Neutral citation [2026] CAT 11

Case Nos: 1517/11/7/22 (UM)
1441-4/7/7/22
1266/7/7/16

IN THE COMPETITION APPEAL TRIBUNAL

Salisbury Square House
8 Salisbury Square
London EC4Y 8AP

18 February 2026

Before:

THE HONOURABLE MR JUSTICE MICHAEL GREEN
(Chair)
BEN TIDSWELL
PROFESSOR MICHAEL WATERSON

Sitting as a Tribunal in England and Wales

BETWEEN:

UMBRELLA INTERCHANGE FEE CLAIMANTS
(1) THE STEPHENSON HARWOOD CLAIMANTS
(2) THE SCOTT + SCOTT CLAIMANTS

The "Merchant Claimants"

- v -

UMBRELLA INTERCHANGE FEE DEFENDANTS
(1) MASTERCARD INCORPORATED & OTHERS
(2) VISA INC. & OTHERS

Defendants

AND BETWEEN:

CICC CLAIMANTS
(1) COMMERCIAL AND INTERREGIONAL CARD CLAIMS I LIMITED
(2) COMMERCIAL AND INTERREGIONAL CARD CLAIMS II LIMITED

The "CICC Claimants"

- v -

CICC DEFENDANTS
(1) MASTERCARD INCORPORATED & OTHERS
(2) VISA INC. & OTHERS

The "CICC Defendants"

AND BETWEEN:

WALTER HUGH MERRICKS, CBE

- v -

MERRICKS DEFENDANTS
(1) MASTERCARD INCORPORATED
(2) MASTERCARD INTERNATIONAL INCORPORATED
(3) MASTERCARD EUROPE SA

The "Merricks Defendants"

Heard at Salisbury Square House on 18, 19, 20, 21, 25, 26, 28 and 29 November 2024; 2, 3, 4, 5, 9, 10, 11, 12, 16 and 17 December 2024; 24, 25, 26, 27 and 31 March 2025; and 1, 2 and 3 April 2025

JUDGMENT (PASS-ON)

APPEARANCES

Mr Kieron Beal, KC, Mr Philip Woolfe, KC, Mr Reuben Andrews, and Mr Oscar Schonfeld (instructed by Stephenson Harwood LLP and Scott+Scott UK LLP) appeared on behalf of the Merchant Claimants.

Mr Kieron Beal, KC, Mr Philip Woolfe, KC, Mr Reuben Andrews, Ms Flora Robertson, and Mr Oscar Schonfeld (instructed by Harcus Parker LLP) appeared on behalf of the CICC Claimants.

Mr Daniel Jowell, KC, Ms Jessica Boyd, KC, Ms Isabel Buchanan, Ms Ava Mayer and Ms Aislinn Kelly-Lyth (instructed by Linklaters LLP and Milbank LLP) appeared on behalf of the Visa Defendants.

Ms Sonia Tolaney, KC, Mr Matthew Cook, KC, Mr Owain Draper and Mr Daniel Benedyk (instructed by Jones Day and Freshfields LLP) appeared on behalf of the Mastercard Defendants.

Mr Mark Simpson, KC, Mr Jack Williams, and Mr Alastair Holder Ross (instructed by Willkie Farr & Gallagher (UK) LLP) appeared on behalf of Mr Walter Hugh Merricks, CBE.

Mr Ben Lask, KC, and Mr Thomas Sebastian (instructed by Pinsent Masons LLP) appeared on behalf of Allianz.

Note: Excisions in this Judgment (marked "[✂]") relate to commercially confidential information: Schedule 4, paragraph 1 to the Enterprise Act 2002.

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A. INTRODUCTION

1. Over the course of eight weeks, we have heard two trials on the question of pass-on or mitigation of loss. The two forms of pass-on that we have been considering are said to have arisen in the context of the long-running competition litigation between many thousands of merchant retailers against the payment card schemes operated by the Defendants, "**Visa**" and "**Mastercard**",[1] in relation to what we assumed for the purpose of this trial, are to be unlawful multilateral interchange fees ("**MIFs**") paid by the merchant retailers to their acquiring banks as part of the merchant service charge ("**MSC**").

2. The trials were called Trial 2A and Trial 2B. Trial 1, which was heard a year earlier before a slightly differently constituted tribunal (Mr Tidswell and Professor Waterson sat on both), was concerned with the Defendants' liability under Article 101(1) of the Treaty on the Functioning of the European Union ("**TFEU**"). At the hearing, it was necessary for us to assume that the setting of the MIFs by the Defendants constituted a restriction of competition amounting to an infringement of competition law. In other words, we had to assume that the MIFs were an unlawful overcharge paid by the merchant retailers as part of the MSC (the structure is more complicated than that, as explained below).

3. Since the hearing, the Competition Appeal Tribunal ("**CAT**") has handed down its judgment on Trial 1, reported at [2025] CAT 37, in which it did find such an infringement. The Defendants are entitled to, and still wish to, argue the exemption provided for in Article 101(3) TFEU and that is expected to be the subject matter of Trial 3. They are also seeking permission to appeal the Trial 1 judgment. There remain many more issues to resolve in this complex litigation.

4. Therefore Trials 2A and 2B are about the following forms of pass-on:

    a) Trial 2A is concerned with merchant pass-on ("**MPO**") whereby the Defendants allege that the merchant retailers have passed on the unlawful

[1] Annex 1 contains a list of terms that are used in this Judgment. Those terms are in **bold** when first used in this Judgment.

overcharge, or MIFs, principally to their customers by way of higher prices. But the Defendants (particularly Mastercard) also allege supplier pass-on which is a reduction in the amount paid to other suppliers as a result of the overcharge;

b) Trial 2B, which lasted only a week, is concerned with acquirer pass-on ("**APO**") whereby the merchant retailers allege that the MIFs were passed on to them by the acquiring banks in the form of higher MSCs, such that they suffered loss.

5. The burden of proof is different for each form of pass-on: for MPO, the Defendants have to prove that the loss has been avoided by being passed on – they therefore argue for high rates of MPO; whereas APO is for the merchant retailers to prove because it is necessary for them to establish their loss. Accordingly, each side is arguing the opposite for the different forms of pass-on, with the merchant retailers suggesting that there is complete or very high APO, whereas there is no, or very low, MPO. Both sides say that their respective positions can be reconciled and that they make sense in economic terms.

6. The parties in each Trial were different. Trial 2A began life as part of the Merchant Interchange Fee Umbrella Proceedings (the "**Umbrella Proceedings**") in which thousands of Merchant Claimant entities, consisting of approximately 600 Merchant Claimant groups, brought claims against the Defendants in relation to their operation of their respective payment card schemes. The Merchant Claimants' businesses range across almost all of the major sectors of the UK economy and they are seeking substantial sums in damages from the Defendants on the basis that the MSCs charged to them by the acquiring banks incorporated an unlawful overcharge, being the MIF paid by the acquiring banks to the issuing banks. The "**Merchant Claimants**" pursue their claims against the Defendants predominantly in the period from November 2010 onwards (although certain merchants that ultimately settled such as Primark and M&S had claims which pre-dated this period).

7. Since the claims were brought, a large number of the Merchant Claimants have settled with either or both of the Defendants. There have also been settlements

since we heard these trials. Currently, as at the date of this judgment, there are approximately 47 Claimant groups remaining in the Umbrella Proceedings (some of which have separate claims against each of Visa and Mastercard and some of which have only a claim remaining against one of them). Some of these cases are stayed, while others are actively participating in the proceedings. Of those Claimants remaining active, the majority are represented by Scott + Scott UK LLP following settlements reached with active Claimants represented by Stephenson Harwood LLP during Trial 1 and Trial 2.

8. The Merchant Claimants were joined in this trial by the claim brought by the class representative, Mr Walter Merricks CBE, who was suing Mastercard on behalf of a class of around 44 million UK consumers who purchased goods or services from merchant retailers between 22 May 1992 and 21 June 2010. Mr Merricks' claim was eventually certified under s.47B of the Competition Act 1998 and it follows on from the decision of the European Commission of 19 December 2007 (the "**EC Decision**") which found that Mastercard had infringed what is now Article 101(1) of TFEU by setting the price of intra-EEA MIFs for consumer credit and debit cards in the period 22 May 1992 to 19 December 2007. Mastercard's appeals against the EC Decision were dismissed by the EU courts. Mr Merricks' claim period is 22 May 1992 to 21 June 2010, being the period of infringement plus a run-off period. It can be seen therefore that the Merricks' claim period does not really overlap with the Merchant Claimants' claim period and this enabled Mastercard to pursue somewhat different cases on MPO in relation to them.

9. As Mr Merricks' claim was dependent on the MIFs being passed on to consumers by the merchant retailers in higher prices charged to them, the burden was on him to prove MPO. It was a necessary element of his cause of action against Mastercard, not a mitigation defence that Mastercard was running. Nevertheless, it made perfect sense that these pass-on claims be tried together. It has meant that the run-up to the trial was more complex and added an extra layer to the case and the economic evidence, which as we shall see, was approached differently by all the parties, even those arguing for the same level of MPO.

10. However, as is well-known, during the course of the trial, Mr Merricks settled with Mastercard for £200 million (the original claim was for some £14 billion) and this was subsequently approved by the CAT under s.49A of the Competition Act 1998. The judgment of the CAT approving the settlement is reported at [2025] CAT 28. As Mr Merricks' expert economist had given evidence and been cross-examined at the trial and the Defendants, to a certain extent, rely on that evidence, it will be considered along with the other evidence below. But we do not make any findings on Mr Merricks' claim itself, which sought to establish a UK Retail Pass-on Rate for the relevant period of c.90%. The other parties have not sought to establish an economy-wide pass-on rate, and have concentrated on sectoral rates (although Visa does invite us to find an economy-wide rate which it says may be useful for the purposes of Trial 3).

11. In Trial 2B, four further class actions were brought in, that of the opt-in claim brought by Commercial and Interregional Card Claims I Limited and the opt-out claim brought by Commercial and Interregional Card Claims II Limited against each of Mastercard and Visa (together the "**CICC Claimants**"). Those proceedings are at an earlier stage but, for the purposes of APO, they are completely aligned with the Merchant Claimants and were represented by the same Counsel and used the same expert. By the time we heard evidence in Trial 2B, the CAT's approval of the settlement of Mr Merricks' proceedings was known and consequently Mr Merricks did not participate in Trial 2B.

12. We will deal firstly with Trial 2A and all MPO issues, and then Trial 2B on APO.

13. Before doing so we wish to record our gratitude for the high-quality presentations, both written and oral, that we had from the parties' respective legal teams and experts. We appreciate that it was not just those speaking, whether as advocates or experts, who were responsible for the material put before us and that those in the teams supporting them provided invaluable assistance. We were also pleased to see that junior counsel from all parties took on advocacy roles during the trial and they all did well.

B. SUMMARY OF THE PARTIES' POSITIONS

14. Visa and Mastercard, as the Defendants seeking to prove that the Claimants have mitigated any losses they may have suffered by passing on the overcharge to their downstream customers, say that because of the vast number of Claimants and the impossibility of establishing the precise extent to which each Claimant passed on the cost of the MIF during the claim period, the issue can only be dealt with by a process of estimation. They rely heavily on economic theory, including academic literature and studies and econometric analyses conducted with public data.

15. There is also a limited amount of quantitative data from a small number of "**Analysed Claimants**" on which the experts have conducted regression analyses. However, the experts are agreed that it is not possible to conduct such analyses on the MSCs themselves as there were too few fluctuations in their amount and they are in any event too small to establish any statistical correlation between them and downstream prices. Accordingly, the experts have used proxies for the MSC cost and sought to observe any correlation between an increase or decrease in those proxy costs and downstream prices. A crucial question that requires determination is the appropriate proxy to be used for this purpose and whether any proxy can really be used to inform whether the MSCs were passed on.

16. The parties were agreed that the MSCs should properly be viewed as a variable cost. Visa's economics expert, Mr Derek Holt, used the most significant component of a firm's variable costs, the Cost of Goods Sold ("**COGS**"), as his proxy. This was on the basis that MSCs were variable industry-wide costs that were incurred by the Claimants throughout the relevant period. This yielded relatively high rates of pass-on as one would generally expect COGS to be passed on.

17. Mr Justin Coombs, who was Mr Merricks' expert economist, used total costs as his proxy. That therefore included both COGS and all overhead and fixed costs.

Mr Coombs based this on his theory that all costs become variable costs in the long-run. He also came up with high rates of pass-on.

18. The Claimants' economics expert was Dr Stefano Trento. He looked at the fact that, apart from two of the Analysed Claimants, the vast majority of the Claimants do not treat MSCs as COGS. Rather they mostly include MSCs in their stack of overhead costs. Even though he considered the use of any large cost as proxy for such a small cost to be problematic, he carried out regression analyses mostly on a proxy of total overhead costs. The Defendants do not accept that the way the MSCs were treated for accounting purposes is relevant and say that in any event there is only a small handful of self-selected Claimants who have provided qualitative evidence which cannot be extrapolated to the entirety of the sectors before us. While his approach led to him finding much lower rates of pass-on, Dr Trento does also say that the approach of using a much larger proxy such as total overhead costs raises considerably the likely estimated rate of pass-on for MSCs.

19. Mastercard's expert, Ms Rachel Webster, adopted a different approach. She paid attention to the qualitative evidence and considered that it was important to recognise the way merchants treated MSCs and the appropriate proxy must reflect that. But she based her analysis on whether the merchant was a reseller of goods or services, or a producer. She arrived at high pass-on rates for the Merchant Claimants' claim period, largely because she treated the MSCs as variable costs that would be taken into account in pricing decisions. She had the further difficulty of having to deal with Mr Merricks' claim as well, in respect of which she opined that the pass-on rate would be significantly lower in that period because of the lower amount of card usage then. This dichotomy was challenged by the other parties and became largely discredited in cross-examination.

20. Apart from the different proxies used by the economic experts, the other major area of disagreement is over the relevant legal test for causation and whether it includes a requirement for the Defendants to prove a "*direct and proximate causative link*" between the MSCs and the downstream prices charged to consumers. The legal question is dealt with in detail below. But for now it is

relevant to highlight that this impacts whether the Defendants have to show a plausible mechanism whereby the MSCs would have been taken into account in setting prices. In other words, is it sufficient for the Defendants to say that, in the long run, all costs would be recovered or that all costs were taken into account in the businesses' budgetary processes such that, by one means or another, the MSCs would have had an impact on prices? Or do the Defendants need to prove that the MSCs did directly affect prices by being taken account of in the setting of the profit-maximising price?

21. This also gives rise to evidential problems, particularly emphasised by Visa, that there is only limited evidence from a small number of self-selected Claimants, as Visa describes the Analysed Claimants, from which no conclusions can be drawn as to how MSCs were treated and the mechanisms by which they might be passed on. *A fortiori* Visa says one ought not extrapolate from that scant evidence to the whole of the sector that an Analysed Claimant is in, much less to other sectors where there is no Analysed Claimant.

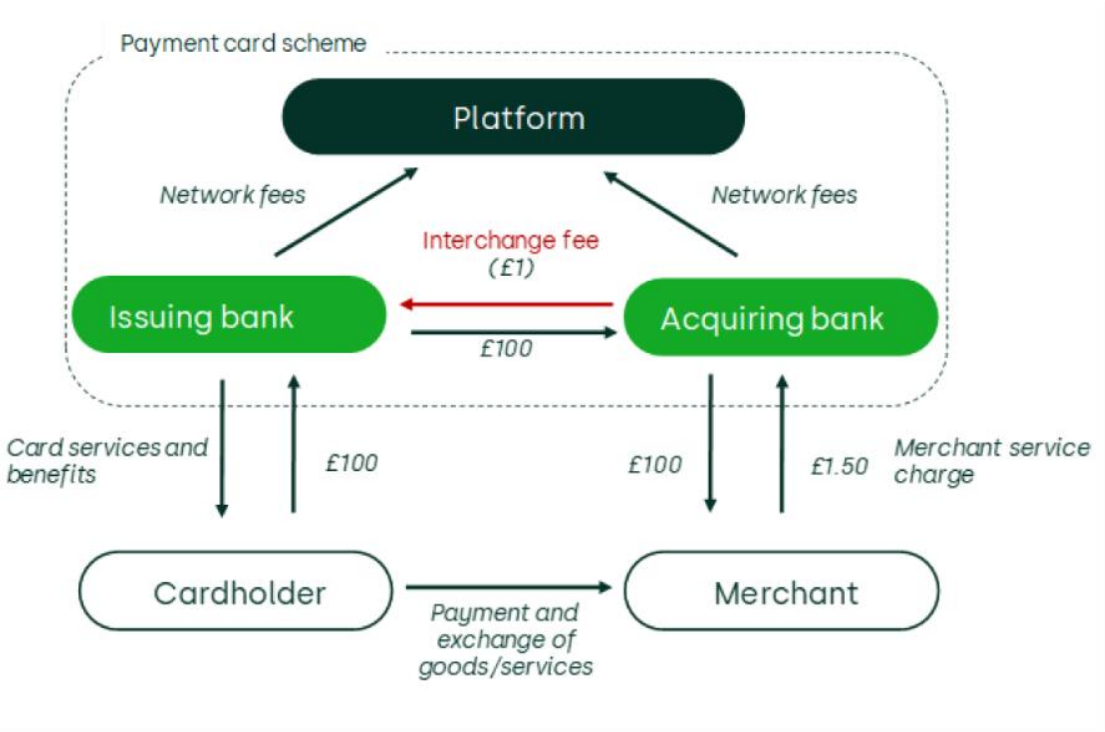
22. The Claimants' primary position was to concentrate on how the Claimants actually priced in the real world, and how or whether costs featured in the setting of prices. The factual evidence demonstrating that was limited to the Analysed Claimants and the Claimants say that this shows that the vast majority of them do not treat the MIF or the MSC as COGS and it is not taken into account in their normal price-setting process. The Claimants say that it is not simply whether the MSC was treated for accounting purposes as an overhead, although that is important, but whether it did actually influence their price setting. As noted above, their expert, Dr Trento, did carry out econometric analysis on a cost proxy that was normally that of overhead costs. The Claimants in the end say that the Defendants have not satisfied the burden of proof on them to show that, for most Claimants, there is a direct and proximate link between the MSC and downstream prices, such that a change in the MSC is likely to cause a change in prices.

23. We will therefore have to determine the answer to the legal question as to whether such a link needs to be established and, if it does, whether the Defendants have proved it to exist as a matter of fact on the balance of

probabilities. If the Defendants do so prove the requisite causative link, it is then necessary to establish the rate of pass-on applicable to that Claimant and the sector that it is in. For that latter exercise, it is clear that we can apply the broad axe to our estimation of the pass-on rate.

C. FACTUAL BACKGROUND

24. The Defendants' four-party payment card schemes have been well described in previous authorities, particularly in [4] to [10] of the Supreme Court decision in *Sainsbury's Supermarkets Ltd v Visa Europe Services LLC and ors* [2020] UKSC 24, [2020] Bus LR 1196 ("***Sainsbury's SC***"). While they are commonly referred to as four-party schemes, in fact the schemes themselves could be said to constitute a fifth party. Three-party schemes are operated by American Express and Diners Card in the UK where typically the scheme operator clears payments itself and there are not separate issuers and acquirers. The schemes can helpfully be represented diagrammatically as follows:[2]



[2] Mastercard Skeleton Argument for Trial 2A [28].

25. The issuing and acquiring banks operate in different markets but both contract with the relevant scheme, i.e. Mastercard or Visa, and agree to abide by the rules of that scheme and to pay scheme fees. Cardholders contract with an issuer which provides the cardholder with the relevant scheme-branded card. Merchants who wish to accept card payments contract with an acquirer who will provide acquiring services in return for the MSC. When a payment transaction takes place using one of the Defendants' cards, the acquirer will receive payment from the issuer of the transaction price less the MIF that the issuer charges the acquirer.

26. Trial 2B is concerned with APO which is to determine whether the MIF is passed on by the acquirer to the merchant through the MSC. The MSC is negotiated between the acquirer and the merchant but it would typically be set by reference to the acquirer's costs (which include the MIF and scheme fees payable to the Defendants) and the acquirer's margin. Before the Interchange Fee Regulation (Regulation (EU) 2015/751 of the European Parliament and Council of 29 April 2015) was introduced from 9 June 2016 ("**IFR**") many merchants were on "blended" contracts with acquirers (explained below), which did not separately identify the MIF element of the MSC. After the IFR and for larger merchants, the MIF is typically a separately identified component of the MSC representing the acquirer's margin. These are known as "Interchange PLUS" or "**IC+**" contracts, or if they separately identify the MIF plus other known costs, known as "**IC++**". It is accepted that under these "costs plus" contracts, there was full APO.

