0.25	0.25

Maestro MIFs

Fee Tier	2007 (%)	2008 (%)	2009 (%)	2010 (%)			2012 (%)			2013 (%)		2014 (%)		2015 (%)
Pay-Pass	0.57	0.00	0.27	0.27	0.27	0.26	0.26	0.23	0.23	0.20	0.23	0.23	0.19	0.19
Chip	0.60	0.00	0.31	0.31	0.31	0.30	0.30	0.23	0.23	0.20	0.23	0.23	0.19	0.19
Chip Late Present ment	0.95	0.00	0.37	0.37	0.37	0.32	0.32	0.25	0.25	0.22	0.25	0.25	0.21	0.21
PIN Verified	0.70	0.00	0.35	0.35	0.35	0.31	0.31	0.24	0.24		0.24	0.24	0.20	0.20
Signa-ture Verified	0.95	0.00	0.37	0.37	0.37	0.32	0.32	0.25	0.25	0.22	0.25	0.25	0.21	0.20
e- & m-comm.	1.25	0.00												
Chip & PIN		0.00												
Secure e- & m-comm.		0.00	0.38	0.46	0.46	0.33	0.33	0.26	0.26		0.26	0.26	0.22	0.22
Base		0.00												
Petrol (trx<€ 50)		0.00												
MO/TO		0.00			0.46	0.33	0.33	0.23	0.26	0.23	0.26	0.26	0.22	0.22

Intra EEA Credit card MIFs

Consumer MasterCard MIFs excluding World & World Elite/Signia

Fee Tier	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2012 (%)			2013 (%)			2014 (%)		2015
Chip	0.80	0.00	0.37	0.34	0.34	0.28	0.28	0.28	0.26	0.28	0.26	0.26	0.26
Electronic/ Enhanced Electronic	0.95	0.00	0.40	0.36	0.36	0.29	0.29	0.28	0.26	0.29	0.26	0.26	0.26
Merchant UCAF	0.95	0.00	0.37	0.36	0.36	0.29	0.29	0.28	0.26	0.29	0.26	0.26	0.26
Full UCAF	1.15	0.00	0.39	0.37	0.37	0.30	0.30	0.29	0.27	0.30	0.27	0.27	0.27
Base	1.20	0.00	0.46	0.38	0.38	0.31	0.31	0.30	0.28	0.31	0.28	0.28	0.28
PayPass		0.00	0.33	0.30	0.30	0.28	0.28	0.28	0.26	0.28	0.26	0.26	0.26

MasterCard World MIFs

Fee Tier	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2012 (%)			2013 (%)	2014 (%)		2015 (%)
Chip	0.80	0.00	0.93	0.93	0.93	0.97	0.97	0.97	0.97	0.87	0.87
Enhanced Electronic	0.95	0.00	0.96	0.96	0.96	0.97	0.97	0.97	0.97	0.87	0.87
Merchant UCAF	0.95	0.00	0.98	0.98	0.98	0.97*	0.97	0.97	0.97	0.87	0.87
Full UCAF	1.15	0.00	1.00	1.00	1.00	0.97	0.97	0.97	0.97	0.87	0.87
Base	1.20	0.00	1.02	1.02	1.02	0.97	0.97	0.97	0.97	0.87	0.87
PayPass		0.00	0.33	0.30	0.30	0.97	0.97	0.97	0.97	0.87	0.87

MasterCard World Signia and World Elite MIFs

Fee Tier	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2012 (%)			2013	2014 (%)		2015 (%)
Chip	1.50	0.00	1.13	1.13	1.13	1.17	1.17	1.17	1.17	1.17	1.17
Enhanced Electronic	1.60	0.00	1.16	1.16	1.16	1.17	1.17	1.17	1.17	1.17	1.17
Merchant UCAF	1.60	0.00	1.18	1.18	1.18	1.17	1.17	1.17	1.17	1.17	1.17
Full UCAF	1.75	0.00	1.20	1.20	1.20	1.17	1.17	1.17	1.17	1.17	1.17
Base	1.90	0.00	1.22	1.22	1.22	1.17	1.17	1.17	1.17	1.17	1.17
PayPass		0.00	0.33	0.30	0.30	1.17	1.17	1.17	1.17	1.17	1.17