27. The Defendants set a default MIF to be charged by the issuer to the acquirer in the absence of a bilateral agreement between them. In practice the issuers and acquirers in the UK adopt the default MIF. But each of Visa and Mastercard set different MIFs for different types of card payment transactions over time, mainly depending on card type – credit/debit, consumer/commercial – or on the absolute and relative geographical location of the participants. Inter-regional MIFs are those due when a payment card issued in one geographical region is presented at a card acceptance location in another region. Whereas intra-regional MIFs are those due when the payment card was issued in the same geographical region as the card acceptance location. Thus EEA MIFs or intra-

EEA MIFs are those applying to cross-border transactions within the EEA. And Domestic MIFs are those where the transaction takes place in the same country as where the payment card was issued.

28. As noted above, Trial 1 was concerned with whether the setting of the default MIFs by the Defendants was an unlawful restriction of competition and for the purposes of this trial we had to assume that it was. The relevant counterfactual in this Trial is whether, in the absence of the MIF overcharge, the downstream prices charged by the Claimants would have been lower.

D. PROCEDURAL BACKGROUND

29. Establishing pass-on rates for such a large and disparate group of Claimants and in respect of a very small cost gives rise to a number of procedural and evidential complexities. The CAT has sought to grapple with this through a number of CMCs and rulings.

30. Initially in February 2021, the CAT, with Roth J as its chair, directed the parties to select a manageable number of Claimants to proceed as sample claims. However, on 16 March 2022, the CAT, this time chaired by Marcus Smith J, rejected the Proceedings continuing by way of sample Claimants. In its ruling, the CAT said: "…*given the significant number and variety of current and potential claimants and the range and complexity of the issues involved, we are concerned that the risk of re-litigating similar or identical issues in non-lead claims is unacceptably high.*" The CAT decided that the claims should be tried by reference to a list of issues that may be capable of generic determination that would be binding on as many parties as possible. This was recognised to require close case-management and it was hoped that disclosure would be controlled so as to focus the factual and expert evidence.

31. On 4 July 2022, an Umbrella Proceedings Order was made in respect of all issues in the Proceedings. Then on 6 July 2022, the CAT handed down a judgment entitled "Judgment (Pass On)": [2022] CAT 31 ("***July 2022 Judgment***"). This is dealt with in more detail in the Legal Principles section below as the CAT endeavoured to explain "*the law in relation to pass on so as*

to enable appropriate evidence to be adduced" by the parties for Trial 2. As a result of its conclusions on the law, the CAT again rejected sampling as a way of resolving MPO.

32. Both the Claimants and Mastercard wanted sampling: the Claimants so as to be able to adduce factual, qualitative evidence that they said would demonstrate that there had not been any MPO; whereas Mastercard wanted that evidence to make good its defence of MPO. Although the CAT was sceptical as to whether Mastercard would be able to use claimant-specific evidence to prove MPO, it did say that it would be "*entirely sympathetic to some form of tightly controlled, expert-lead, disclosure, provided that it was focussed, cost-effective and proportionate*." As for the Claimants, the CAT said that it would not preclude them from any evidence that they wished to adduce "*in support of their claim that the Overcharge was <u>not</u> passed on*" (emphasis in original).

33. Visa, by contrast, was always against any such qualitative evidence from the Claimants as it proposed to prove MPO purely by using econometric evidence and existing public studies. The CAT said in the *July 2022 Judgment* that it considered Visa's approach to be "*prima facie, the correct one*."

34. Following a hearing over 3 days in May 2023, the CAT ruled on 5 October 2023 as to the evidence to be produced for the purposes of the MPO trial. It directed that the parties' experts produce a joint report setting out a list of factors that were and were not relevant to MPO, and identifying the options for gathering evidence to determine the causative effect of those factors on MPO rates. That joint expert report was produced on 22 December 2023 but it showed agreement that there was no simple way to isolate particular factors and study their effect on MPO rates.

35. At the hearing to discuss the joint expert report held on 10-11 January 2024, and given the divergencies of positions held by the parties on disclosure, the CAT considered, by way of compromise, that there should be a small number of Claimants that should disclose data, or quantitative evidence, that the experts would be able to analyse as they saw fit. It directed that the trial should involve a limited number of Claimants, who we have called the Analysed Claimants

(Visa preferred to call them the "**Willing Claimants**"), who were meant to be indicative of the respective sectors involved with the largest claim values – the CAT asked for "*the big players in the big sectors*". It was anticipated that those Claimants would provide the data that the experts needed in relatively short order and that this approach "*either shortcuts or at least postpones the sampling question.*" This process was to be led by the experts.

36. Whilst the focus in the early part of 2024 was on quantitative data, in late March/early April 2024, the Claimants said that their experts needed some qualitative evidence from the Analysed Claimants. Visa was adamantly opposed to this, but the CAT indicated at a hearing on 24 April 2024, that, as a matter of fairness, the Claimants should be able to adduce the evidence they wanted in order to establish what they would be saying in their positive cases, and that that may include qualitative evidence. However the CAT said that if they intended to adduce such evidence, they must take a "*warts and all approach*". The CAT also went on to say that if other parties wanted further disclosure following the submission of the Claimants' positive cases, that this should be provided quickly.

37. On 31 May 2024, Mr Merricks' application to be joined to Trial 2 was granted, so that there would be consistency on the issues of pass-on.

38. Between May and November 2024, 11 Analysed Claimants provided some disclosure in relation to their price-setting processes and ten of those Claimants provided witness statements to explain and support their disclosure. The whole process was expert-led, as it was done alongside the provision of data from those Claimants for the experts to use in their regression analyses. Visa has been particularly critical of this process, which Mr Jowell KC repeatedly described as self-selected disclosure from self-selected Claimants. However, that is not fair, as Visa was in a position to object to a particular Analysed Claimant and its expert Mr Holt was fully engaged in the selection of Analysed Claimants and at one stage was seeking to include further Claimants. In the end the selection of the Analysed Claimants was largely determined by the availability of useful data within a sensible time frame.

39. Following the filing of the parties' positive cases on 7 August 2024 there were a fair number of requests by Visa (mainly), Mastercard and Mr Merricks for further qualitative evidence to be disclosed by the Claimants. There was a series of fortnightly CMCs chaired by Marcus Smith J and Mr Tidswell in which such requests were dealt with and, if necessary, adjudicated upon. It then turned into a Redfern schedule exercise running up to November 2024, just before the start of the trial. By that time, there were no outstanding requests for disclosure and the Claimants had complied with whatever they were required to disclose. While there were various generalised complaints about the process by which the Claimants gave disclosure, Visa did not suggest that the Claimants were in breach of any disclosure order or that there were any outstanding requests that remained unanswered. In particular, many of its complaints were based on pure speculation that certain types of documents might exist, without establishing any real likelihood of that.

40. It was therefore somewhat baffling that Visa sought to suggest in its opening submissions that this had amounted to a procedurally unfair process and that it could mean that the ensuing trial was unfair. Mr Jowell KC's point was that Visa had continually opposed the use of any qualitative evidence in this trial because of the impossibility of extrapolating from a small sample of ("*self-selected*") Claimants what the price-setting mechanisms were among all the Claimants and sectors. He said that Visa had relied on the CAT's earlier rulings to the effect that the issue of pass-on could be determined purely by reference to the econometric evidence and economic theory. This was based, he submitted, on the CAT having ruled out any issue of proximity arising on the test for causation in mitigation of loss.

41. However, it was clear from at least the Claimants' positive cases that they would be arguing that the Defendants would have to prove "proximity" or a sufficiently close causal connection between the MIF overcharge and downstream prices if they were to establish their mitigation defence. According to the Claimants, that would mean showing that the MSCs were directly taken into account in the price-setting process and not merely included within the more long term budgetary and overall profitability considerations. Because the Claimants were saying that the factual evidence showed that, for most of the Analysed

Claimants, the MSCs were not treated as COGS, but were instead included in overheads and were not considered as part of their regular profit-maximising price-setting, the Defendants would not be able to prove the requisite causative link. We examine below what the test is for causation in relation to a pass-on mitigation defence.

42. At this stage, we consider that Visa has no grounds for suggesting that the trial was unfair or an abuse of process. The Chair asked Mr Jowell KC in opening if he was seeking an adjournment on the basis that he could not fairly run his case with the allegedly inadequate disclosure from the Claimants. He said he was not seeking an adjournment but that he wished to lay down a marker to the effect that that was on the basis that he was right on the law and there is a simple "but for" causation test.

43. However he could not have expected us to decide that question at the beginning of the trial. And he cannot, in our view, effectively reserve his position as to whether his client has had a fair trial until after the legal point possibly went against his client, and where perhaps no progress was made in cross-examination, and then seek to argue at the end of the trial (or possibly on appeal) that it was all very unfair. But he has argued that in his closing submissions, suggesting that if his client is required to prove a closer causal connection or proximity, there would need to be a new trial and a full disclosure process. Alternatively he submitted that adverse inferences should be drawn against the Claimants in this respect. He was supported by Mastercard on the latter point.

44. Quite apart from the obviously unsatisfactory and impractical prospect of a retrial, the trouble with this position is that Visa nailed its colours to the mast of Mr Holt's approach of dealing with the issue by purely looking at the econometric evidence and economic theory without reference to what was actually happening in the real world. If the legal test is a straightforward "but for" causation one and Mr Holt was found to be using the correct proxy of COGS for his regression analyses, then Visa might well succeed in establishing significant pass-on rates (Mr Beal KC conceded this in his closing submissions). However, if we find that it is necessary to show a closer causal connection and to establish that MSCs were factored into the Analysed Claimants' direct profit-

maximising price-setting channel, Visa might come unstuck because it had never run that alternative case. Mr Holt did refer to some indirect channels through which pass-on might occur, but this was only to support his central thesis that, as a matter of pure economics, MSCs would largely be passed on, whether in the short or long term, because they are industry-wide variable costs. On this basis, it did not matter how pass-on actually happened; nor did it matter how the merchants categorised the MSCs in their accounts or otherwise.

45. That position adopted by Mr Holt and Visa from a relatively early stage, well before any disclosure and witness evidence had been served, meant that they considered any qualitative evidence from the Claimants to be irrelevant to the live issues, although Mr Jowell KC accepted that it could help inform the experts as to the correct choice of proxy. But the CAT allowed such evidence to be adduced and it led to the disclosure and witness evidence that was given. It is too late at the end of the trial, having refused to ask for an adjournment, and having cross-examined the witnesses on the basis of the disclosure that had been given, to complain about an alleged lack of disclosure that Visa might have needed to prove an alternative unpleaded case that it has never run. Furthermore, Mr Jowell KC did not say what other documents he would have sought from the Analysed Claimants. He only complained about alleged inadequate searches and the lack of involvement of solicitors in some of the disclosure exercises.

46. Accordingly we reject the notion that a rehearing should be ordered on the basis of inadequate disclosure by the Claimants.

47. Ms Tolaney KC advanced the proposition that because the Supreme Court in *Sainsbury's SC* said at [216] that there is "*a heavy evidential burden*" on the merchants to provide evidence as to pass-on and that adverse inferences could be drawn against them if they did not, so adverse inferences should be drawn against those Claimants who failed to disclose all relevant evidence as to the link between MSCs and prices. Reliance was also placed on what HHJ Pelling KC said in *Granville Technology Group Ltd v Chunghwa Picture Tubes Ltd and ors* [2024] EWHC 13 (Comm) at [180] and [188].

48. In her oral closing submissions, Ms Tolaney KC explained that we should make the best use of the limited evidence available, which she said in any event supported her client's case. But she said that we could also make adverse inferences from the Claimants' alleged failure to provide full disclosure. She was not precise as to what those adverse inferences should be, particularly in the light of the witness evidence that attempted to explain the Analysed Claimants' pricing practices. While Mr Jowell KC supported the point about adverse inferences, he went even further and submitted that we could not even attempt to use the limited qualitative evidence available, as it was so utterly deficient.

49. We think that goes too far. This has to be looked at in the context of the Claimants having complied with the disclosure orders that were made, that the Analysed Claimants were selected and approved by the experts and the fact that they have adduced witness evidence, which the Defendants were able to challenge through cross-examination, which explained how the particular Claimant set its prices and which was all to the effect that MSCs were not taken into account in their pricing decisions. The Defendants say that they could not properly challenge these statements without documents to put to witnesses but it is difficult to see what sort of documents could have undermined that evidence.

50. So while we will bear in mind what the Supreme Court said about the burden on the Claimants, we will analyse the evidence that we do have as best we can and without recourse to the use of adverse inferences, particularly as we do not understand what sort of inference would be appropriate in these circumstances.

51. We will look at the factual evidence after first deciding the legal issues that are in dispute.

E. LEGAL PRINCIPLES

(1) Introduction

52. The relevant legal principles in relation to pass-on in competition claims follow the ordinary English common law of tortious damages. These are reasonably well-established, although their application to these sorts of claims have been debated recently in some authorities, inspired by the Supreme Court decision in *Sainsbury's SC*. Pass-on is a form of mitigation of loss and is part of the assessment of damages.

53. While it is accepted that there needs to be a causative link between the overcharge or the cost of the MIFs paid by the Claimants and the prices charged by the Claimants to their customers, there has been a huge dispute between the parties over whether the Claimants are allowed to run a case that the Defendants have to prove "*a direct and proximate causative link*" between the two. The Defendants (although it was principally Visa taking the point) put their argument on two broad bases: (i) that *Sainsbury's SC* decided that there could be no issue of "*legal or proximate causation*" in the case of pass-on of MIFs; and (ii) that the CAT in this case had ruled out any possibility of there being any further "*proximity*" test having to be proved by the Defendants.

54. In our view, there has been too much focus on the words "*proximate*" and "*proximity*" and there has been some confusion in the authorities as to what they relate. As a result, we consider that the use of those words is unhelpful, as we hope to explain below, and will adopt a test of a sufficiently close and direct causal connection between the overcharge and the act of mitigation, whether it is the raising of prices in MPO and APO, or the reduction in the costs incurred on other supplies.

55. The form of mitigation that we are concerned with here is the avoidance of loss by the Claimants in passing it on to their customers. This is the third of three rules identified in *McGregor on Damages* (22nd Ed) ("McGregor") as to the avoiding of the consequences of a wrong – this classification was endorsed by

the Supreme Court in *Sainsbury's SC* at [212] and [214]. At [10-006] of *McGregor*, the learned authors stated as follows:

> "The third rule is that the claimant cannot generally recover for avoided loss. Where the claimant takes steps before or after the wrong, or a third party takes steps, that avoid the loss then this reduces the recoverable loss. The most common scenario is where the claimant takes ordinary or reasonably necessary steps to mitigate the loss to them consequent upon the defendant's wrong, and where these steps are successful. Then, the defendant is entitled to the benefit accruing from the claimant's action and is liable only for the loss as lessened; this is so even though the claimant would not have been debarred under the first rule from recovering the whole loss, which would have accrued in the absence of their successful mitigating steps, by reason of these steps not being ones which were required of them under the first rule. In addition, where the loss has been mitigated by other reasonably foreseeable means such as actions by third parties or actions by the claimant before the wrong, the claimant can again recover only for the loss as lessened."

56. An important point to recognise and which was emphasised by Mr Jowell KC is that it is not simply a question of the Claimants mitigating their losses and reducing the amount for which the Defendants might have to compensate them. MPO is crucial to the potential claims of the ultimate consumers, as in Mr Merricks' claim, and whether they can establish that they have suffered loss by paying the overcharge through higher prices charged to them. The Court is required to treat their claims, or potential claims, in the same way as the direct Claimants' claims and to allow the wielding of the broad axe in estimating the effect of pass-on and to respect the principle of effectiveness. This is another way of saying that the Claimants should not be over-compensated which would leave the ultimate consumers or indirect purchasers under-compensated.

57. We will start our consideration of this issue by reference to the *Sainsbury's* litigation that culminated in *Sainsbury's SC*.

(2) *Sainsbury's*

58. The story begins in the CAT with its judgment in *Sainsbury's Supermarkets Ltd v Mastercard Incorporated and ors* [2016] CAT 11 ("***Sainsbury's CAT***"). This was the first time that MPO had been argued at a trial and it was, of course, concerned with the pass-on of MIFs by a retailer, Sainsbury's, to its customers. In [455] (which is a repeat of [434]) the CAT set out the now familiar fourfold categories of potential reactions that a business might have to an increase in its

costs (this was picked up and repeated in slightly modified form in *Sainsbury's SC*), namely:

> "(1) It can make less profit (or incur a loss or, if loss making, a greater loss).
>
> (2) It can cut back on what it spends money on – reducing, for example, its marketing budget; or cutting back on advertising; or deciding not to make a capital investment (like a factory or machine); or shedding staff.
>
> (3) It can reduce its costs by negotiating with its own suppliers and/or employees to persuade them to accept less in payment for the same services.
>
> (4) It can increase prices, and pass the cost on to its purchasers. (We should stress that here we are using "pass-on" in its economic sense of a producer recovering the costs of production from its customers: we consider whether this amounts to "pass-on" in the legal sense further below.)"

It seems that Mastercard had put forward three categories by combining (2) and (3), but the CAT said at [436] that they considered it important to distinguish between "*cutting back on spending and reducing costs*" for the purposes of assessing damages.

59. The CAT analysed how Sainsbury's actually set its prices, which was largely by reference to their competitors, Tesco and Asda, rather than its own costs, such as COGS. It certainly did not operate a cost-plus pricing model and at [459] the CAT commented as follows:

> "Like any firm, Sainsbury's would have been concerned to make a profit. By definition, and as we have noted, this involves setting a price for the goods and services it sells that at least covers its actual costs. *Prima facie*, therefore, we anticipate that – just as with any cost – Sainsbury's would have sought to pass the cost of its UK MIF on to its customers. Of course, given the range of products sold by Sainsbury's, and the multitude of costs incurred by Sainsbury's in doing so, it would be impossible to say what part of the price of any given product was attributable to the UK MIF. As Sainsbury's witnesses explained, and as we accept, Sainsbury's did not operate on a "cost-plus" basis. In this, Sainsbury's business is readily distinguished from that of Acquiring Banks, who obviously did price on a "cost-plus" basis: the MSC comprised essentially the MIF plus a little extra."

Similarly with reducing costs, the CAT considered that there was no linkage between such decisions and the MIF. At [461] it said:

> "Once again, however, we consider that Sainsbury's efforts to reduce costs and spending decisions would not be capable of being related back to any given cost, whether that cost is the UK MIF or some other cost."

60. The CAT was unable to conclude how the MIF was passed on. It considered that it was obvious that a business that did not recover its costs would become insolvent. But that was insufficient to establish that the specific MIF cost had been passed on in higher downstream prices. It rejected as unarguable any sort of suggestion that it was possible to find a link between a given cost and a specific price or a specific saving of costs. At [469], the CAT said: "*Given the manner in which Sainsbury's does business, the proposition that such a nexus exists would be a frankly absurd one*."

61. After going through some of the authorities on mitigation of loss, in particular *British Westinghouse Electric and Manufacturing Company Ltd v Underground Electric Railways Company of London Ltd* [1912] 1 AC 673 ("***British Westinghouse***"), the CAT came to certain legal conclusions, including that a defendant would have to prove the identity of a downstream class of indirect purchasers to whom the overcharge had been passed on. The Court of Appeal disagreed that this was a necessary requirement. But the CAT also said that: "*the pass-on defence is only concerned with identifiable increases in prices by a firm to its customers*" and that "*the increase in price must be causally connected with the overcharge, and demonstrably so*" (at [484(4)] emphasis added). The CAT was clear that there had to be a sufficient connection between the overcharge and the price increase. The CAT did not mention "*proximity*"; nor "*but for*" causation. At [485] the CAT said that pass-on had not been made out since "*no identifiable increase in retail price has been established, still less one that is causally connected with the UK MIF*" (emphasis added). This conclusion was never appealed.

62. In the Court of Appeal – [2018] EWCA Civ 1536 ("***Sainsbury's CA***") – pass-on was addressed within the "*narrow*" point that was before the Court of Appeal, namely whether there was an inconsistency between the CAT's finding that Mastercard had failed to prove pass-on and the holding that Sainsbury's was entitled to compound interest on only 50% of the MIF because 50% had been passed on. The Court of Appeal at [330] stated that pass-on diminishing the loss suffered is "*only to be taken into account if there is a sufficiently close causative link between*" the prices charged and the overcharge. The Court of Appeal referred to *Fulton Shipping Inc v Globalia Business Travel SAU* [2017]

UKSC 43, [2017] 1 WLR 2581 ("***Fulton Shipping***"), which we will come back to. At [332] the Court of Appeal said that: "*in each case it is a matter for the judge to decide whether, on the evidence before her or him, the defendant can show that there is a sufficiently close causal connection between an overcharge and an increase in the direct purchaser's price. We see no reason why that increase should not be established by a combination of empirical fact and economic opinion evidence*" (emphasis added).

63. As noted above, *Sainsbury's SC* broadly adopted the pass-on classification as set out in *Sainsbury's CAT*. In the context of considering whether the Court of Appeal in *Sainsbury's CA* had been correct to say that the broad axe principle does not apply to quantification of mitigation of loss, as opposed to the quantification of loss in competition claims, the Supreme Court at [177] clarified some of the underlying principles of pass-on as "*the debate around this issue widened in the course of the hearing*". On the particular issue that was before it, the Supreme Court held at [226] that the Court of Appeal was wrong to require "*a greater degree of precision in the quantification of pass-on from the defendant than from a claimant*"; in other words that the broad axe can be wielded for both the quantification of a claimant's loss and for the mitigation of that loss. The Supreme Court at [179] seemed to accept Mastercard's submission that it had to prove "*that the merchants passed on some of the overcharge to their customers but that having done so, the quantification of the extent of the pass-on did not have to be precise where such precision could not reasonably be achieved*."

64. At [205], the Supreme Court slightly adjusted the four responses of a merchant to an increase in costs that the CAT had articulated (set out above) into the following:

> "There are four principal options: (i) a merchant can do nothing in response to the increased cost and thereby suffer a corresponding reduction of profits or an enhanced loss; or (ii) the merchant can respond by reducing discretionary expenditure on its business such as by reducing its marketing and advertising budget or restricting its capital expenditure; or (iii) the merchant can seek to reduce its costs by negotiation with its many suppliers; or (iv) the merchant can pass on the costs by increasing the prices which it charges its customers. Which option or combination of options a merchant will adopt will depend on the markets in which it operates and its response may be influenced by whether the

> cost was one to which it alone was subjected or was one shared by its competitors."

65. The Supreme Court then made it clear that it was only (iii) and (iv) that would count as pass-on, as it was only those that might reduce the merchant's loss. It considered that options (i) and (ii) would not reduce the loss because the merchant would have been deprived of the funds used to pay the overcharge "*for use in its business*". The Supreme Court also recognised that option (iv) could be subject to the ""*volume effect", if higher prices were to reduce the volume of its sales and thereby have an effect on the merchant's profits.*"

66. The Supreme Court then continued to deal with the burden of proof, holding that the legal burden is on the defendants to plead and prove mitigation of loss. If the law required the claimant to prove the effect on its profits of the unlawful overcharge it might face an insurmountable burden and it would therefore probably offend the principle of effectiveness.

67. Then, after referring to other related forms of mitigation, being either the additional benefits that a claimant has received from mitigating actions that it has taken (citing *Fulton Shipping*) or a failure to take reasonable steps to mitigate, the Supreme Court made clear that it was concerned with *McGregor's* third rule described above, namely the avoidance of all or part of the loss. At [215], it referred to the influential statement of principle by Viscount Haldane in *British Westinghouse* (a contract claim) that a claimant cannot claim: "*when in the course of his business he has taken action arising out of the transaction, which action has diminished his loss, the effect in actual diminution of the loss he has suffered may be taken into account even though there was no duty on him to act.*" (the underlining is the Supreme Court's [215]).

68. In the rest of [215] the Supreme Court introduced the notions of legal and factual causation and it is this part of the judgment that has given rise to the current dispute between the parties, in particular because of the use of the word "*proximate*". The Supreme Court said as follows:

> "Here also a question of legal or proximate causation arises as the underlined words show. But the question of legal causation is straightforward in the context of a retail business in which the merchant seeks to recover its costs in

> its annual or other regular budgeting. The relevant question is a factual question: has the claimant in the course of its business recovered from others the costs of the MSC, including the overcharge contained therein? The merchants, having acted reasonably, are entitled to recover their factual loss. If the court were to conclude on the evidence that the merchant had by reducing the cost of its supplies or by the pass-on of the cost to its customers (options (iii) and (iv) in para 205 above) transferred all or part of its loss to others, its true loss would not be the prima facie measure of the overcharge but a lesser sum." (underlining added)

69. Mr Jowell KC submitted that the Supreme Court, in a case concerning merchants and MIFs that is for all intents and purposes the same as the case before us, held that "*legal or proximate causation*" is straightforward and established. Therefore, he went on to say, there can be no issues of "*proximity*" because the Supreme Court had effectively ruled out there being any such live issues. The only issue that is left for us to decide is one of factual causation which is a "*but for*" test, namely: whether, but for the MIF, the merchants' prices would have been lower. However, that was not how the Supreme Court framed the factual question and it did not refer to a "*but for*" test. Furthermore, it does not seem to be the way the paragraph has been interpreted in later judgments.

70. The Defendants also rely on what the Supreme Court said in [216] about the "*heavy evidential burden on the merchants to provide evidence as to how they have dealt with the recovery of their costs in their business…The merchant must therefore produce that evidence in order to forestall adverse inference being taken against it by the court which seeks to apply the compensatory principle.*" Both Visa and Mastercard have invited us to draw adverse inferences against the Claimants because of the alleged paucity of their disclosure in relation to pass-on.

71. The Supreme Court did go on to say that where the cost of achieving precision is disproportionate, the Court would tolerate reliance being placed on estimates – see [217]. This is consistent with the principle of effectiveness. And after discussing the EU Commission Guidelines for National Courts (the "**EU Guidelines 2019**") and the **Damages Directive**, together with the fact that it is necessary to have the same test for estimating the pass-on effect for both direct and indirect purchasers, the Supreme Court concluded in [225] as follows:

> "The loss caused by the overcharge included in the MSC was an increased cost which the merchants would in all probability not address as an individual cost but would take into account along with a multiplicity of other costs when developing their annual budgets. The extent to which a merchant utilised each of the four options, which the CAT identified and we described in para 205 above, can only be a matter of estimation. In accordance with the compensatory principle and the principle of proportionality, the law does not require unreasonable precision in the proof of the amount of the prima facie loss which the merchants have passed on to suppliers and customers."

72. Ms Tolaney KC particularly relied on these paragraphs as recognition by the Supreme Court that it would usually not be possible to prove pass-on by tracing through an individual increase in a particular cost to a specific increase in price. Therefore, the Defendants are entitled to point to the fact that the MSCs were taken into account in the merchants' annual budgeting together with other costs, but she accepted that it still had to be shown that this translated into a change in prices. She submitted that, as there was a heavy evidential burden on the Claimants in this respect, their alleged minimal disclosure means that adverse inferences can be made against the Claimants, even to the extent of establishing that there was the necessary linkage between the budgetary process and the setting of prices. We consider that that might be taking what the Supreme Court said in *Sainsbury's SC* too far, as what it was concerned with was estimating which of the four options was being utilised by each merchant to deal with an increase in a relatively small cost.

(3) ***Merricks SC***

73. Six months after *Sainsbury's SC*, the Supreme Court again considered a number of competition law issues including the potential calculation of damages in Mr Merricks' claim against Mastercard (which was of course before us for most of the hearing): *Mastercard Inc. v Walter Merricks CBE* [2020] UKSC 51 ("***Merricks SC***"). This was in the context of the certification of the *Merricks'* proceedings, which had been refused by the CAT on two main grounds concerned with the method of calculating damages. The Court of Appeal concluded that the CAT's decision had been vitiated by five errors of law. Apart from Lord Sales JSC, this was a differently constituted panel of the Supreme Court to that of *Sainsbury's SC*, and it had the extraordinary and sad position that, after presiding over the hearing, but before the judgments were handed

down, Lord Kerr died. All the Justices agreed that Lord Kerr had expressed his agreement with the final version of Lord Briggs JSC's judgment and that therefore this was the majority judgment, Lord Thomas also agreeing with it. Lord Sales and Lord Leggatt JJSC dissented. The majority upheld the Court of Appeal decision.

74. MPO was central to Mr Merricks' claim as he had to show that the overcharged MIFs were passed on by the merchants to their customers, the class that he was representing. That was effectively the measure of the customers' loss. Lord Briggs JSC said that after a claimant has passed a strike out application or survived summary judgment, that is they have established a sufficiently arguable case that should be taken to trial, they are entitled to have the court quantify their loss. He explained in [47] that sometimes "*the court has to do the best it can upon the basis of exiguous evidence*" when calculating damages. He went on to say in [48] that: "*A resort to informed guesswork rather than (or in aid of) scientific calculation is of particular importance when (as here) the court has to proceed by reference to a hypothetical or counterfactual state of affairs*."

75. Mr Jowell KC emphasised that because MPO is an essential part of any downstream consumer claim the court must apply the principle of effectiveness and the broad axe so as to ensure that victims of unlawful conduct are able to recover from the wrongdoers. While we understand the point that the same principles must apply to all forms of claimants and that they should not be over- or under-compensated, it is a little ironic that the alleged wrongdoers are seeking to place reliance on principles that are there to protect their victims.

(4) The *Trucks* Litigation

76. The CAT first considered the implications of *Sainsbury's SC* in the *Trucks* litigation,[3] in the context of an application to amend the pleadings so as to include the Supreme Court's category (iii) form of mitigation by the claimants reducing their costs paid to third party suppliers as a result of the overcharge:

[3] This is the litigation arising out of the Settlement Decision of the European Commission dated 19 July 2016 that determined that truck manufacturers had carried out a single and continuous infringement of competition law in operating a cartel involving the exchange of information on their prices.

Royal Mail Group Ltd v DAF Trucks Ltd and ors [2021] CAT 10. At [35] and [36], the CAT sought to clarify what it understood the Supreme Court to be saying:

> "35. Accordingly it seems to us that it cannot be enough for a defendant to plead that a claimant's business input costs as a whole were not increased, or that as part of the claimant business's ordinary financial operations and budgetary control processes its overall expenses were balanced against sales so that profits were not reduced. There must be something more to create a proximate causative link between the overcharge and a reduction in other input costs, so as to constitute mitigation. This can be inferred from the Supreme Court's citation from the *British Westinghouse* case at [215] of its judgment, its emphasis of the underlined words "…[the claimant] has taken action arising out of the transaction", and its comment that "a question of legal or proximate causation arises."
>
> 36. We therefore consider that, for a defendant to be permitted to raise a plea of mitigation in this way in general terms, there must be something more than broad economic or business theory to support a reasonable inference that the claimant would in the particular case have sought to mitigate its loss and that the steps taken by it were triggered by, or at least causally connected to, the overcharge in the direct manner required by the *British Westinghouse* principle".

77. This and *Sainsbury's SC* was then considered by the Court of Appeal in *NTN Corp v Stellantis NV* [2022] EWCA Civ 16 ("***Stellantis***") again in the context of category (iii) mitigation, what Green LJ called "*off-setting*" of loss.[4] Green LJ stated at [17] that: "*the basic test is that there has to be a sufficient causal nexus or connection between the steps that a defendant says a claimant took by way of mitigation (the off-setting) and the overcharge.*" Then after looking at the interpretation of the CAT in the *Royal Mail* case (set out above), Green LJ held as follows, at [33]:

> "33. Pulling the strands together, the burden of proof when pleading causation is on the defendant to demonstrate: (a) that there is a legal **and** proximate, causal, connection between the overcharge and the act of mitigation; and (b), that this connection is "*realistic*" or "*plausible*" (the two phrases being interchangeable) and carries some "*degree of conviction*"; and (c) that the evidence is more than merely "*arguable*"." (bold emphasis added)

78. Green LJ therefore seemed to think that "*proximity*" was separate to legal causation and required to be proved in order for there to be a sufficiently close causal connection between the overcharge and the alleged act of mitigation. In

[4] This was not a Trucks case as such, but it did involve a secret cartel in relation to bearings in components for motor vehicles.

applying that principle to the facts of the case, Green LJ considered it relevant that the overcharge was very small as a proportion of the claimant's overall costs. At [65] he opined, that such a relatively small cost "*might still not be such as to trigger any impetus for off-setting, even in the most rigorous and challenging of cost control regimes*."

79. The trial in the *Royal Mail* case had to consider whether the overcharge had been passed on to the claimants' customers in higher prices so as to mitigate their loss. In *Royal Mail Group Ltd and ors v DAF Trucks Ltd and ors* [2023] CAT 6 ("***Royal Mail CAT***") the CAT sought to understand what the Supreme Court meant in *Sainsbury's SC* when it said that in relation to MPO of the MIF by a retailer "*the question of legal causation is straightforward*". The CAT considered that the Supreme Court did not define what it meant by legal causation (or factual causation) and did not set out the legal test to be applied to the facts to determine whether the claimant had mitigated its loss. Instead the Supreme Court at [215] of *Sainsbury's SC* suggested that the factual question was whether the claimant had "*recovered [the MIF] from others*" by using categories (iii) or (iv) and that it had thereby transferred "*all or part of its loss to others*".

80. At [223] of *Royal Mail CAT*, the CAT said as follows:

> "Accordingly, we consider that DAF must prove that there was a direct and proximate causative link between the Overcharge and any increase in prices by the Claimants. That means there must be something more than reliance on the usual planning and budgetary process, into which the Overcharge was input and at some point prices increased."

And at [228], the CAT summarised its conclusion as follows:

> "By way of summary of the legal test for causation in relation to a pass-on form of mitigation defence, we respectfully conclude that DAF must prove a direct and proximate causative link between the Overcharge and any increase in prices by the Claimants. It is not enough for DAF to say that all costs, including increases in costs, are fed into the Claimants' or their regulators' business planning and budgetary processes. There must be something more specific than that and there are a number of potentially relevant factors that it can rely on, including:
>
> (1) Knowledge of the Overcharge or the specific increase in the cost in question;

(2) The relative size of the Overcharge against the Claimants' overall costs and revenue;

(3) The relationship or association between what the Overcharge is incurred on and the product whose prices have been increased; and/or

(4) Whether there are identifiable claims by identifiable purchasers from the Claimants in respect of losses caused by the Overcharge."

81. In applying those principles to the facts before it, the CAT held that none of the above factors were present in that case and at [573] the majority judgment[5] stated: "*While the four factors are not themselves decisive or necessary, we think that in a situation where none are present, the evidence of factual causation needs to be that much stronger so that the requisite proximity can be established*."

82. The defendants' appeal was dismissed by the Court of Appeal at [2024] EWCA Civ 181 ("***Royal Mail CA***"). Mr Beal KC submitted that the judgment of Sir Julian Flaux C (with which Newey and Green LJJ agreed) set out the test for causation arising out of *Sainsbury's SC* and that this is therefore binding on us. The important paragraphs are [149] to [151] and they state as follows:

> "149. In my judgment, Mr Ward KC's description of DAF's case on SPO in Ground 2 as "strikingly ambitious" is entirely apt. Its case is, in effect, that there was no overcharge, but if there was one, which on its case is entirely hypothetical, it would have been passed on. As Mr Ward KC pointed out, given the level of overcharge determined by the CAT of 5%, this was no more than about 0.025% of Royal Mail's revenues and 0.0015% of Openreach's revenues, on any view a tiny amount. The idea that this tiny amount could not only be traced to the price of the Claimants' individual products, but that it is then possible to establish that it caused a price increase, seems to me completely unreal. Even Mr Ridyard's dissenting opinion concluded that the specific downstream impact of SPO was too small to be measured.
>
> 150. In its argument on this Ground, DAF raises the somewhat elusive distinction between legal causation and factual causation in relation to mitigating conduct. In my judgment the distinction is clearly and usefully explained by the CAT in the *MIF Umbrella Proceedings* judgment quoted at [83] above. Factual causation involves consideration of whether the effect of the mitigating conduct was in fact to reduce or eliminate the claimant's loss, whereas legal causation concerns whether, even if the effect of the mitigating conduct was in fact to reduce or eliminate the claimant's loss, as a matter of legal policy, it should serve to reduce or eliminate the damages payable by the defendant to the claimant. The classic example referred to by the CAT is an indemnity obtained by the claimant under a contract of insurance which is

[5] The majority comprised the Chair in this case and Sir Iain McMillan. Mr Derek Ridyard agreed on the law but delivered a dissenting opinion on supply pass-on.

> regarded as *res inter alia acta* and thus does not reduce the defendant's liability. As Green LJ pointed out in the course of argument, other examples of legal causation are when the relevant matter is too remote or amounts to a *novus actus*. In my judgment, the CAT in the present case correctly identified at [212] of its judgment, on the basis of the judgment in the *MIF Umbrella Proceedings*, the distinction between factual and legal causation.
>
> 151. In terms of factual causation, DAF could only succeed in its argument on SPO if it could establish that the prices charged by Royal Mail and BT to their customers were higher because of the overcharge, in other words if it could establish (and the burden of proof is on DAF) that the overcharge had been passed on to those customers. The CAT was unanimous as to this requirement at [223] of its judgment where it said: "we consider that DAF must prove that there was a direct and proximate causative link between the Overcharge and any increase in prices by the Claimants. That means that there must be something more than reliance on the usual planning and budgetary process, into which the Overcharge was input and at some point prices increased." I agree with Mr Ward KC that the CAT was applying the correct legal test, as recently restated by this Court in *Stellantis* (as cited at [23] above)."

83. At [149], the Chancellor therefore considered the size of the overcharge relative to the overall revenues of the respective business to be relevant. He explained the distinction between legal and factual causation in [150], endorsing what the CAT said in these proceedings (referred to further below) that legal causation is really about "*legal policy*". That must have been the Chancellor's interpretation of the first two sentences of [215] in *Sainsbury's SC*, and it is notable that he does not refer to "*proximity*" in this context. It will be recalled that the Supreme Court referred to "*legal or proximate causation*" but in the next sentence said that "*the question of legal causation is straightforward*", without using the word "*proximate*". It seems to us that the Chancellor was attempting to define what the Supreme Court meant by legal causation and it was unnecessary to add the concept of proximity to that.

84. In [151] however, where the Chancellor went on to deal with factual causation, he considered that the CAT had applied the "*correct legal test*" in requiring the defendant to prove a "*direct and proximate causative link between the Overcharge and any increase in prices*". In the next paragraph [152], the Chancellor described what the defendants had to prove as a "*direct and causative link*", dropping the word "*proximate*". Then in [154], after upholding the CAT's non-exhaustive four relevant factors for considering factual causation, the Chancellor referred to the "*requisite degree of proximity to*

establish a direct causative link". He clearly thought that the CAT had been correct to hold that, with the four factors being absent, it was necessary to provide "*some other evidence of factual causation to establish that requisite degree of proximity.*"

85. While the Court of Appeal in *Royal Mail CA* clearly concluded that "*proximity*" is an element in the test for factual causation, it is not obvious what the "*requisite degree of proximity*" is and how it is to be applied in any given case. The Supreme Court distinguished between legal and factual causation, and for whatever reason used the word "*proximate*" as a synonym for "*legal*" causation. The Chancellor in *Royal Mail CA* considered that this was purely about whether legal policy might prevent a defendant from relying on the mitigating conduct to reduce the claimant's loss. The Supreme Court considered that "*legal causation is straightforward*" in a MIF case because there are no issues of legal policy that arise where a retailer seeks to recover its losses through its regular budgeting process. That does not mean that factual causation is straightforward. On the contrary, the Supreme Court went on to say that options (iii) or (iv) must be proved so as to establish that all or part of the loss was transferred to others. Furthermore, the Supreme Court refused permission to appeal *Royal Mail CA*, suggesting that it did not consider there was any conflict with *Sainsbury's SC*.

86. All the authorities refer to a "*direct causative link*" or a "*direct and causative link*". We are not sure that proximity actually adds anything to the requirement to show a "*direct causative link*". Directness stems from the *British Westinghouse* requirement, emphasised in *Sainsbury's SC,* that the act of mitigation must arise out of the transaction, or in competition terms, out of the overcharge. The alleged increase in prices or cutting of costs paid to suppliers must be directly linked to, and have been caused by, the overcharge.