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UK Debit card MIFs

Debit MasterCard MIFs (excluding World and Elite)

Fee Tier	2006 (%)	2007 (%)	2009 (%)	2010 (%)			2011 (%)	2012 (%)	2013 (%)		2015 (%)
Chip/PIN		0.32					0.37	0.54	0.52	0.52	0.60
Chip					0.37	0.37					
Enhanced Electronic		0.45			0.37	0.37	0.37				
Merchant UCAF		0.35			0.47	0.47	0.46	0.39	0.38	0.38	0.44
Full UCAF		0.45			0.47	0.47	0.46	0.59	0.57	0.57	0.66
Base		0.55			0.84	0.84	0.83	0.89	0.85	0.85	0.99
PayPass		0.32	0.18		0.19	0.19	0.52	0.65	0.65	0.65	0.65
PayPass HVP								0.39	0.38	0.38	0.44
PayPass Terminal								0.39	0.38	0.38	0.44
PayPass Wallet (MasterPass)											0.44
Debit MC avg.	**0.39**	**0.66**		**0.47**	**0.45**	**0.45**	**0.46**			**0.58**	

Debit World and Debit World Elite MIFs

Fee Tier	2012 (%)		2013 (%)	2015 (%)
Chip & PIN		0.84		0.60
Enhanced Electronic	1.33	1.33		
Merchant UCAF	0.59	0.59	0.57	0.44
Full UCAF	0.89	0.89	0.85	0.66
Base	1.33	1.33	1.27	0.99
PayPass	0.65	0.65	0.65	0.65
Full PayPass HVP	0.59	0.59	0.57	0.44
PayPass Terminal	0.59	0.59	0.57	0.44
PayPass Wallet (MasterPass)	0.59	0.59	0.57	0.44
Debit World and Debit World Elite avg.		**0.91**		

Maestro MIFs

Fee Tier	2007 (%)	2010 (%)	2011 (%)		2012 (%)	2013 (%)	2015 (%)
Chip/Pin verified	0.35	0.28	0.28	0.28	0.35	0.33	0.38
Chip read	0.46	0.32		0.37			
CNP with CV2	0.35						
CNP	0.40						
CAT (unsecured)	0.41						
(Secure) E/M-commerce	0.46	0.37	0.37	0.37	0.44	0.42	0.49
MOTO		0.37	0.37	0.37	0.59	0.57	0.66
Base	0.46	0.37	0.37	0.37	0.59	0.57	0.66
PayPass	0.23	0.18	0.18	0.18	0.20	0.19	0.22
PayPass Card					0.39	0.38	0.44
PayPass Terminal					0.30	0.28	0.33
PayPass Wallet (MasterPass)						0.38	0.44
Maestro avg.	**0.39**	**0.30**	**0.30**	**0.30**	**0.39**		

UK Credit card MIFs

MasterCard Consumer and MasterCard Electronic MIFs as set

Fee Tier	2006 (%)	2007[A] (%)		2009 [A] (%)	2010 (%)			2012 (%)	2013 (%)	2015 (%)
Chip - PIN verified	0.80	0.80	0.80		0.80	0.80	0.80			0.80
Chip	0.85	0.85	0.85					0.80	0.80	
Electronic / Enhanced Electronic	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.80
Card Not Present	1.00	1.00	1.00							
Merchant UCAF	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.80
Full UCAF	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.80
Standard / Base	1.20	1.20	1.20		1.05	1.20	1.05	1.00	1.00	0.80
PayPass			0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
PayPass Wallet (MasterPass)									0.85	0.80
MC Consumer and Electronic avg.	**0.90 to 0.92**				**0.89**	**0.90**	**0.89**			

MasterCard World MIFs

Fee Tier	2006 (%)	2007[A] (%)	2008[A] (%)	2009[A] (%)	2010 (%)		2012 (%)	2013 (%)	2015 (%)
Chip - PIN verified		1.30							0.80
Chip	1.30		1.30		1.30	1.30	1.25	1.25	
Electronic / Enhanced Electronic	1.40	1.40	1.40		1.40	1.40	1.35	1.35	0.80
Merchant UCAF	1.40	1.40	1.40		1.40	1.40	1.35	1.35	0.80
Full UCAF	1.55	1.55	1.55		1.55	1.55	1.50	1.50	0.80
Standard / Base	1.70	1.70	1.70		1.70	1.70	1.65	1.65	0.80
PayPass		1.30		0.80	0.80	0.80	0.80	0.80	0.80
PayPass. Wallet (MasterPass)								1.30	0.80
MC World avg.	**1.44 to 1.46**				**1.43**	**1.43**			