(5) The approach to MPO in these proceedings

87. Mr Jowell KC mounted a full-scale attack on the Claimants' approach to causation by referring to two previous judgments of the CAT that ruled out any consideration of legal causation and, so he said, any issues of proximity. In July 2022, the CAT handed down the *July 2022 Judgment* (supra) for the stated

purpose set out at [7] of "*articulating the law in relation to pass on so as to enable appropriate evidence to be adduced, and so as to enable us to find the relevant facts in due course*". The *July 2022 Judgment* considered *Sainsbury's SC* and was itself considered in *Royal Mail CAT* and *Royal Mail CA*. The CAT had well in mind the position of downstream claimants and Mr Merricks was permitted to make submissions at the hearing in relation to pass-on, which was critical to his claim.

88. The important paragraphs in the *July 2022 Judgment* follow the reference to [215] and [216] of *Sainsbury's SC*, at [50] and [51], which relevantly state as follows:

> "50(1)(2) *Proposition [b]*.[6] This is a reference to the fact that causation (which, as we have said, the second aspect of mitigation turns on) itself has two aspects, "legal" causation and "factual" causation:
>
> (i) Factual causation is the more obvious of the two: it involves consideration of whether the effect of the alleged mitigating conduct was, as a matter of fact, to reduce or eliminate *B*'s loss. [7]
>
> (ii) Legal causation concerns the question of whether – even if the effect of the alleged mitigating conduct was, as a matter of fact, to reduce or eliminate *B*'s loss – as a matter of legal policy it <u>should</u> serve to reduce or eliminate the amount of damages that *A* should pay *B*.[8] The question arises quite frequently and is an elusive one. Thus, the fact that a claimant receives an indemnity by virtue of a contract of insurance is regarded as "collateral" to the defendant's liability and thus will not affect it. In personal injury cases, the fact that the claimant receives some benefits as a result of his or her injury is also generally regarded as "collateral".
>
> Having identified the two aspects of causation, the Supreme Court the [sic] proceeded to say – in a single sentence in paragraph [215] – that no issue of legal causation arose:
>
> > "…But the question of legal causation is straightforward in the context of a retail business in which the merchant seeks to recover its costs in its annual or other regular budgeting."

---

[6] The CAT divided up [215] and [216] of Sainsbury's SC into four propositions. Proposition [b] was the distinction between legal and factual causation as set out in [215].
[7] "*B*" is the party in the position of the merchant retailer claimants.
[8] "*A*" is the party in the position of the Defendants who have infringed competition law and are subject to a claim for the overcharge.

> It seems to us very difficult to identify any policy reason why *B* should nevertheless continue to be able to claim the Overcharge from *A*, despite having passed it on to *C.*[9] Indeed, one can see very strong reasons for not permitting *B* to persist in such a claim, because (as we have described) on these facts *C* will have a claim against *A*, and *A* should not be obliged to pay twice over. Frankly, we can see exactly why the Supreme Court regarded this as a "no brainer". As the Supreme Court noted, the difficult question is that of factual causation.
>
> […]
>
> 51. We consider that there is no point of law that we need to resolve. Although the Supreme Court was referring to retail businesses, we consider exactly the same to be true of the other types of business (for example, councils, local authorities and universities) that feature in the proceedings before us…"

89. In [150] of *Royal Mail CA* (set out in [82] above), the Chancellor referred to the *July 2022 Judgment* and accepted the CAT's explanation of the difference between legal and factual causation, the former being concerned with legal policy reasons why the loss should not be treated as having been avoided or transferred to others, despite factual causation being established. The Chancellor gave examples of such legal policy reasons, being a contract of insurance covering the loss (identified by the CAT as well), or issues of remoteness or "*novus actus*". Proximity was not identified as an aspect of legal causation. The Chancellor also endorsed [212] of *Royal Mail CAT* where it said:

> "In other words, where factual causation has been proved and the overcharge has been passed on to the claimant's customers, is there any "*policy reason*" why the claimant should be able to continue to claim the overcharge from the defendant?"

90. The CAT in this case gave a short *ex tempore* ruling on this issue on 21 March 2024 – [2024] CAT 21 ("***March 2024 Ruling***"), as Visa, supported by Mastercard, sought to strike out passages of the Claimants' pleadings on the basis that they were intending to argue at trial that something "*over and above factual causation*", namely proximity, was required to be proved by the Defendants. The CAT considered that it was really being asked to clarify the scope of the issues that would be before the court at this trial. At [4] the CAT noted that that scope had troubled the CAT "*on a number of previous occasions*"

[9] "C" is the party in the position of Mr Merricks, as a downstream indirect claimant to whom the overcharge was allegedly passed on.

and that it was now time "*to put this emphatically to bed*". But it is clear that the CAT and Visa had assumed that the Claimants were seeking to argue proximity as an aspect of legal causation. We think there may have been some confusion, perhaps contributed to by some of the Claimants, as to whether the Claimants were seeking to run a case on proximity as an element in legal causation rather than factual causation. The Claimants were relying on *Royal Mail CA* as entitling them to argue that the Defendants had to prove the "*requisite degree of proximity*".

91. At [5] and [6] of the *March 2024 Ruling*, the CAT repeated the distinction between legal and factual causation that it had made in the *July 2022 Judgment*. It made clear that it was not dealing with factual causation and what evidence was needed to prove that. It was only dealing with legal causation and at [7] it explained [50(2)(ii)] of the *July 2022 Judgment* as being very clear that "*the questions of legal causation there articulated were not before the Tribunal because, as propositions, they were not arguable as a matter of law.*" The CAT went on to note that *Royal Mail CA* had endorsed that position. It clearly did not think that it was going against that decision, or that *Royal Mail CA* was in any way inconsistent with *Sainsbury's SC*.

92. The net result of these decisions is that there are no issues of legal causation before us. Those issues are whether, despite factual causation being proved as to MPO, legal policy dictates that the Claimants should still be able to claim the full amount of the loss suffered by paying the overcharge. No such policy reasons can be relied on by the Claimants.

(6) The test for factual causation

93. The only question therefore is one of factual causation. Mr Jowell KC argued that factual causation is a straight "but for" test and there is no further requirement of proximity, or we suppose, directness or closeness that the Defendants have to establish. However, the Supreme Court in [215] of *Sainsbury's SC*, when dealing with factual causation, did not refer to a "but for" causation test.

94. Mr Beal KC took us to the Supreme Court decision in *Fulton Shipping* (supra) which was cited in *Sainsbury's CA* (see [330]) and *Sainsbury's SC* (see [202] and [213]). The court in that case was considering another form of mitigation – the first in *McGregor's* threefold classification – namely whether additional benefits that a claimant had gained from the mitigating actions it took should be set off against its claims for loss. Lord Clarke JSC, who gave the only judgment, seemed to endorse what Popplewell J, as he then was, said at first instance ([2015] 1 All ER (Comm) 1205 at [64]), set out at [16] of Lord Clarke JSC's judgment, relevantly as follows:

> "64. Nevertheless a number of principles emerge from the authorities considered above which I would endeavour to summarise as follows:
>
> (1) In order for a benefit to be taken into account in reducing the loss recoverable by the innocent party for a breach of contract, it is generally speaking a necessary condition that the benefit is caused by the breach: *Bradburn* [(1874) LR 10 Ex 1], *British Westinghouse* [[1912] AC 673], *The Elena d'Amico* [[1980] 1 Lloyd's Rep 75], and other authorities considered above.
> (2) The causation test involves taking into account all the circumstances, including the nature and effects of the breach and the nature of the benefit and loss, the manner in which they occurred and any pre-existing, intervening or collateral factors which played a part in their occurrence: *The Fanis* [[1994] 1 Lloyd's Rep 633].
> (3) The test is whether the breach has caused the benefit; it is not sufficient if the breach has merely provided the occasion or context for the innocent party to obtain the benefit, or merely triggered his doing so: *The Elena d'Amico*. Nor is it sufficient merely that the benefit would not have been obtained but for the breach: *Bradburn; Lavarack v Woods* [[1967] 1 QB 278]; *Needler v Taber* [[2002] 3 All ER 501].
> (4) In this respect it should make no difference whether the question is approached as one of mitigation of loss, or measure of damage; although they are logically distinct approaches, the factual and legal inquiry and conclusion should be the same: Hussey v Eels [1990] 2 QB 227].
> (5) The fact that a mitigating step, by way of action or inaction, may be a reasonable and sensible business decision with a view to reducing the impact of the breach, does not of itself render it one which is sufficiently caused by the breach. A step taken by the innocent party which is a reasonable response to the breach and designed to reduce losses caused thereby may be triggered by a breach but not legally caused by the breach: *The Elena d'Amico*.
> (6) Whilst the mitigation analysis requires a sufficient causal connection between the breach and the mitigating step, it is not sufficient merely to show in two stages that there is (a) a causative nexus between breach and mitigating step and (b) a causative nexus between mitigating step and benefit. The inquiry is also for a direct causative connection between breach and benefit (*Palatine* [[1986] QB 335]), in cases approached by a mitigation analysis no less than in cases adopting a measure of loss approach: *Hussey v Eels*; *The Fanis*. Accordingly, benefits flowing from a step taken in reasonable mitigation of loss are to be taken into account only if and to the extent that they are caused by the breach.

(7) Where, and to the extent that, the benefit arises from a transaction of a kind which the innocent party would have been able to undertake for his own account irrespective of the breach, that is suggestive that the breach is not sufficiently causative of the benefit: *Lavarack v Woods*; *The Elena d'Amico*.
(8) …
(9) Subject to these principle, whether a benefit is caused by a breach is a question of fact and degree which must be answered by considering all the relevant circumstances in order to form a commonsense overall judgment on the sufficiency of the causal nexus between breach and benefit: *Hussey v Eels*; *Needler v Taber*; *The Fanis*.
(10) …
(11) …"

(Underlining added. The latter sub-paragraphs deal with matters of policy and justice and could be considered aspects of legal causation.)

95. Lord Clarke JSC essentially overturned the Court of Appeal decision which had overturned Popplewell J's decision that causation had not been established. He held at [30] that the "*essential question is whether there is a sufficiently close link between the two* [i.e. the benefit and the loss] *and not whether they are similar in nature*". It seems to us that the general principles of factual causation set out by Popplewell J were endorsed by the Supreme Court and that they apply whatever the type of mitigation is in play. As the underlined passages indicate, "but for" causation is not a sufficient test; there has to be a "*sufficient causal connection between the breach and the mitigating step*".

96. In the *Trucks* cases, the test became whether there is a "*direct and proximate causative link*" between the overcharge and downstream prices.[10] This was endorsed in *Royal Mail CA*, including that there needs to be "*something more than reliance on the usual planning and budgetary process*" in order to prove the "*direct and proximate causative link*". In [154], the Chancellor referred to the "*requisite degree of proximity to establish a direct causative link".*

97. In a very recent case in the CAT, *Stellantis Auto SAS v Autoliv AB* [2025] CAT 9 ("***Autoliv***"), the above principles were applied, albeit *obiter*, as the CAT did not have to decide pass-on because it had found that there was no overcharge. Having quoted from *Sainsbury's SC* and *Royal Mail CA*, the CAT held at [248]

[10] See [223], [228] and [230] of *Royal Mail CAT*.

that: "*when addressing pass-on it is necessary to look for a direct and proximate causative link between the overcharge and the mitigation*." The CAT focused on the factual rather than econometric evidence in this respect. At [277] the CAT held that:

> "While there was some evidence that when margins declined precipitately or were far from target, they would seek to raise prices, the Tribunal heard no evidence to suggest that the companies would raise their prices in response to a relatively small increase in direct manufacturing costs. The evidence does not establish that profitability is finely managed such that adjustments are made to small variations in component costs."

And at [278], the CAT said:

> "Autoliv in its cross examination put its case broadly suggesting that costs in the generality would be passed on at the level of the dealer. Importantly, however, the evidence showed that the key driver of price was the competition in the market. It was understood that raising prices would be expected to have an impact on volume and that costs which are not industry wide are not automatically passed onto customers. There is not a proximate and causative link between a small price increase and the price charged to dealers or the support given to dealers in other forms."

98. Again, the language of proximity is used. But we consider that, with the possible confusion as a result of the use of the concept of "proximity" in the context of legal causation (as per [215] of *Sainsbury's SC*) and its meaning in relation to factual causation, that it is probably best avoided. That is not to say that it is not a suitable shorthand for the requirement to establish a sufficiently close causal connection between downstream prices and the overcharge.[11] But reverting to the language used in *Fulton Shipping,* and retaining the notion of "*directness*", we think that the test is adequately encapsulated in the formulation of a "*direct causative link*" and that is what we propose to apply. It is more than a "but for" test of causation and it is necessary to show that the overcharge directly caused or led to an increase in prices.

99. That test means that it is important to examine how the overcharge is said to have been passed on through increased prices. The fourfold categorisation of the Supreme Court in *Sainsbury's SC* seems to us to focus on decisions taken

[11] In *Sainsbury's CA*, proximity was not referred to and instead it adopted a test of a "*sufficiently close causative link*" – see [330] and [332].

by a merchant claimant by way of a direct response to an increase in a particular cost, as opposed to an increase in its prices that might have come about for less direct reasons. Options (i) and (ii) (the latter includes restricting capital expenditure) do not constitute a relevant mitigation of loss because the merchant "*would have been deprived of those funds for use in its business*".[12] Those are the longer term, less direct ways in which the increased cost may be dealt with, as it would have to be if the merchant was to remain solvent and profitable. By contrast options (iii) and (iv), and particularly the latter, concern the shorter-term assessment of the merchant's profit-maximising price.

100. This led at trial to the distinction being drawn between direct and indirect mechanisms for pass-on. The Claimants say that the Defendants must prove that the overcharge or a relevant costs increase must have been responded to directly in the merchant's price-setting. It is not sufficient, they say, for the Defendants to rely on the econometric evidence to establish, by a top down, highly aggregated analysis, that over the long term there is likely to be some sort of correlation between a cost proxy and prices. It is not sufficient to point in a generalised way to possible implicit internal mechanisms, such as Earnings Before Interest, Taxes, Depreciation and Amortisation ("**EBITDA**") targets or competitor monitoring, because this would only indirectly translate into prices.

101. This will be explored in detail below. At this stage we say that we do think that the Defendants are required to prove that decisions on prices were directly influenced by the MSCs and, going back to *Royal Mail CAT* and *CA*, it is necessary to show something more than the fact that the merchant was aware of the MSCs and thereby impliedly took account of them in its usual planning and budgetary processes. Entry/exit and long term investment decisions do not usually provide the necessary closeness or directness to a specific cost, particularly where that cost is too small to have any measurable effect on those decisions.

102. We have concluded that directness is a necessary element of proving the legal concept of pass-on as a mitigation defence. That being so, it is necessary to

[12] *Sainsbury's SC* [205].

examine the factual qualitative evidence to test if the MIF overcharge was passed on directly by the merchant in its price-setting and it will be insufficient for the Defendants to show or ask us to infer that pass-on of such a small cost may have occurred via an indirect channel in the long run, such as through ordinary planning and budgetary processes, margin targets or observation of competitor pricing.

103. It should perhaps be added that the Defendants' complaints about the lack of disclosure were principally concerned with their alleged inability to prove the way that the MSC might have been passed on through the indirect channels, rather than in the direct price-setting channel. As the effect of our legal findings is that the Defendants must prove that the very small MSC cost was passed on through a direct price-setting channel, the alleged lack of disclosure about indirect channels of pass-on is irrelevant and cannot have affected the Defendants' ability to run their mitigation defence of pass-on.

F. THE FACTUAL EVIDENCE

(1) Introduction

104. Our conclusion on the applicable legal test for factual causation means that it is important to see what the Analysed Claimants say about their approaches to pricing and whether the MSCs featured, and if so, how. We will therefore set out our findings on the evidence before us in relation to each of the Analysed Claimants which provided evidence, whether documentary, and/or by witness statement and oral evidence.

105. A number of general difficulties and limitations with this evidence have been highlighted by the Defendants, quite apart from Visa's overarching case that the evidence is irrelevant, inadmissible and unfair in that it goes to a case, namely proximity or a direct causative link, that the Claimants should not be allowed to run. We have ruled on that above and have found that the correct legal test does require the Defendants to prove a direct causative link between the MIF overcharge and the setting of downstream prices. Even though we have rejected

Visa's claims of unfairness, we remain mindful of the potential limitations and deficiencies in the evidence disclosed by the Claimants.

106. One of those problems is whether it is possible from the small number of Analysed Claimants which have provided such evidence to assume that other businesses in the same sector adopted similar price-setting processes. This, however, is the necessary basis for conducting a trial by reference to a selection of Claimants where it is accepted by all that this is the only means by which these issues could be tried. The parties therefore considered these matters by reference to sectors of the economy and sought to place the Analysed Claimants into those sectors for such purpose. The different approaches to sectorisation are dealt with in Section H below.

107. As to the channels for pass-on, the Defendants say that if it is necessary to identify how the MSCs were passed on in any particular business, then the evidence demonstrates how that might be done. Mr Holt set out in his report the possible indirect pass-on channels through which this might have happened. This included: taking account of competitors' pricing where those competitors directly set prices, taking into account MSC costs; it also included pricing by reference to target margins or overall profitability or where incentive schemes were set by reference to a firm's performance against an operating margin target that took into account MSCs. We have however concluded that such indirect mechanisms for a small cost such as the MSC would not satisfy the legal test for causation.

108. It follows that evidence showing that people were aware of the MSCs and that it was factored into budget or target setting, as it would inevitably have to be for there to be an accurate EBITDA or similar calculation, does not assist in establishing that MSCs were factored into a direct price-setting process. Furthermore, the alleged lack of documentary evidence showing whether MSCs were taken account of is unsurprising if the Claimants' evidence is correct that they were not. There is unlikely to be documentary evidence specifically confirming the negative proposition that MSCs were not taken account of in price-setting.

109. We will go through the factual evidence that has been adduced in relation to each of the Analysed Claimants. In doing so we refer to the witnesses who were cross-examined and we make factual findings based in part on our assessment of their evidence together with the other documentary evidence. In general, we would say that all the witnesses were doing their best to assist us and gave their evidence honestly and carefully. It would be invidious to pick out one or two of the witnesses as being more credible than the others; or to attempt to grade them. As will become apparent, there were some better witnesses than others and we have made our findings accordingly.

110. We will take the Analysed Claimants in alphabetical order.

(2) Allianz

111. There were six Allianz entities making claims in these proceedings, all involved in offering a range of different personal insurance products, including motor and home insurance, to consumers (collectively called "**Allianz**"). Three of the entities: Liverpool Victoria Insurance Company Ltd ("**LVIC**"); Fairmead Insurance Ltd ("**Fairmead**"); and Allianz Insurance PLC ("**Allianz PLC**"), are underwriters. LVIC was making by far the largest claim. The other three entities, all of which were brokers, were: Allianz Business Services Ltd ("**ABSL**"); Home and Legacy Insurance Services Ltd ("**Home and Legacy**"); and Pet Plan Ltd ("**Pet Plan**").[13]

112. Allianz were separately represented at the trial but during the course of opening submissions, both Defendants agreed settlements in respect of all of Allianz's claims, so they took no further part in the trial and their witnesses were not cross-examined. However, Mr Beal KC on behalf of the remaining Claimants made it clear that they intended to rely on the Allianz witness statements and the expert evidence of Mr Richard Murgatroyd. Visa objected to any weight being placed on what it described as hearsay evidence, because it did not have the opportunity to cross-examine those witnesses, in particular about suggested direct and indirect channels for pass-on of the MSC.

[13] ABSL's and Home and Legacy's claims were assigned to Allianz Holdings PLC ("**Allianz Holdings**").

113. The witness statements were from: Mr Lee Bodman, the Broker Pricing and Underwriting Director, Allianz Personal at Liverpool Victoria General Insurance Group Limited dealing with the underwriting business; and Mr Gary Skipworth, Sales and Placement Director of ABSL dealing with the brokering business. Allianz also disclosed certain documents.

114. It is clear from Mr Bodman's evidence that on the direct insurer side of the business, the main price-setting factor is the expected future claims costs or "burn" costs of an individual customer. That is calculated by using a machine-learning model based on quotations and policy data. But while Mr Bodman said that MIF and MSC costs were not "*on* [his] *radar*" for him in his role as pricing director, nevertheless LVIC's accounting systems treated MIFs as a management expense and they were included in a broader management expense category called "**GI Direct**" which also covered other costs such as staff, IT, complaints payments, printing and postage. GI Direct costs do form a relatively small part of LVIC's non-claim costs, which themselves are a small part of LVIC's total costs. The MIFs as a proportion of LVIC's total costs were between [✂].