MasterCard World Signia and World Elite MIFs

Fee Tier	2006 (%)	2007 [A] (%)	2009 [A] (%)		2010 (%)	2012 (%)	2013 (%)	2015 (%)
Chip - PIN verified		1.50						0.80
Chip	1.50				1.50	1.40	1.40	
Electronic / Enhanced Elect.	1.60	1.60			1.60	1.50	1.50	0.80
Merchant UCAF	1.60	1.60			1.60	1.50	1.50	0.80
Full UCAF	1.75	1.75			1.75	1.60	1.60	0.80
Standard / Base	1.90	1.90			1.90	1.85	1.85	0.80
PayPass		1.50	0.80	0.80	0.80	0.80	0.80	0.80
PayPass Wallet (MasterPass)							1.45	0.80
MC World Signia and Elite avg.	**1.64 to 1.66**				**1.69**			

MasterCard Prepaid Consumer MIFs

Fee Tier	2009	2010 (%)		2012 (%)	2013 (%)	2015 (%)
PayPass	0.60	0.60	0.60	0.60	0.60	0.60
Chip/ PIN Verified		0.60	0.60	0.60	0.60	0.60
Electronic		0.70	0.70	0.70	0.70	0.70
Merchant UCAF		0.70	0.70	0.70	0.70	0.70
Full UCAF		0.75	0.75	0.75	0.75	0.75
Base		1.00	0.85	0.85	0.85	0.85
PayPass Wallet (MasterPass)					0.70	0.70
MC Prepaid Consumer avg.		**0.75**	**0.74**			

Irish Debit card MIFs

Debit MasterCard MIFs

Fee Tier	2008 (%)	2009 (%)	2015 (%)
PayPass	0.20	0.20	0.20
Chip & PIN	0.34	0.40	0.40
Base	0.60	0.88	0.92
Enhanced Electronic	0.40	0.48	0.48
Merchant UCAF	0.40	0.48	0.48
Full UCAF	0.48	0.64	0.64
Debit MC avg.	**0.41**	**0.53**	

Maestro MIFs

Fee Tier	2007 (%)	2008 (%)	2010 (%)	2015 (%)
PayPass	0.57	0.20	0.20	0.20
Chip	0.60			
Chip & PIN		0.28	0.28	0.28
Large Merchant		0.28		
Chip late presentment	0.95			
PIN Verified	0.70			
Signature verified	0.95			
(Secure) e/m-commerce	1.25	0.32	0.32	0.32
Base		0.40	0.40	0.40
MO/TO				0.32
Maestro avg.		**0.29**		

Irish Credit card MIFs

MasterCard Consumer MIFs

Fee Tier	2007 (%)	2015 (%)
PayPass		0.80
Chip	0.80	
Chip & PIN		0.80
Electronic/Enhanced Electronic	0.95	0.95
Merchant UCAF	0.95	0.95
Full UCAF	1.15	1.15
Base	1.20	1.20

MasterCard World MIFs

Fee Tier	2007 (%)	2008 (%)	2015 (%)
Chip & Pin			1.30
Chip	0.80	1.30	
Electronic / Enhanced El.	0.95	1.40	1.40
Merchant UCAF	0.95	1.40	1.40
Full UCAF	1.15	1.55	1.55
Standard / Base	1.20	1.70	1.70
PayPass			0.80

MasterCard World Signia MIFs

Fee Tier	2007 (%)	2015 (%)
PayPass		0.80
Chip	1.50	
Chip & PIN		1.50
Electronic/Enhanced Electronic	1.60	1.60
Merchant UCAF	1.60	1.60
Full UCAF	1.75	1.75
Base	1.90	1.90

MasterCard Prepaid Consumer MIFs

Fee Tier	2015 (%)
PayPass	0.55
Chip & PIN	0.55
Enhanced Electronic	0.70
Merchant UCAF	0.70
Full UCAF	0.75
Base	0.85