115. Mr Holt commented in his Twelfth Report on Allianz's evidence and said that it showed that there was a direct channel of pass-on in that prices seemed to be set explicitly taking into account MSCs. He also identified possible indirect channels such as profitability and expense ratio measures for executive compensation, and competitor pricing.

116. As to the direct channel, it appears that the price-setting team uses a "manufactured cost" calculation which comprises the burn costs and the GI Direct costs. It then performs a multi-factorial assessment whereby the manufactured cost is overlain with commercial judgment and it takes account of other factors such as price elasticity modelling, inflation forecasts, regulatory considerations, customer impacts and tactical trading. It applies all of this in coming up with a final premium charged to the customer.

117. Mr Beal KC accepted in his oral submissions that that meant that the MSCs were a factor, albeit a very small one, in the price-setting process. This is not

cost-plus pricing, but it does appear that MSCs did feature in the process, meaning that, if there was a sharp change in that specific cost, it might impact the price that is arrived at. Ms Tolaney KC aptly described this as treating MSCs as analogous to COGS, even though they were categorised for accounting purposes as an overhead cost. She said that this is a striking example of the categorisation of a cost not being determinative of how that cost was treated for the purpose of price setting.

118. Given that the Defendants did not have the opportunity to cross-examine this, it would be unfair to decide against them that the MSCs did not have a direct impact on the setting of premiums.

119. As for ABSL and Mr Skipworth's evidence, he said that while they review costs constantly, their main driver in setting commission fees was run rate rather than profit. In other words they would generally be looking at how to raise revenue and the main driver in relation to costs was staff costs. ABSL's evidence showed that they imposed a card surcharge between November 2016 and January 2018 and when that ended, as it had to they considered increasing their general administration fee chargeable to all customers irrespective of whether they paid by card or not. This perhaps further demonstrates their focus on revenue rather than the passing-on of a particular cost.

120. Therefore in relation to ABSL and the brokerage side of the business, it is less clear that MSCs were taken into account in direct price setting.

(3) Hilton

121. The Hilton chain of hotels have a number of Claimants in these proceedings, all operating different hotels both in the UK and in Europe. Those Hilton Claimants are a mixture of leased, managed and franchised entities. The evidence adduced by Hilton did not deal with the position of franchised hotels.

122. Hilton disclosed documents in relation to price-setting and put forward two witnesses, who were cross-examined: Mr James Percival, Hilton's Senior Vice

President Finance Europe, Middle East and Africa; and Mr Darcy VanWyck, a Vice President of Revenue Management & Commercial Services.

123. Visa, in particular, complained about the paucity of disclosure by Hilton. However, on analysis of the requests for more disclosure and Hilton's responses through the Redfern schedule process, it is a little difficult to understand where the gaps in the evidence are said to be. It is extremely unlikely that there will be documents indicating that something has not been done, such as not inputting MSC costs into an algorithm. This was recognised by the CAT in refusing to order any more disclosure from Hilton.

124. Hilton categorises MSCs as overheads in their accounts. This is in line with its industry-specific accounting and reporting rules – the Uniform System of Accounts for the Lodging Industry. It is therefore likely that its competitors would account for MSCs in the same way. Both Hilton's witnesses were clear that MSCs were not taken into account in direct price-setting.

125. As explained in the evidence, Hilton has two principal revenue streams with distinct pricing structures: room revenues, in respect of which Hilton uses a third-party pricing algorithm called the "**GRO system**"; and non-room revenues, such as food and drink, spas and events. There is a rough **[✂]** split between the two in terms of overall revenues.

126. As explained by Mr VanWyck, the GRO system is very dynamic and sets prices three times a day, with the purpose of maximising revenue per room, rather than by seeking to recover all of Hilton's costs. The GRO system was described by Mr VanWyck as a "black box" and he was not able to provide any evidence as to the inner workings of its proprietary software. Its aim is to maximise the total revenue per room ("**RevPAR**") and it considers competitor pricing as well as a limited range of variables that revenue managers can input into the system, such as weather reports and local events, that might influence demand and purchasing patterns.

127. However, there are only two costs inputs from Hilton and these provide a "floor" to the prices that the GRO system can produce. Those inputs are: **[✂]**. In his

oral evidence, Mr VanWyck confirmed that it was only those two costs inputs that his team entered into the GRO System. He also confirmed that they would not be able to input margin targets or the like and that the whole pricing process was centred around maximising RevPAR rather than profit, meaning that other costs were treated as fixed costs and not taken account of in price setting.

128. Mr VanWyck was cross-examined as to the assumptions and parameters that were built into the GRO system but he was unable to comment on that, as it is a "black box". However, he knew what his team could input into the GRO system and he was clear in his evidence that the only cost inputs were those two referred to in paragraph 127 above. We have no reason to disbelieve Mr VanWyck on this and we do not think that the Defendants were inviting us to do so. What they were saying however is that Hilton should have produced more evidence as to how the GRO system worked. But the important point is whether there were any other costs inputs and it seems clear that MSCs (and many other costs) were not taken into account in price-setting via the GRO system.

129. Mr Percival accepted that the GRO system may change room prices in response to Hilton's competitors adjusting their prices, including by reference to MSCs or other costs. But this would be impossible to prove and we do not see that the burden was on Hilton to obtain that evidence from their competitors (to see if their prices were changing by reference to changes in MSCs). In any event, as Mr Beal KC submitted, there would be a break in the chain of causation, because Hilton, in that scenario, would be responding to a MIF overcharge incurred by its competitors, not by itself.

130. Non-room rate prices are set locally by individual hotels and this is done primarily by reference to that hotel's **[✂].** According to Mr Percival, MSCs are not directly considered. He did accept in cross-examination that individual hotels may be required to find costs savings or revenue opportunities in response to an increase in Hilton's total overheads costs base. However, MSCs form a very small part of that costs base (approx. **[✂]** of operating costs and **[✂]** of total revenues by way of average between 2017 and 2018). Mr Percival could not recall any non-room prices being raised because of an increase in MSCs and he pointed out that raising prices would, in any event, be only one way of

responding to an increase in costs. Hilton had previously found itself unable fully to pass on even industry-wide costs increases, such as National Insurance increases.

131. The Defendants highlight the possible indirect channels for pass-on such as individual hotel regular performance reviews which sometimes result in decisions or recommendations as to pricing. While there is little scope for changing room pricing, in relation to non-room pricing, there is more scope at the hotel level for taking into account costs increases. It is clear that card usage is closely monitored and any significant increase or reduction in MSCs would be picked up in these performance reviews. The Defendants invite us to infer that if there had been such a change, Hilton would have acted in accordance with ordinary profit-maximising incentives and passed on any significant change in what was recognised by Hilton's witnesses as an industry-wide variable cost.

132. In its closing submissions, Mastercard alighted on a particular spreadsheet that had been disclosed by Hilton. This appears to be a calculator for determining the profitability of hosting a particular conference or event. One of the boxes in the spreadsheet is titled "Payment Settlement Method" and there is a dropdown menu box allowing selection between different payment methods, such as "CC Visa/Mastercard", "CC Amex" and "bank wire". Depending on what is selected, the profit changes. Although the closing submissions indicate that this document was put to Hilton's witnesses, in fact it was not. The first time it was referred to at the trial was in Mastercard's closing submissions. Mr Beal KC said that nothing could fairly be made of this document as Hilton's witnesses did not have the opportunity to explain it.

133. We do think that is unsatisfactory. The document appears on its face to be calculating the profit that would be made from a particular event. The payment method will obviously affect the profit made on the event and the document shows that Hilton was well aware of that. What it does not show is whether the payment method actually affected the pricing of the event. There is therefore no evidence to contradict the evidence of Hilton's witnesses that MSCs would not be taken into account in either room or non-room pricing.

(4) Holland & Barrett

134. Holland & Barrett is a well-known retailer in the health and wellbeing sector. It sells a wide variety of products across four different areas: sports; food; vitamins and supplements; and beauty. It has approximately 800 retail stores in the UK and an online sales channel, comprising **[✂]** of total sales.

135. Holland & Barrett had two witnesses, both of whom were cross-examined: Mr Paul Troth, the Head of Capital Investments and Shared Service Centre; and Mr Guy Dixon, the Head of Pricing and Promotions. It has also provided documentation but again the Defendants complain as to its adequacy.

136. Mr Troth was the first witness to be called in this trial and his evidence was, in a number of respects, unsatisfactory. He said in his first witness statement dated 6 June 2024 that there were certain reference points for price setting, including EBITDA. EBITDA would necessarily include the MSCs, as Holland & Barrett treated them for accounting purposes as overheads. However in Mr Troth's second witness statement dated 9 October 2024 he backtracked from this, saying that he had discussed this point with Mr Dixon, who knows far more about pricing than he does, and Mr Dixon had told him that he was not correct and that the reference points for price-setting that he had identified are not in fact used for that purpose. As pricing is not part of his day-to-day responsibilities, he said that questions in relation to pricing should be directed to Mr Dixon. Mr Jowell KC inevitably seized on this in cross-examination and it is fair to say that Mr Troth could not really explain why he made the error – he said in his second witness statement that he had been sick and off work at the time. Other mistakes were also picked up, such as whether he had prepared the statement after a video call with the Claimants' solicitors, Stephenson Harwood, and who he had spoken to about his evidence. The Defendants both submit that Mr Troth's *volte-face* should not be accepted and the truth is that EBITDA is a reference point for price-setting.

137. While Mr Troth's evidence was unfortunate, we do not see why his corrective statement is less believable than his original one. The Defendants invite us to conclude that EBITDA or EBITDA targets feature in price-setting and that

MSCs are closely monitored by the board. Neither Mr Troth nor Mr Dixon were on the board (although Mr Troth did purport to comment on the fact that MSCs were not discussed at board or executive management meetings) and the Defendants criticised Holland & Barrett for not calling anyone from the board.

138. Mr Dixon described how Holland & Barrett sets its prices. A product's initial retail selling price ("**RSP**") is set by its commercial category managers ("**CCMs**"). The CCMs start with the cost price of the product from suppliers, which is the minimum level for RSP. But this is not a simple costs-plus-margin calculation as further factors are considered: **[✂]**.

139. Thus, the only costs of which the CCMs are aware are the source costs of the products. They do not have any means of considering other costs data such as Store Support Centre ("**SSC**") costs which includes MSCs and EBITDA margins which are not part of any pricing decisions by the CCMs.

140. Price changes from the RSPs are infrequent as there are the so-called "menu costs" of doing so, being a disruption to the business requiring staff to have to spend time changing tickets on products when they could be doing more useful sales tasks. Also any increase in price may lead to a loss of volume. There are occasions when changes are made, as Mr Dixon described, such as inflationary pressures on the source pricing or to align better with competitors. However, he also explained that price changes are only one option in their armoury and that even if there was an industry wide costs decrease, Holland & Barrett might not necessarily lower prices to remain competitive. It may respond by increasing promotional intensity or renegotiating funding details in supplier agreements. Mr Dixon was clear that it would never change prices in order to hit budgets.

141. The Defendants again tried to establish from the documentary evidence an indirect channel for pass-on. They referred to board minutes and associated papers from the Chief Financial Officer that showed close consideration being paid to budgets, EBITDA margins and targets, which necessarily will have included MSCs as a component of SSC costs. They said that because both witnesses were not on the board and did not know how the targets set by the board were used, that we should infer that the targets would affect pricing in

some way. However, the witnesses were clear, albeit after Mr Troth corrected his first statement, that SSC costs and EBITDA targets or margins are not reference points, or factored into price discussions or decision making. Visa sought to suggest that Mr Troth had backtracked on this in his oral evidence when being asked about EBITDA stretch targets, but that is to confuse whether such targets are being used as a management incentive tool with whether they specifically affect decisions on prices.

142. The fact that the board considers all of the firm's costs, which it would inevitably have to do in considering EBITDA, says nothing about whether EBITDA, or margins or targets derived from it, directly affected prices. The only evidence as to price-setting at Holland & Barrett comes from its witnesses who were clear that MSCs do not feature and despite the unsatisfactory nature of some of that evidence, we do not think that that core point is undermined as a result. The Defendants cannot prove that MSCs were directly passed on to customers in the prices they paid.

(5) Marks & Spencer

143. Marks & Spencer ("**M&S**") is a leading food, clothing and homeware retailer in the UK, Ireland and selected other international markets. M&S settled its only live claim which was against Mastercard a few months before the trial and positive cases were filed. It had by then disclosed a few documents related to its price setting processes and a witness statement from Mr Peter Fraser, Head of Finance for Food. Accordingly, no more documents were disclosed or sought and Mr Fraser was not cross-examined. The Claimants said that they wished to rely on his witness statement as hearsay evidence. Visa said we should place no weight whatsoever on this evidence, as the Claimants could still have called Mr Fraser to give evidence. We cannot place much weight on it in those circumstances but we do not think it appropriate to ignore it completely.

144. According to Mr Fraser, M&S has a value-led approach to its pricing, which is set at a level that is commensurate with the perceived higher value that consumers place on M&S's products. It does not adopt a COGS plus margin approach, but gross profit margin is actively considered.

145. M&S's commercial buyers set initial prices on the basis of two main data inputs: **[✂]**. This excludes overheads and any costs not related to **[✂]**, such as payment costs, including MSCs. They are treated as overheads in M&S's accounts, grouped in with other overheads costs. MSCs do not therefore feature at all in any price-setting discussions or decisions.

146. Visa attempted to extract from this evidence the potential channels by which MSCs could have affected M&S's prices. First of all it points to the fact that Mr Fraser stated that gross profit margins are considered an important part of the price-setting process. It referred to budget documents suggesting that operating costs were monitored closely and that when M&S was facing costs pressures, it might seek to maintain its margin by increasing prices. However, apart from that being highly speculative, prices would only change in that way through an indirect channel of pass-on, which is insufficient for the legal test of causation.

147. The other channel is competitor pricing and Visa suggests that if MSCs were materially and permanently reduced and M&S's competitors responded to that by lowering prices, then M&S would be bound to follow in order to remain competitive. That may be right, but it again falls into the trap of considering indirect channels, rather than the direct channel explained by Mr Fraser. M&S's profit maximising price-setting adopts a value-led approach, taking into account competitors' pricing, but a shift in one particular small cost is not something that would be accounted for in that direct channel.

(6) Pendragon

148. Pendragon plc primarily operates car dealership brands that sell, lease and provide aftersales services. It provided witness evidence for Trial 1 and Mr Neil Bailey was cross-examined and found to be a truthful and careful witness. For this trial, Pendragon provided data but no witness evidence. Dr Trento analysed the data and noted the following: (i) Pendragon treats MSCs as overhead costs in its accounts; and (ii) MIFs represented approx. 0.03% of Pendragon's revenue in 2022 (only 10% of its revenue related to transactions settled by card). The evidence of Mr Bailey in Trial 1 dealt with the question of surcharging which

the Claimants accept could amount to mitigation of loss insofar as it relates to the MSCs. This is dealt with below.

149. Therefore, not much can be drawn from Pendragon's evidence as to its price-setting processes.

(7) Pets at Home

150. The same can be said for Pets at Home which disclosed quantitative data but not qualitative evidence. The experts have conducted econometric analyses of the data. All that can be said about Pets at Home in this context is that it treated MSCs as overheads in its accounts.

(8) Primark

151. Primark, the well-known multi-national fashion retailer, settled its claims against both Defendants shortly before the start of the trial. It had previously disclosed documents and filed witness statements from: Mr Rory Noonan, Head of Financial Planning and Analysis for Primark's global business; and Mr Richard Lister, Head of Planning, within the Planning and Space team at Primark Stores Ltd. Because of the settlement, neither witness was called but the Claimants wish to rely on the witness statements as hearsay. Consistent with its position adopted in relation to other Claimants (M&S and Allianz), Visa objects to this and says that, as certain documents apparently contradict what the witness statements say, its inability to cross-examine means that the evidence should not be relied upon. We will obviously take into account that there was no cross-examination, but we are well able to judge whether the documents are indeed inconsistent with the witness statements.

152. Mr Lister described Primark's pricing approach as a holistic exercise looking at a range of factors. The overarching principle is that it aims to be the best value retailer for all the products it sells which generally means that it has the lowest prices and relies on selling large volumes of products. The Buying and Merchandising teams focus on "*pricing architecture*" meaning that pricing has to sit well within the relevant product range taking into account a price spread

within that range. This avoids there being "*big gaps or jumps in pricing within a particular product range*". Primark has always sought to price in clear increments (i.e. round figures) which is more understandable for its customers. Primark does not have a costs-plus pricing model.

153. According to Mr Noonan, MSCs are within the category of bank charges which is an administrative cost that sits within operating costs. They therefore feature in its operating budget and the operating margin which are monitored closely and regularly. He emphasised that if Primark wanted to improve its operating margin, it would look to cost cutting measures rather than price increases. He said that the bank charges item, which includes MSCs, in for example the current year's budget, was less than 1% of the operating costs budget and so any changes to those costs would be too small to make any difference to the overall budget.

154. The Buying and Merchandising Teams are focused on gross margin targets, but in order to meet those targets, they would only look at cutting costs, as price increases would be exceptional. In any event gross margin targets do not include operating costs, and any changes to the MSCs element of that would be too small to have any real impact on the budget.

155. Visa pointed to a pricing and margin update from 2023 which suggested that Primark might try to achieve a higher gross margin to mitigate the impact of rising operating costs. Mr Noonan however said that an increase in bank charges would be too small to influence any change to the gross margin. There is no evidence that this would be done by increasing prices rather than cutting costs.

156. Mastercard referred to a number of documents disclosed by Primark that showed what it said was close monitoring of MSCs and that such operating costs were taken account of in setting prices. However, none of those documents show any actual causative link between operating costs and price increases. What they do show is that, looking back, operating margins were being squeezed despite price increases.

157. Mr Lister referred to **[✂]**, when an exceptional price increase was actioned. This was because of specific inflationary pressures caused by a combination of factors including: **[✂].** Mr Lister said that there were very uncomfortable conversations within Primark about the need to address these issues and it resulted in around **[✂]** of its product lines increasing their prices. It is operationally difficult for Primark to change its prices as most price tags are applied by its suppliers.

158. Visa suggested that because of Primark's *mantra* of charging the lowest prices for the products it sells, if there was a material reduction of the MSCs, or in circumstances where the MIF were removed (e.g. in a no-MIF counterfactual), Primark would be bound to have adjusted its prices accordingly. However, Primark's *mantra* is about remaining competitive in the market and it does not provide evidence that Primark therefore sets its prices by reference to the very small element of operating costs that is the MSCs. It also does not prove the existence of a direct channel for pass-on of MSCs.

159. Visa also refers to the now familiar alternative pass-on routes of indirect channels or competitor pricing – Mr Lister seemed to accept that Primark's competitors may have a costs-plus pricing model, but that would involve consideration of COGS, rather than total costs – and employee incentives based on profitability metrics that included MSCs. For the reasons stated above, these indirect channels are not sufficient for the Defendants to prove their case and they do not show that changes in MSCs directly affected prices.

(9) Sony

160. The Sony business at issue is Sony Interactive Entertainment Europe which sells games applications, subscriptions and hardware for PlayStation games consoles. Sony provided some limited qualitative documents but unhelpfully refused to file any witness statements in relation to its pricing practices and other matters relevant to pass-on. As Mastercard has said, the information that ought to have been disclosed by Sony (which is whether MSCs were included in the costs stack used for pricing) is uniquely within Sony's possession and could easily

have been provided. In our view, Sony's unexplained reluctance to engage should count against it, if the documentation provided is not clear.

161. The starting point is that Sony does treat MSCs as COGS in its accounts. The Defendants therefore say that it would very likely treat MSCs as COGS for the purpose of price-setting.

162. However, it appears from the documentation disclosed and Sony's answers to the Redfern schedule requests, that the pricing practice in relation to third party digital games (which forms **[✂]** of Sony's sales of PlayStation games in the UK) is to maintain a **[✂]** target margin between the suggested retail price (excluding tax) and the wholesale price agreed with the third party publishers of the games. In other words, there is a **[✂]** split of revenue between the wholesaler and Sony respectively. Dr Trento has interpreted that as meaning that the wholesale price is set as an *ad valorem* fee of 70% of the retail price and that therefore COGS, including MSCs, have no impact on the price of digital games.

163. The Defendants question Dr Trento's interpretation but do not dispute that Sony had a stable target margin of **[✂]** between the wholesale and retail price. Obviously, Sony will expect to cover all its costs within the retail price. Even though MSCs are treated as COGS in Sony's accounts, it does not appear that they are expressly taken into account in the setting of retail prices. The only known item of COGS that is taken into account is the wholesale price and there is a purely arithmetic calculation from that to get to the retail price, by adding the fixed margin of **[✂]**. The issue is whether that **[✂]** takes account of MSCs or any particular costs or whether it is just a margin figure that is automatically applied by Sony without reference to its other costs.

164. This would have been easy for Sony to explain in a witness statement and one would have thought that if the answer was that MSCs were not taken into account, Sony would have said so. By choosing not to engage on this, Sony has left itself vulnerable to adverse conclusions being drawn. In its Redfern schedule response it said that within the target margin "**[✂]**". That does not mean that if there is a change in operating costs, including a significant change

in MSCs, the target margin would change. On the contrary, if a fixed percentage margin is being earned in relation to third party royalties, it suggests that there is a distinction within COGS for pricing purposes between those royalties and other COGS, including the MSC.

165. Accordingly, the evidence that we have is that, although the MSC is treated as a component of COGS, it is only third party royalties that feature in Sony's direct price-setting. The other COGS, which are aggregated on a monthly basis, in the way that overheads would normally be, but which are closely looked at and monitored, do not seem to have been taken into account for the purpose of setting the retail price of games.

(10) Three

166. Three is the smallest of the four mobile network operators in the UK. Three has disclosed some documentation in relation to its pricing practices and has served witness statements from two witnesses: Mr Steve Barnett, Head of Finance for Three's Consumer Division; and Mr Harry Bullard, Head of Voice in Consumer (Mobile). Only Mr Barnett was cross-examined. We found him to be an entirely credible witness.

167. Three treats MSCs as overheads and they are recorded under "Payment Processing Operating Costs" in its financial statements. They do not therefore feature in gross profit figures.

168. The important matter to note in relation to Three's business is that some **[✂]** of payment transactions are conducted by Direct Debit and only **[✂]** of transactions, principally the initial purchase of a handset, are settled by card. MSCs therefore represent a very small percentage of Three's overall revenue and costs base, being less than **[✂]**.

169. Mr Barnett explained in his evidence that prices are never set by reference to MSCs. The three key costs that Three specifically takes into account are: (i) **[✂]**. Three is perceived and places itself as having lower prices than the other mobile network operators and so its pricing has to take account of that, after

considering the three costs factors. Mr Barnett explained in his evidence that Three is heavily driven by concerns to maintain market share and has found that if it raises prices it tends to lose volume and therefore its profits reduce. That might even have the effect for example, of Three not raising prices in response to industry-wide costs increase, even when its competitors have, for fear of a negative volume effect.

170. Over the last few years, Three along with its competitors have included annual price rises in their contracts to deal with inflation. These apply to the majority of contract voice and mobile broadband customers. These price increases are attributable to the mechanism in Three's terms and conditions rather than as a response to any actual or perceived increase in any particular cost, including MSCs.

171. The Defendants have severely criticised the lack of meaningful disclosure by Three. Visa said that Three had failed to disclose documents that explain what the "minimal variable costs" are that influence the pricing of its SIM-only products. However, this very issue was raised during the Redfern schedule process and the CAT's final decision on it was to make no order for further disclosure as it was unclear what specific documents Visa was requesting, and for Visa simply to assert that a factual matter was "unevidenced" was not a good reason for a suitable request for documents. In any event, as Mr Beal KC said, Three did not regard MSCs as a variable cost, so this alleged lack of documentation would not relate to MSCs and would not therefore be relevant.

172. Visa also suggested that Mr Barnett had agreed in cross-examination that there were documents in relation to the setting of margins and the costs that were taken account of in pay-as-you-go prices. However, we do not think there was any such admission by Mr Barnett, certainly not in relation to the costs point. There would be more documents dealing with their budgetary and margin-setting processes, but these are not relevant to whether MSCs were taken account of in direct price setting.

173. The Defendants run the same points in relation to Three that they do in relation to the other Analysed Claimants; that the evidence does show potential indirect

channels by which changes to MSCs could have been passed on. Visa refers to the possible impact of MSCs on its gross margin, such as by way of price increases to take account of costs inflation. But this does not provide a direct link between MSCs and pricing. Similarly, employee incentives based on EBITDA or other targets provide only a possible very indirect link. Competitor pricing is clearly a feature of Three's price setting, but it cannot be known if its competitors were pricing by reference to MSCs.

174. Mastercard has settled with Three. That did not stop Mastercard criticising Three's evidence and asserting that it could be inferred that Three could in fact have taken account of the MSCs in setting its prices. For the reasons set out above, we do not accept that the Defendants have shown that the MSCs were directly taken account of in Three's prices.

(11) Travix

175. Travix is an online travel agent. It is the one Analysed Claimant where it is clear that MSCs were taken into account in direct price setting such that there would likely be a high rate of pass-on, that satisfies the legal test for causation.

176. Travix filed witness statements from Mr John Wilson, Vice-President of Finance and Business Operations, and Mr Matthew Day, Head of Financial Planning and Analysis. Only Mr Wilson was cross-examined. A rather limited number of documents were provided by Travix, which was probably a result of its policy of deleting documentation after a short period. Somewhat ironically, Visa submitted that little weight should be afforded to Travix's qualitative evidence as a result. But that evidence seems to be largely in favour of the Defendants.

177. As Mr Wilson explained, MSCs are treated as COGS in Travix's accounts and specifically feature in the costs stack used by its pricing model to generate a starting price for each transaction. Travix then factors in competitor pricing to adjust the starting figure. As was pointed out by the Defendants, this market has high transparency and effective price competition, meaning any change in an industry-wide cost would be likely to lead to a high rate of pass-on.

178. There was a dispute on the evidence as to whether Travix was acting like a travel agent/intermediary putting customers together with suppliers of travel services such as flights and hotels, or whether it was acting as principal in purchasing the travel products which were then resold to the customer. There is no doubt that Travix's customers paid the full amount for their travel products to Travix which therefore incurred very high MSCs, as that is generally paid by card. However, Travix's only real revenue is the commission it earns from the sale of those products. The cost of flights is the main cost that Travix takes into account for obvious reasons, but this is essentially non-negotiable and Travix is working on very tight margins because of the nature of the market concerned.

179. This dispute led to two issues:

a) The Claimants said that Mastercard and its expert Mr Harman had grossly exaggerated the proportion of costs that were accounted for by MSCs. This was because they had taken the total figure for MSCs incurred by Travix, which would be on the full amount charged to the customer for flights and then applied that to the much smaller commission revenue on the basis that Travix was acting only as an intermediary that did not pay for the flights it sold to its customers. If that cost is not included in the analysis then clearly the MSCs would form a very high proportion of costs and revenue. However, we think that Mr Beal KC was correct to say that one needs to compare like with like; and that if the full MSCs are being taken account of for this purpose, then they have to be seen as a proportion of the full cost of the flights on which they were paid. That will result in a much-reduced proportion.

b) The other point concerns the expert analysis and the choice of proxy. This is dealt with below. At this stage it is relevant to explain that Mr Holt on behalf of Visa used the cost of flights as his proxy, but this would almost inevitably be passed on in full as it is the primary expenditure item that Travix cannot negotiate and which must always be covered, even if Travix is only acting as an intermediary. Dr Trento considered two proxies as suggested by Mr Economides: payment costs, of which MSCs were a very large component; and "meta costs" which comprised commissions paid to

online search aggregates. He chose the latter because the former had an endogeneity problem. Mr Holt seemed to endorse that choice for that reason, but he did expose a problem with it being that in about a third of transactions there were zero meta costs.

180. In any event, the only relevance of the qualitative evidence is that it shows that there was a direct channel of pass-on for Travix and it will be up to the econometric analysis to show the extent of that pass-on.

(12) University of Manchester

181. The University of Manchester ("**UOM**") filed statements from two witnesses: Dr Simon Merrywest, Director for Student Experience; and Mr George Whalley, the Deputy Chief Finance Officer; both of whom were cross-examined. It also provided some documents, including very shortly before the start of the trial and which were the subject of much criticism by the Defendants. Visa also attacked the choice of witnesses by UOM as it said that Dr Merrywest is not a member of the finance team and is not involved in the setting of tuition fees; and Mr Whalley had only been in his current role since March 2024, but was commenting on documentation that pre-dated his tenure. We bear those points in mind, but do not consider that they materially undermine the substance of their evidence.

182. As for all universities, the UOM cannot raise domestic undergraduate tuition fees, which are capped. It only has freedom in relation to unregulated fees, which are principally the tuition fees for overseas students and graduates. 90% of the MSCs incurred by UOM relate to tuition fee payments. The Defendants accept that, as a result of the regulation and UOM pricing up to the cap, there can have been no pass-on in relation to domestic undergraduate tuition fees. The split between domestic and overseas students is roughly two thirds to one third in favour of domestic.

183. Mr Whalley confirmed that the UOM is an unincorporated corporation that is considered an exempt charity. Because UOM, like other UK universities, make negative margins on the provision of services to domestic undergraduates, the

fees charged to international students are critical in ensuring financial stability. UOM has sought to increase fees and the volume of international students.

184. The UOM treats MSCs as centralised overheads. They are not attached to any particular business unit, or faculty, but rather to the UOM's Professional Services Division.

185. Dr Merrywest explained that each faculty has its own fee setting principles and strategies and these are generally in line with the UOM's own agreed principles which form the framework for the setting of internally agreed tuition fees. It uses a market-informed approach and conducts an annual, programme-level benchmarking exercise against selected competitor fees. For some courses the UOM might use a value-based approach to pricing to ensure that it prices at the top end of its competitors' range so as to maintain "that sense of a premium product". For other courses it may consider local issues and may price to meet social aims such as to encourage more to work for the NHS.

186. The problem with pricing for universities is that it has to be done well in advance. They cannot use dynamic pricing. UOM sets fees two years ahead of enrolment which means that it does not have strong data on students' price sensitivity and it can only react to competitors' pricing in the following recruitment cycle. Also, UOM uses an "institutional fee matrix" that pins fees to specific pricing increments (**[✂]**). In practice that means that it cannot make small fee adjustments.

187. UOM centrally sets financial "contribution targets" to the individual faculties. Mr Whalley explained that the UOM seeks to cover its costs, including MSCs, and it seeks to achieve a **[✂]** margin of revenue over costs. He accepted that costs were monitored at a fairly granular level, and that would include MSCs, although as they were such a small part of UOM's costs base (**[✂]** in 2015/16 rising to **[✂]** in 2023) it would be very unlikely that the MSCs would impact on the contribution targets for the faculties. Mr Whalley did accept that a change in MSCs would be picked up and could affect the contribution targets.

188. It is clear that MSCs do not sit within the budgets of the individual faculties. Mr Whalley said that the individual faculties have a number of ways to meet their contribution targets, including by increasing tuition fees for graduates and international students. However, he maintained that this was low on the list of likely responses from the faculties and more commonly they would try to raise volume by increasing student intake or finding costs savings. Because of the lag in fee-setting, Mr Whalley considered that the faculties would need "*incredible foresight*" to be raising prices two years ahead without having received their contribution targets yet. Costs savings and volume increases can be implemented after those targets have been provided and shortly before enrolment.

189. Visa sought to suggest that the evidence showed that if there was a significant change in MSCs, the contribution targets would have changed "*and the faculties would have set their international tuition fees accordingly*". We do not see how that follows in the real world and we accept Mr Whalley's evidence that, for various reasons explained above, such a change in MSCs would not be likely to be passed on, in any sort of direct way, into international tuition fees.

190. By way of conclusion, we do not consider that the Defendants can establish that changes in MSCs would be passed on into tuition fees by any direct channel.

(13) Wagamama

191. Wagamama is the well-known pan-Asian restaurant chain that operates over 160 sites in the UK and internationally. Two witness statements were filed by Mr Thomas Heier, the Chief Executive Officer and he was cross-examined at the trial. Wagamama also disclosed relevant documents and one in particular, a 2023 Budget presentation that included an EBITDA walkthrough, was the subject of much focus, particular by Ms Tolaney KC on behalf of Mastercard.

192. Mr Heier's evidence was clear and coherent as to Wagamama not considering MSCs when setting its prices or its gross or net profit margin ranges. MSCs are treated as overheads in its accounts and are part of "card and cash handling fees" which are approximately **[✂]** of Wagamama's sales. Mr Heier said that

Wagamama therefore considers MSCs as "*far too small to influence decisions regarding price-setting [or] to impact budgeting, margin targeting or performance monitoring in a way that might influence price setting*".

193. In his oral evidence, Mr Heier explained why Wagamama charges higher prices at its airport restaurants; its overheads including in particular its **[✂]** are considerably higher at the airports compared to the high street. That is an indication of the size of costs that might lead in practice to higher prices.

194. Unusually perhaps, for the purposes of pricing, Wagamama treats two overheads as included in COGS. These are: labour costs; and the costs of the central production unit that Wagamama operates to produce the sauce and gyozas that are used in its restaurants. Mr Heier explained that the accounting classifications of these costs as overheads did not prevent Wagamama from factoring them into its short-term pricing decisions where, as particularly would be the case in relation to labour costs, they have a substantial effect on the business. MSCs are not considered in the same category. Mr Heier said that at least since 2017 **[✂]**, which suggested that there had been no pass-on of changes to overheads.

195. Wagamama's pricing decisions are made on a dish-by-dish basis primarily by reference to competitor pricing but also taking into account customer perception of value for money. Competitor pricing reviews are conducted quarterly and focus on average transaction value.

196. The Defendants honed in on EBITDA as a key metric used by Wagamama and a number of documents showing how it was considered. However, it is unsurprising that any business would look closely at and measure its performance by reference to EBITDA and set EBITDA targets. EBITDA obviously includes MSCs as overheads. But this, in itself, tells one nothing about whether changes in small overheads flow through into pricing decisions. Furthermore, if there is any link to a pricing decision it is likely to be through a very indirect channel and would fall into the category of MSCs being taken account of in the normal budgetary and planning processes. Mr Heier accepted that EBITDA for each restaurant is monitored and if its target has not been met

there may be corrective action taken in the form of addressing "*labour overspends and wastage"*. In other words, it would not look at prices which could not be changed for one particular restaurant.

197. The 2023 Budget shows Wagamama considering a number of issues around the achievement of an EBITDA target, which was actually **[✂]** than the 2022 actual EBITDA figure of **[✂]**. The bullet points in the Executive Summary read as follows: **[✂]**

198. The box beneath these bullet points made it clear that these are options to be considered once a final budget presentation was prepared. It was therefore exploring the means by which they might achieve the EBITDA margin.

199. The so-called walkthrough was set out later in the document and this seemed to explain how Wagamama would go from the 2022 EBITDA figure of **[✂]** to the budgeted figure of **[✂]** for 2023. This was the centrepiece of Ms Tolaney KC's closing submissions as she said that it showed Wagamama increasing prices in response to "*significant cost headwinds*". The walkthrough showed those headwinds in red and included items such as **[✂]** which would include MSCs.

200. Proposed changes that would improve EBITDA are marked in green and the most substantial item is an increase in **[✂]**, which is the **[✂]** identified in the bullet point. There are also cost challenges of **[✂]** which would improve EBITDA and various openings and closings of restaurants that would contribute. Basically, the walkthrough graphically demonstrated the anticipated journey from the previous year's figure to the target for the following year.

201. Ms Tolaney KC sought to suggest that the walkthrough shows how EBITDA, which takes into account MSCs, affects pricing. In the absence of documents showing whether the recommended price increase was actually carried into effect, it should be assumed that it was and that it was done to address changes in overheads so as to meet the EBITDA target.

202. However, what one does not get from the walkthrough is any linkage between any one cost increase and an increase in prices. As Mr Beal KC submitted, the

menu price increase is one of the assumptions on which the walkthrough is based, and it shows how, with that assumption, the EBITDA for 2023 might end up at **[✂]**, which is **[✂]** than the previous year. Price rises will have an effect on volume and this is taken account of in the walkthrough. But it is not that the walkthrough leads to the suggested price increase; the price increase is assumed and the walkthrough shows how that is forecast to pan out.

203. In any event, this is a classic indirect channel of pass-on through the budgetary/EBITDA process. Mr Harman himself referred to this as an indirect mechanism for MSC pass-on. It is looking at the business as a whole, taking into account all costs and all ways to achieve maximum profitability. Mr Heier was not even asked whether these price increases were implemented and if so how. He accepted that EBITDA was used to assess the overall financial position of Wagamama but stated that it was not used for granular pricing decisions. MSCs would not feature at all in those decisions, as they were largely based on competitor pricing and they only took into account COGS, including labour costs, for that purpose.

204. Visa also relied on EBITDA target bonuses as providing incentives to employees involved in setting prices to increase revenue. Again, this is a very indirect channel that indicates no direct causative link between MSCs and prices. In relation to competitor pricing, while it is correct to say that there might be pressure to respond to an industry-wide cost change, an example was given where VAT relief was provided to the hospitality industry during Covid. **[✂].**

205. In summary, the Defendants have not shown that MSCs have affected prices through any direct price setting mechanism.

(14) WorldRemit

206. WorldRemit is an international online money transfer company. It was originally one of the Claimants selected to be an Analysed Claimant but the experts deprioritised it, and it ended up providing some data but no qualitative evidence. Mr Holt and Mr Coombs did attempt regression analyses on its data but Dr Trento did not, because of the lack of qualitative evidence. He relied on

Mr Economides's suggestion that the Cross-border Payments subsector should be extrapolated from the Online Travel Agencies results. But in cross-examination Dr Trento seemed to agree that it would be preferable to rely on WorldRemit's own data for COGS pass-on.

207. In fact, Mr Economides had concluded that the MSC would likely be treated as COGS by WorldRemit, because it is such an important cost for that sort of business, acting as an intermediary. It is therefore common ground that, like Travix, there was a direct channel for pass-on of the MSCs into prices. It will be for the econometric analysis to determine the rate of pass-on.

(15) Conclusion on the factual evidence

208. By way of conclusion from the above analysis of the factual evidence we find as follows:

(1) Apart from Travix, WorldRemit and the underwriting part of Allianz's business, the Defendants have not proved on the balance of probabilities that there was a direct causative link between the other Analysed Claimants' MSC cost and the prices charged to their customers. Accordingly, there was no pass-on of the MSC cost sufficient to satisfy the legal test for causation and there is no basis for applying the broad axe to calculate an approximate rate of pass-on, even if that were possible to do.

(2) In relation to Travix, WorldRemit and the underwriting part of Allianz's business, the Defendants have established the necessary direct causative link and the rate of pass-on therefore needs to be estimated by our assessment of the econometric analyses carried out by the respective experts.

G. ECONOMIC EVIDENCE

(1) Introduction

209. The trial was dominated by the economic expert evidence. All the experts were doing their best to assist us in understanding both the relevant elements of

economic theory and their approach to the econometric analyses that they performed. It is true to say that, while the experts did agree on some things, their primary positions as adopted in their reports, did not markedly shift, either in the concurrent (or "hot tub") session that we had or as a result of cross-examination. We will assess that evidence in due course, but we again reiterate what was said by the CAT in *Royal Mail CAT* that we feel that experts in these cases should accept when the other side's expert makes a valid and reasonable point and should recognise the weaknesses in their own positions. We would also add that the many thousands of pages of expert evidence we received were excessive and somewhat disproportionate, even bearing in mind the size and complexity of the case. We urge the parties, their legal teams and their respective parties to consider the burden on the CAT in having to deal with and assimilate such voluminous evidence.

210. We had a hot tub session before the experts were individually cross-examined. There were six experts in the hot tub session, that is, the four economists – Mr Holt, Mr Coombs, Ms Webster and Dr Trento – together with Mr Economides for the Claimants and Mr Harman for Mastercard. Our questioning was led by Professor Waterson and it covered more general issues that we were interested in, such as the economic framework for analysing pass-on, the comparative sources of data and their relative strengths and weaknesses, the appropriate proxy costs to use in place of the MSCs, various technical modelling issues for the econometric analyses and the interpretation of results. We point out that we did not have available an up-to-date joint statement including all the experts who gave evidence setting out where they agreed or disagreed on some of these core issues.

211. We are nevertheless grateful to the experts for engaging in this process which we found beneficial. It perhaps did not bring the opposing experts closer together, but hearing the opinions of all experts on an issue at the same time, and their ability to respond to each other immediately was of assistance. On reflection we probably should not have had all six experts together at the same time and just confined the hot tub to the economists. But the parties were still able to cross-examine on what they wanted and overall it both contributed to and clarified our understanding of the issues. With respect however, we do

question the relevance and admissibility of the evidence of Mr Harman and Mr Economides.

212. Given our conclusions on the law and the need for the Defendants to show a direct causal connection between a change in the MSCs and a change in prices, and our factual conclusions that, save in respect of Travix, WorldRemit and the underwriting part of Allianz's business, they cannot do so, it may be thought that we do not need to examine closely the expert evidence. However, it is important for us to do so, both in case we are wrong on the law, but also because the expert evidence helps to inform whether we were right to adopt the approach that we have.

213. The burden is on the Defendants to prove that all or part of the loss suffered by the Claimants has been avoided by being passed on either to their customers in higher prices or to their suppliers in reducing their costs. It is clear that once the Defendants have shown on the balance of probabilities that the Claimants have in fact passed on their losses to either their customers or suppliers, then the broad axe applies to the quantum of any such pass-on. That is where the experts' pass-on rates come in, as being their best estimates based on the material that they have.

214. But the expert evidence must be grounded in reality. Much of Mr Holt's and Mr Coombs' evidence is based on economic theory, in particular how profit-maximising businesses would be expected to behave in relation to an industry-wide variable cost and cost recovery in general, rather than using economics to reflect and explain their actual behaviour. This became compounded in their choice of proxy, which either was COGS or included COGS within total costs, thus guaranteeing at least a correlation being shown between the most significant component of variable costs and prices. COGS are also inherently likely to be considered as an element in the determination of a merchant's direct price setting, whereas, as we have seen, the majority of Claimants do not actually treat it as such in the real world.

215. Therefore care needs to be taken in drawing any conclusions directly from economic theory without reference to the facts. But we start with some basic relevant principles of that theory.

(2) Relevant concepts of economic theory

216. Economic theory assumes that firms set their prices to maximise their profit. There are a number of different forms of profit that firms will measure.

a) Gross profit is sales revenue less COGS, or in other words the profit made directly from the sale of goods or services. The gross profit margin is the percentage of revenue that is gross profit. This is normally the most relevant form of profit used by price-setters.

b) Operating profit is the net profit after all costs (i.e. COGS and overheads) are deducted from revenue but before accounting for interest, taxes and exceptional one-off items or non-operating income. It can also be represented as a percentage of revenue called the operating profit margin.

c) EBITDA, referred to above, is a form of operating profit which excludes non-cash expenses such as depreciation and amortisation and which gives a clearer picture of a firm's cash-generating ability from its core operations. EBITDA margin is similarly its percentage of revenue. This is normally used to monitor performance and to shape targets and budgets.

d) Net profit is the remaining profit after all costs and expenses have been deducted from total revenue. And net profit margin or a firm's "bottom line" is calculated accordingly.

217. The concepts of marginal cost and marginal revenue are central to profit maximisation. The EU Guidelines 2019 defined marginal cost as "*the increase in total costs that arises from an extra unit of production*". Marginal revenue is the extra income from selling that additional unit.

218. Striking the right balance between marginal costs and marginal revenue is the key to profit maximisation. When marginal revenue exceeds marginal cost, a firm can increase its profitability by producing more units. When marginal cost exceeds marginal revenue, profitability will improve if the firm produces fewer units. The equilibrium point where marginal cost equals marginal revenue defines the optimal production level and explains how a firm can best set its prices to maximise profit, taking into account the effect on volume. In a perfectly competitive market, because an individual firm's demand curve is flat, profits are maximised when the firm produces a quantity of goods such that the market price is equal to its marginal cost, whereas under imperfect competition, price will be above marginal cost. The experts were agreed on that.

219. The distinction between variable and fixed costs is also important. A variable cost is a cost that varies as the quantity of output varies. That typically includes COGS, such as expenditure on raw materials used for production, which increases as output increases. Marginal costs are included in variable costs. The difference between them is that a firm's total variable costs represent the total amount of variable costs incurred by the firm to produce a given level of output whereas its marginal cost represents the increase in variable cost due to increasing the production by one unit from its current level of production. This was a distinction that Dr Trento made, although its significance in this case is disputed by Visa, which says that MSCs are marginal costs. In cross-examination Dr Trento accepted that "*intuitively*" MSCs are akin to marginal costs, but his point was really that what matters is whether the merchant treated them as marginal costs.

220. A fixed cost is a cost that does not vary with the level of output. Fixed costs may include rent, expenditures on plant construction and maintenance, insurance and salaries (at least those which do not vary with output). A fixed cost remains the same no matter how much output the firm produces.

221. There is not a clear dividing line between fixed and variable costs. Some costs may be semi-fixed or semi-variable. For example, staff costs may be fixed until a certain volume of sales is achieved but then to achieve a higher level of sales, more staff may be required. It is also relevant that over a longer time period

many fixed costs become variable as a firm reviews its output and profitability. This is important to Mr Holt's and Mr Coombs' theses that even if MSCs were treated as fixed costs overheads in the short term, they would become variable in the long run and will therefore have to be considered in relation to prices. This however falls into the legal trap of assuming that an indirect mechanism for pass-on in the long term is sufficient to prove causation. The legal test requires focus on the short term, rather than the longer term planning and budgetary processes and entry/exit investment decision making.

222. There is disagreement as to how to classify the MSC. Conceptually, the MSC looks like a variable cost as it varies with the volume of goods sold. However, it is not a standard component of marginal cost because an MSC is not paid on all transactions, and even where payments are made by card, the size of the MSC may vary depending on the type of card or type of transaction. A firm could not know *ex-ante* whether it will incur an MSC if it increases output by one unit or, if it does, by how much. It is probably for that reason that the MSC is generally not treated as though it is a marginal cost in the context of pricing. Instead MSCs are regarded as an aggregate and considered to be common across all goods and services, and any pass-on of the MSCs would be spread across all transactions, similarly to other fixed costs or overheads.

223. The Claimants accept that the MSC is conceptually variable in nature but say that most of them do not treat it as a component of their marginal cost. The small size of the MSC may also contribute to that. They say that, whatever the reason for not treating it as a part of marginal cost, the only thing that matters is that it was not and that has consequences for how it was treated for pricing purposes. Firms generally do not take account of non-marginal costs, such as overheads, in their profit-maximising short-term pricing decisions; whereas they do take account of marginal costs such as COGS as a direct mechanism for pass-on.

224. The EU Guidelines 2019 at [158] indicate that we need first to analyse the "cost structure" of the Claimants. They continue in [159] as follows:

> "To identify passing-on effects, it is important to determine whether the input cost incurred by a purchaser facing an overcharge varies with the input quantity it orders (i.e. variable input cost) or not (i.e. fixed input cost). Indeed, economic

> theory indicates that the relevant cost category for short run price formation is variable costs or more precisely, marginal cost, i.e. the cost increment incurred when purchasing one additional input…The opposite of such costs are fixed costs which, in turn, typically affect the long run strategic decisions of firms, such as market participation, product introduction and level of investment."

225. In a similar vein, the report prepared for the EU Commission by economists RBB and the Spanish law firm Cuatrecasas in 2016 (the "**RBB 2016 Report**") focuses on marginal cost as the primary influence on price. At [110] to [111] the RBB 2016 Report says as follows:

> "110. Basic economic reasoning predicts that a firm's "marginal" costs, i.e. the additional costs per unit associated with a very small increase in output, will have a critical influence on its pricing decisions. This is because the cost changes that would be brought about by the small adjustments to output that would result from further fine-tuning of prices will depend on the level of these marginal costs.
>
> 111. On this basis, as is explained in more detail below, an increase in an input cost caused by a competition law infringement (e.g. cartelised supply of an input) may be expected to have some impact on the price that the purchaser in question charges its customers if it affects the purchaser's marginal cost."

226. Therefore the prime consideration for firms in price-setting from economic theory is a change in marginal cost. If the cost input is considered to be a fixed cost or non-marginal cost, it will likely only affect the "*long run strategic decisions of the firms*".

227. Mr Holt accepted that changes in fixed costs do not affect the profit-maximising price and so will generally not be passed on. But he maintained that, despite the evidence that most of the Analysed Claimants treated MSCs as overheads and did not take them into account for price-setting, nevertheless economic theory dictates that they are a variable cost and therefore would be taken into account in the same way as COGS would be. These issues are explored further below, including in relation to the experts' choice of proxy.

228. Before doing so we will make some general findings in relation to the expert evidence that we read and heard. We will take the economist experts first in the order in which they gave evidence, followed by Mr Harman and Mr Economides.

(3) The Experts

(a) Mr Derek Holt

229. Mr Holt is a Managing Director in the Economics Practice at AlixPartners UK LLP. He has had many years experience as an expert economist and advisor in the fields of competition litigation and regulatory economics across a range of sectors including financial services, telecommunications, and utilities. There is no doubt that he is an accomplished economist who thoroughly understands his field and his duties as an expert in this tribunal. Having said that, and while he was engaging, he did have a tendency to give overlong answers both in the hot tub and in cross-examination and he stuck to his thesis in relation to pass-on that he had come to some time ago.

230. In fact Mr Holt has been Visa's expert for over nine years, going back to the *Sainsbury's* litigation. He was also instructed by Visa to act for it in relation to the EU Commission investigations. He has produced four voluminous reports for Trial 2, being his Eleventh, Twelfth, Thirteenth and Fourteenth Reports (the latter two in respect of APO) in this litigation.

231. Mr Holt concluded that the vast majority of the MSC was passed on to consumers in the form of higher retail prices for all industry sectors (he used Visa's own classification of 14 sectors of the economy). Visa therefore relies on his evidence to prove that materially lower MSCs would have led to lower retail prices in all those sectors in the long run. Mr Holt considered that that conclusion was consistent with empirical analysis, economic literature, documentary evidence and common sense.

232. A summary of Mr Holt's adjusted merchant pass-on estimates, by source and then consolidated are set out below:

Summary of Mr Holt's adjusted merchant pass-on estimates

Visa Sector *Subsector*		Merchant pass-on rate by source			Consolidated estimate
		Existing studies	Publicly available data	Willing Claimants' data	
1.	**Automotive**	87%	54%	106%	**82%**

2.	**Business To Business**	94%	102%	*N/A*	**98%**
3.	**Department & Apparel**	117%	130%	116%	**121%**
4.	**Education & Government**	Mr Holt considers that none of the available estimates are sufficiently reliable, and that the economy-wide pass-on estimate should be used instead			**88%**
5.	**Entertainment**				**88%**
6.	**Food & Drug**	92%	92%	*N/A*	**92%**
7.	**Fuel**	93%	104%	*N/A*	**96%**
8.	**Health Care**	*N/A*	92%	*N/A*	**92%**
9.	**Home Improvement & Supply**	77%	94%	*N/A*	**87%**
10.	**Restaurant & QSR**	84%	84%	*N/A*	**84%**
11.	**Retail Goods**	85%	105%	75%	**90%**
12.	**Retail Services**	78%	47%	102%	**74%**
	Cash Services	*78%*	*N/A*	102%	*85%*
	Other	*N/A*	47%	*N/A*	*47%*
13.	**Telecoms, Utilities & Insurance**	68%	99%	104%	**84%**
	Insurance Services	*54%*	*N/A*	*99%*	*77%*
	Telecommunications	*N/A*	*N/A*	*109%*	*109%*
	Utilities	*70%*	*99%*	*N/A*	*79%*
14.	**Travel**	89%	50%	80%	**74%**
	Lodging	*89%*	*51%*	*62%*	*73%*
	Other	*N/A*	*50%*	*99%*	*71%*

233. As can be seen the consolidated sectoral estimates range between 74% and 121%. For two of the sectors, Education & Government and Entertainment, Mr Holt used his economy-wide pass-on estimate because of the alleged absence of reliable estimates which could be obtained from the sector specific evidence. He applied certain weightings as to card and MIF expenditure to his sectoral analysis in order to come up with an economy-wide pass-on rate of 88%. Visa has invited us to determine such a rate for the purposes of Trial 3 which will be considering whether the Article 101(3) exemption is met. The Claimants object to this and have not calculated an economy-wide pass-on rate as they say it is not an issue for Trial 2 and the experts were not instructed on this. Furthermore, not all sectors of the UK economy are covered by the Claimants who are only concerned with responding to the Defendants' pass-on defences to their claims.

234. Mr Holt's analysis was based very much on economic theory and it was developed at quite an early stage, well before any qualitative evidence was served. He concluded that, because the MSCs were industry-wide variable costs, the appropriate proxy to use was COGS for most of the sectors he was analysing (he also on occasion used labour costs, VAT and excise duties). He did not change his mind when the evidence emerged that the Analysed Claimants mostly did not treat the MSCs as though they were COGS; nor did they take account of the MSCs in their direct price-setting. He applied that proxy in his own estimates using the Analysed Claimants' data and also in his consideration of existing academic studies and public data.[14]

235. While we can understand why he chose COGS as being a proxy with similar economic characteristics to MSCs but being large and variable enough to be able to measure their effect on price, it is largely tautological. Apart from the fact that this is not how most Claimants treated the MSCs, it is also inevitably going to produce a high pass-on result. COGS are almost universally a prime consideration in setting the profit-maximising price and one would expect almost complete pass-on. Thus the result is obvious from the choice of proxy as COGS and it cannot accurately capture what a single component of COGS (assume the MSC) is or is not doing.

236. When forced to consider the fact that the Claimants did not take account of MSCs in direct price-setting, Mr Holt somewhat half-heartedly put forward certain implicit internal mechanisms through which the MSCs might influence the Claimants' pricing decisions. These were essentially: the monitoring of a larger bucket of costs that included MSCs; the monitoring of net profit measures such as EBITDA that include MSCs; and/or employee incentive schemes that link employee compensation to those net profit measures. However, quite apart from the failure to meet the legal test, there is no factual evidence to show how that monitoring or those incentive schemes affected prices; nor does it follow from economic logic that the Claimants would necessarily have responded to a change in MSCs by altering prices.

[14] There are a number of problems with applying public data, normally indices of prices and costs, which is explored below.

237. Mr Holt also placed great weight on competitor monitoring, but for the reasons set out above, there are difficulties in doing so because if a Claimant is responding to a change in its competitors' prices which have been affected by a change in the MIF, then it is not a mitigating action by that Claimant in respect of its own loss. Also, if a Claimant's prices followed a change in competitors' prices, it would have acted in that way irrespective of whether the Claimant incurred the unlawful MIF. In other words, it is not changing its prices because of the loss suffered through it having to pay the MIF.

238. Mr Holt claimed that he did not need to identify precisely the mechanism by which the MSCs were passed-on because he said that the long term incentives were all that really mattered. But that seems to us to be an argument that, in the long run, a firm has to recover its costs to stay alive. While that is a truism, it says nothing about whether a Claimant has directly passed on the MSCs in accordance with the correct legal test for causation in relation to mitigation of loss.

239. Accordingly, we consider that Mr Holt has relied on economic theory in the face of economic reality and, instead of recognising the limitations of the approach he has taken, has stuck doggedly to the perhaps extreme approach of looking at the costs proxy most likely to produce a high pass-on result.

240. The Claimants accused Mr Holt of adopting a different approach to APO, where it would be in his client's interests to have a lower pass-on rate. In relation to APO he said it was appropriate to base it on a factual analysis and the way it was treated by firms and acquirers was relevant. He did not suggest that the MIFs for acquirers were an industry-wide variable cost such that the pass-on rate would be expected to be high from an economic theory perspective.

241. There is something in that point, but the same can be said for all parties who were seeking the opposite conclusions in relation to MPO and APO.

(b) Mr Justin Coombs

242. Mr Coombs gave evidence for Mr Merricks and, although the claim settled during the course of the trial, he put in substantial reports and was cross-examined fully, as well as participating in the hot tub. Mr Merricks was completely aligned with Visa on MPO but he was dealing with the earlier period of 1992 to 2010 and looking for an economy-wide pass-on rate. Mr Coombs adopted a different approach to Mr Holt and it is instructive to look at and test the credibility of that approach.

243. Mr Coombs is an Executive Vice President and co-head of Compass Lexecon's London Office. He has more than 30 years experience as an applied economist specialising in competition policy and economic regulation. He has given evidence many times as an expert both in courts and tribunals and also at CMA and EU Commission hearings as well as Parliamentary select committees.

244. Mr Coombs gave his evidence in an assured and considered manner. But there were some fundamental problems with his analysis that we feel he did not satisfactorily address. It was also of some concern that he omitted to explain in his reports matters that may have undermined his methodology and he was not always clear why he was adopting one course rather than another.

245. Mr Coombs' task, unlike the other experts, was to provide a UK retail economy-wide estimate of pass-on for the Merricks' claim period, being 1992 to 2010. He accepted that his estimate, which was 91% pass-on of the MSC, could not be applied to any particular Claimant or indeed any sector containing Claimants for the relevant Claimant period.

246. Mr Coombs' pass-on estimates were summarised in the following table reproduced in Mr Merricks' opening submissions.

	Sector	Sector weighting	Pass-on rate from public studies	Pass-on rate from public data	Pass-on rate from merchant data	Pass-on rate from other experts that are adopted or use as cross-checks	Final Pass-on Rate result
1.	Automotive Fuels	5.6%	c. 100%	105.7%	-	Overall: 99% (Holt),	105.7%

						70-100% (Webster) Previous studies: 93% (Holt) Public data: 112% (Holt), 96% (Webster)	
2.	Entertainment	7.1%	70-100% (or above)	114.5%	-	Previous studies: 76%, 110%, 70%, 14% (Holt) Public data: 83% (Holt)	114.5%
3.	Food & Drink	12.8%	70-100% (or above)	97.0%	-	Overall: 70-100% (Webster) Previous studies: 92% (Holt)	97.0%
4.	Hotels	4.5%	70-85%	55.8%	-	Previous studies: 89% (Holt) Merchant data: 63% (Holt)	55.8%
5.	Household	11.5%	38-82%	110.9%	-	Overall: 70-100% (Webster) Previous studies: 77%, (Holt)	110.9%
6.	Travel	11.5%	c. 100%	87.5%	-	Overall: 70-100% (Webster) Merchant data: 103% (Holt)	87.5%
7.	Vehicle Sales and Services	6.6%	71-88%	111.3%	40.3%, 70.7%, 78.2%	Overall: 70-100% (Webster) Previous studies: 87% (Holt)	79.6%
8.	Clothing	5.2%	31-100%	-	102.9%	Overall: 70-100% (Webster) Previous studies: 117% (Holt)	102.9%
9.	Financial Services	5.3%	c. 100%	-	36.9-50.3%	Previous studies: 71% (Holt) Overall: 70-100% (Webster)	44.8%
10.	Mixed Business	6.9%	98.9-99.6% (triangulation from other sectors)			Overall: 70-100% (Webster)	98.9%-
11.	Other Retail	13.4%	70-100% (or above)	108.7%	66.2%	Overall: 70-100% (Webster) Previous studies: 80-113% (Holt) Public data: 86%, 105%, 118% (Holt)	88.8%
			98.9-102.6% - (triangulation from other sectors)				
12.	Other Services	9.6%	45-100%	-	108.2%	Overall: 70-100% (Webster)	79.7%

			76.6-81.9% (triangulation from other sectors)			Previous studies: 71%, 73% (Holt) Public data: 95%, 90%, 72%, 38%, 52% (Holt), 116% (Webster)	
	Overall UK retail economy	100.0%	c. 100%	-	-		91.1%

247. Mr Coombs had a distinct preference for public data over merchant data, except where there was no suitable public data. Even where there was good, disaggregated and detailed merchant data, such as in relation to Hilton, he preferred to use public data, and that was despite him accepting that Hilton would be representative of the hotel sector. However some of the sectors that he was analysing (he was using the Payment Systems Regulator's ("**PSR**'s") 12 sectors which were not the same as Visa's sectors) were rather ill-defined and broad, such as "mixed businesses", "other retail" and "other services". That meant that some of his sectoral estimates relied on huge approximations to the sector as a whole. Mr Coombs said that he did the best he could within his chosen methodology and that where, for example, he based his entire analysis of the "other services" sector on the jewellery sub-sector and Pets at Home data, he explained that he had chosen the most conservative estimate to account for this. We think that Mr Coombs should have been more up front about the limitations of the evidence and his methodology.

248. The main difference between Mr Coombs and Mr Holt is that Mr Coombs uses total costs as his proxy rather than Mr Holt's use of the COGS component of total costs. Mr Coombs' reasoning seemed to be that over time all costs are variable and that in the long term a cost such as the MSC will be taken account of, in some way or other, in pricing. Mr Coombs was reluctant to engage on the qualitative evidence, which he accepted could shed light on the rate of pass-on in the short-term, but he did not read the oral evidence of the factual witnesses before he gave evidence. Mr Coombs resorted to economic theory which amounted to him saying that all costs will be recovered in the long term and that was what his estimates were based on. The major problem with using total costs as a proxy is that it massively exceeds the size of the MSC and while total costs

are likely to be correlated with price at least in the long term (otherwise the merchant is unlikely to survive) it does not really assist in identifying the causative effect of much smaller components of total costs and in the short term.

249. Mr Cook KC identified some examples where figures unhelpful to his client were unreasonably disregarded by Mr Coombs. In relation to the vehicle services sub-sector Mr Coombs adopted a model of pass-on elasticity which did not pass the test for heteroskedasticity and produced an estimate of 0.88. Without explaining why, he did not adopt a model that did pass the test but produced a lower estimate of 0.77. The latter model had used dummy variables to deal with apparent price increases in January in eight separate years. Mr Coombs was unable to explain why he chose the higher estimate over the lower and, during his oral evidence, he changed his mind about it and said that he should have relied on the 0.77 estimate. He should have been clear in his report about this but at least he was prepared to accept that he had got it wrong.

250. In relation to the restaurant sub-sector, Mr Coombs departed from his stated methodology and chose to omit a statistically significant time trend from his analysis which, if included, would have lowered his pass-on estimate from 114% to 44%. Mr Coombs said in evidence that he had omitted the time trend because it was highly correlated with the cost index that he was using and would have resulted in a model where prices might appear to be determined by time which would not be economically rational. Mr Coombs sought to suggest in his oral evidence that a pass-on rate of 44% would not fit with previous studies. However, the previous studies that he was referring to concerned the pass-on rate of alcohol which is only a small part of what a restaurant sells. In any event the point is that he did not explain this in his report and he ended up choosing the figure that suited his client's case.

251. What was also not made clear in his reports was the important point that at least two of his pass-on estimates – for the restaurant sector and the vehicle services sub-sector – would only be achieved after time-periods of many decades, which obviously undermines any sort of causal relationship between the MSC and prices.

252. Mr Coombs was also challenged as to his apparently arbitrary use of dummy variables. It is legitimate to use dummy variables in a regression analysis where the relationship might be affected by external factors such as Covid or the financial crisis. But they should not be used to improve the figures and will tend to distort the relationship and any identifiable correlation.

253. Ultimately his analysis amounted to saying that all cost changes, however small, will combine at some indeterminate point in time to prompt a price change through some undefined indirect mechanism. Such a theory cannot amount to proof of sufficient causation of change to a very small cost like the MSC into a change in prices. This is inherently a long term process and Mr Coombs' high pass-on rate is dependent on that legally-flawed basis as to the requirements of proving pass-on.

(c) Ms Rachel Webster

254. Ms Webster is a Director of Frontier Economics Ltd and she has over 20 years of experience as a professional economist specialising in the use of economic theory and empirical analysis in competition law cases. She had the disadvantage of coming into the case relatively late, in mid-2024, and after the joint expert statement on pass-on dated 22 December 2023 had been prepared by the other experts, including Ms Webster's predecessor for Mastercard, Dr Gunnar Niels. Her appointment as Mastercard's expert for Trial 2 caused Mr Merricks to accuse Mastercard of so-called "expert shopping", but his application in this respect was rejected by us at the PTR. Nevertheless, it left Ms Webster and her team far less time to get on top of this matter. It is to her credit that she managed to do so, but we do feel that the shortness of time could have perhaps impacted on the quality of her evidence.

255. Ms Webster had the unenviable task of providing expert evidence on pass-on for Mastercard in relation to both the Merchant Claimants' claims and Mr Merricks' claim. In the former, Mastercard would want to be arguing for high pass-on to support its defence to the Claimants' claims; whereas in relation to the latter, Mastercard would want to be able to argue for as low a pass-on rate as possible in order to say that Mr Merricks could not prove that UK consumers

suffered loss. The way Ms Webster sought to square that circle was by differentiating between the two claim periods – Mr Merricks' claim period being 1992 to 2010 and the Claimants' period being 2007 to the present day – and showing that in the earlier claim period there was far less card acceptance and card usage than in the later period.

256. Ms Webster relied on a graph that her team had prepared that purported to show the share of total transactions in the UK retail economy accounted for by card and cash payments between 1995 and 2022. It was taken from UK Payment Statistics prepared by APACS[15] and later UK Finance. Ms Webster claimed that this showed a significant rise in card payments during the Merricks' claim period.

257. However Ms Webster's graphs and evidence came under sustained attack from Mr Merricks' counsel, Mr Mark Simpson KC, such that by the end of her cross-examination by him, she accepted that the figures in the graphs could not be relied upon, principally because she had not taken account of other important payment methods, such as direct debits, that would have distorted the share of transactions by card payments. She maintained that card payments did increase during that time, but this was not disputed. What was disputed was that the change was so significant during the earlier Merricks' claim period such that it would have affected pass-on rates during that period compared to the later period. Furthermore, the graphs showed a continuing steep rise in card payments over cash in the later Claimants' claim period, but Ms Webster did not take account of that in her conclusions as to pass-on rates during that period. In short, her evidence on this did become wholly unreliable.

258. We accept Mastercard's point that this was somewhat of an ambush by Mr Simpson KC, the question marks over Ms Webster's graphs not having been raised by Mr Merricks prior to the trial, whether in his Responsive Case, including Mr Coombs' report or even in his skeleton argument. It was raised in Mr Simpson KC's oral opening and there were questions in the hot tub about them as a result. So we understand that Ms Webster might have been taken

[15] Association for Payment Clearing Services, which used to manage the UK's payment clearing systems.

aback by the ferocious forensic attack on her work. But she remained calm under fire. However, we cannot ignore the fact that this did undermine quite considerably the credibility of her approach, in particular in trying to maintain a difference between the two periods, which was of course necessary for Mastercard's defence of the two conflicting positions that it had to adopt to the claims it was facing.

259. As for Ms Webster's approach to the Claimants' claims, she adopted a more cautious, hybrid approach to estimating pass-on rates in that she, like Mastercard, had always considered that it was important to look at the qualitative evidence, if available, to see how the merchants had actually treated the MSCs in their price setting. She relied heavily on Mr Harman's analysis of that evidence, which we do not think was the right way of going about things, but we can see that it may have been convenient for Ms Webster to do that. The problems with Mr Harman's evidence are summarised below.

260. Ms Webster did not use a costs proxy. Instead, she categorised the Claimants into either resellers of products and services, such as high street retailers; and producers of products and manufacturers, such as hotels and telecom businesses. She also had a residual category of non-profit maximising entities, such as universities. We were unclear as to why she made this categorisation because in large part she seemed to base her analysis on whether the merchant concerned treated MSCs as variable costs when setting prices, despite accounting for them as overheads. She relied perhaps more than the other experts on economic theory to predict that, if MSCs were so treated as variable costs, then there would be high pass-on. She estimated a "benchmark" case, from her analysis of public data and a sub-set of Analysed Claimants' data, of 70%-100% pass-on for those merchants who treated MSCs as variable costs. If instead the merchant treated MSCs as fixed costs for such purpose, then she estimated very low pass-on.

261. However the trouble with this approach is the way that Ms Webster sought to establish which category any particular merchant was in. It also emerged from her cross-examination that when she referred to a variable cost throughout her reports, she was intending to refer to what economists call a marginal cost.

262. But when looking at Mr Harman's evidence, Ms Webster seemed to be looking at whether Mr Harman had identified an explicit or implicit mechanism by which the MSCs would be taken account of in pricing. Thus, Mr Harman frequently concluded that an Analysed Claimant's evidence showed an implicit mechanism if it monitored its competitors or used an EBITDA target. We have found that that would be insufficiently direct to amount to pass-on at law. But even if it was sufficient, we do not see that if such an implicit mechanism was used, that that would mean that the merchant treated MSCs as a marginal cost. Furthermore, Ms Webster accepted that these implicit mechanisms would be where fixed costs might be taken into account by the merchant deciding as a result of a change in such costs whether or not to invest. There is therefore little distinction between what she describes as a fixed cost and the use of an implicit mechanism for passing on variable costs.

263. Most marginal costs are inherently likely to be taken account of in setting a profit-maximising price. We agree that if merchants regarded MSCs as a marginal cost, that they would be likely to pass them on in pricing. But if they only take account of MSCs in a budgetary or performance-monitoring setting, by looking at EBITDA targets say then that is a clear indication that they were not being treated as a marginal cost. This highlights a mismatch between Ms Webster's economic evidence and Mr Harman's commentary on the factual evidence. Ms Webster was asking the question whether merchants in their commercial decision-making were treating MSCs in the way economic theory implies they should treat variable/marginal costs; whereas Mr Harman could perhaps be viewed as answering the question whether the Analysed Claimants who provided evidence took into account MSCs either explicitly or implicitly.

264. There are some more technical criticisms that can be made of Ms Webster's theoretical assumptions underlying her benchmark case, in particular that there is perfectly inelastic demand and perfectly elastic supply. Both assumptions were shown in cross-examination to be unsupportable.

(d) Dr Stefano Trento

265. Dr Trento is an economist consultant employed at Compass Lexecon, which is a trading name for FTI Consulting LLP, in their Madrid office. Since 2011, Dr Trento has been working in the field of competition economics. Prior to that he was professor of economics at the Universitat Autonoma de Barcelona and the Barcelona Graduate School of Economics. He gave his evidence in a considered and engaging manner, doing his best to assist the tribunal.

266. Dr Trento's focus was very much on the Claimants in respect of which he had data. Like Ms Webster with Mr Harman's evidence, Dr Trento tried to use Mr Economides' evidence in particular as to suitable proxy costs for the MSCs, recognising that the MSCs themselves could not be used to produce a robust estimate of pass-on. However, most of the specific proxy costs identified by Mr Economides were also too small to measure econometrically and Dr Trento decided to adopt a proxy of total overheads.

267. Dr Trento's primary position is that, as most of the Claimants treated the MSC as an overhead, there is no basis for concluding that they would have been passed on. As the burden is on the Defendants to prove pass-on, his position is that they have not done so.

268. But Dr Trento did not leave his analysis there and he tried to conduct regression analyses, using total overheads as the proxy cost, and came up with relatively low rates of pass-on. As he recognised, using total overheads as his proxy is seriously problematic as it means that he is assuming that they were passed on at the same rate as a very small component of them, the MSC. That is an issue with all the proxy costs.

269. There were two of the Analysed Claimants for whom Dr Trento did not use total overheads as the MSC cost proxy: Travix; and Sony. As we have seen, they treated MSCs as COGS. Dr Trento used Mr Economides' suggestion for Travix of "meta costs", being the commission Travix paid to metasearch engines such as Skyscanner and Kayak, and found an upper bound to the pass-on rate of the MSC at 47.5%. In relation to Sony, Dr Trento used a broader category of COGS

but excluded third party royalties, which, as explained above is the wholesale price from the game developer on which Sony earns a fixed margin of [✂]. Dr Trento found no evidence for the pass-on of that category of COGS.

270. Dr Trento's overall conclusions in respect of the Analysed Claimants and their sectors, also matched to Mr Economides' sub-sectors, are as follows:

Analysed Sector (Analysed Claimant(s)) • **Matched sector(s) per Economides Extrapolation**	**Dr Trento's Ultimate Conclusions for Sectors Analysed in Trento 1**
Hotels (Hilton) • Entertainment Fixed Assets • Equipment Hire • Airlines • Vertically Integrated Travel & Leisure	No basis for concluding the MSC was passed-on. If MSCs were passed on, rate of pass-on most likely to be 0-14% (the estimated rate of total overheads pass-on).
Telecoms (Three) • Gyms • Insurance[6] • Captive Motor Finance • Toll Roads • Hosting, Domain, Security & other Web-based Services	No basis for concluding the MSC was passed-on. If MSCs were passed on, rate of pass-on most likely to be 33.5% (the estimated rate of total overheads pass-on).
Digital Products (Sony)	MSC pass-on unlikely in view of the qualitative and econometric evidence.
Fashion (Primark, M&S Clothing) • Household Goods Retail • Charities	No basis for concluding the MSC was passed-on. If MSCs were passed on, rate of pass-on most likely to be 19.5% (the estimated rate of total overheads pass-on).
Health Retail (Holland & Barret) • Pharmacy	Evidence indicative of zero or near zero MSC pass-on.
Restaurants (Wagamama) • Events Catering • Vehicle Maintenance & Repair	No basis for concluding the MSC was passed-on. If MSCs were passed on, likely at a rate of pass-on significantly lower than 13.5% (the rate of total overheads pass-on).
Universities (University of Manchester) • Vehicle & Accessory Sales	No basis for concluding the MSC was passed-on.

	If MSCs were passed on, rate of pass-on no higher than 10-16% via unregulated fees (the pass-on rate of the cost of programme delivery via unregulated fees), likely lower overall.
Online Travel Agencies (Travix) • Online Auction Sites • Cross-border Payments • Entertainment Event Ticketing	Strong evidence that the MSC was passed on at a rate no higher than 47.5%.
Supermarkets (M&S Food) • Motorway Service Areas • Wholesale Food & Beverage • Pet Products	No basis for concluding the MSC was passed-on. Unable to reliably estimate the rate of pass-on of total overhead costs or, therefore, a ceiling for the rate of MSC pass-on if MSCs were passed on.

271. Dr Trento considered that there is no *a priori* expectation from economic theory as to the rate of pass-on. Rather, any such expectation depends on a number of factors in relation to the markets in which the particular merchant operates, including the shapes of the demand curve, and of its own and the market-wide supply curves (which are unknown) as well as the level of competitiveness of the relevant market. It also cannot be assumed that, in reality, merchants act as economists would expect profit-maximising firms to act as they do not have available perfect information on which to act.

272. In relation to the direct and indirect channels of pass-on and looking to the long run, as Mr Holt and Mr Coombs do, Dr Trento considers that, in reality, prices may never reach some sort of long-run equilibrium and the distinction between fixed and variable costs remains, even if fixed costs become variable over time. Dr Trento's view is that the mechanisms for pass-on of fixed and variable costs are fundamentally different. This can broadly be equated with the distinction between the direct short term and indirect longer term channels, and it therefore fits with the legal test for causation that we have explained above.

273. Dr Trento therefore paid close attention to how the Claimants treated their costs and MSCs in practice and selected his costs proxy by reference to whether it was likely to be treated in the same way as the MSCs in relation to its effect on

prices. As noted above, most of the cost proxies identified by Mr Economides (larger than the MSCs but still a smallish subset of costs) proved to be unsuitable for a robust regression analysis. So Dr Trento used the large proxy of total overheads for all but two of the Analysed Claimants.

274. The cost proxy is examined in detail below. The Defendants say that the use of total overheads is highly problematic even if those Claimants did classify MSCs in their accounts as overheads. MSCs are variable costs and as such do not share many of the economic characteristics of a large proportion of a merchant's overheads which will include both fixed and variable costs and both market-wide and firm-specific costs. There will therefore be different underlying rates of pass-on for the different types of overhead costs. Using an average of those rates would likely seriously underestimate the pass-on of MSCs.

275. We accept that there are serious difficulties with the use of a total overhead costs proxy, as there are with using Mr Holt's and Mr Coombs' choices of proxy but Dr Trento recognises this and would prefer not to have to use such a proxy. He has done so to avoid giving up on trying to produce credible estimates and considers that this is essentially the "least worst" option. His main case is that the Defendants cannot prove that there was any pass-on for most of the Claimants.

276. Dr Trento largely rejected reliance on public data as the relevant costs indices mainly related to variable costs, not overheads. He also felt that use of public data in this way had a number of difficult technical econometric issues, such as simultaneity bias (when the explanatory variable and the dependent variable of interest influence each other), measurement error (where the measured value of a given variable differs from its actual true value), omitted variable bias (where a relevant explanatory variable is not included in the regression) and various uncertainties arising from the need to convert pass-on elasticities derived from the indices to pass-on rates using price-cost ratios derived from different and non-matching datasets.

277. Dr Trento also rejected academic studies on the basis that: (i) they related to firms in different industries, time periods and geographies; (ii) there was a risk

of publication bias skewing the sample in favour of positive findings of pass-on; and (iii) they largely related to pass-on of substantial wholesale variable costs or taxes, rather than small costs treated as an overhead.

(e) Mr Greg Harman

278. Mr Harman is a Managing Director in the Economics and Damages practice of Berkeley Research Group, a global firm specialising in providing economic and financial expert evidence in dispute contexts. He has been in consultancy for 33 years, is a qualified Chartered Accountant and has been an expert in valuation, finance, the assessment of damages, competition and economic regulation. He previously gave evidence for Mastercard in the *Sainsbury's* litigation.

279. Mr Harman was essentially called by Mastercard to provide his interpretation of the factual, qualitative evidence filed by the Analysed Claimants. This was both to assist Ms Webster and to provide evidence to the tribunal on behalf of Mastercard. While we can understand that it would be of assistance to Ms Webster to have someone perform such an exercise, given that she considered it relevant to take into account how the Claimants regarded MSCs in practice, we questioned at the time, and remain doubtful, that this is really relevant admissible expert evidence. With all due respect, we are in just as good a position to analyse the factual evidence and it may be better that we do so without the spin and assumptions that Mr Harman put on it.

280. Based on his experience, Mr Harman was looking to see if there were possible mechanisms by which MSCs could affect prices. He was also seeing if there might be mechanisms for supplier pass-on. It is interesting that he expressly distinguished between explicit and implicit mechanisms for pass-on, which is basically the split that we have found to exist in the legal test for causation. In the majority of cases, Mr Harman found there only to be an implicit mechanism and this was generally based on the fact that MSCs would be taken account of in EBITDA monitoring or target setting. He did not find any actual evidence that they were specifically taken account of in setting prices, merely that they could have in some way filtered through into prices at some point in the future. Even were an implicit mechanism enough to prove pass-on of the MSCs, the

evidence still falls well short of establishing that that did indeed happen through that implicit mechanism.

281. Mr Harman continually complained about the lack of documentation that would prove his theory. However, he did not seem to consider that the reason why there was no evidence supporting his theory, was that there was no such evidence. He therefore made an assumption that there would be pass-on in a particular way but then criticised the Claimants for not producing the documentation that would prove that it happened in that way. He was involved in the Redfern requests process but could not say that the Claimants had failed to comply with any requirement to disclose. Nevertheless, he still insisted that there was missing information.

282. Mr Harman even went so far as to question some of the factual evidence, such as doubting Hilton's evidence as to the minimum costs of selling a room that was put into the GRO system as the floor price. He seemed to be arguing that Hilton ought to take account of all its variable costs. But, as he is not an economist, his only role as an expert in this case must be to comment on the actual evidence that has been disclosed, not on how any particular merchant should structure its business model.

283. Mr Harman also had a tendency to read far too much into the material that he was analysing. For example, he came to a conclusion from a Holland & Barrett spreadsheet that had one entry in a cell that referred to "margin rate improvements" and that spreadsheet had 13,456 price change entries in it. Similarly, he based the statement "Hilton monitors even small cost changes" on one cell entry in a spreadsheet.

284. In the circumstances, we both question the need for Mr Harman's evidence and doubt its utility to the issues in dispute.

(f) Mr Vassilis Economides

285. Mr Economides is a Senior Partner at L.E.K. Consulting, a global managing consulting firm. He has 25 years of consulting experience and is L.E.K.'s

leading Pricing Strategy expert, mainly focused on improving businesses' profitability by reviewing cost structures, effective management and changes in pricing. He claims to have had experience in many industries but his primary focus is on retail and consumer goods and services.

286. Mr Economides however has no relevant expertise or qualifications in economics or accountancy, and we have similar issues with his evidence as we have with Mr Harman's, as just explained. Mr Jowell KC cross-examined him and this showed that there were significant sectors and issues upon which he had no knowledge or expertise and clearly could not be giving expert evidence on. Mr Economides did purport to give his opinion on the appropriate proxy costs that the expert economists should use for their regression analyses and in doing so he thought it appropriate to take account of the merchant's accounting classification of the MSCs. This was used by Dr Trento, although in the end he was unable to successfully analyse the chosen proxy costs, mainly because they were too small. Visa criticised Dr Trento's use of Mr Economides' evidence.

287. The Claimants say that Mr Economides was not put forward as an expert economist or accountant. Instead, he was giving expert evidence on matters on which he was an expert, namely pricing practices in the real world. His suggestion of proxy costs was based on the practical features of those costs that were similar to the MSCs in the particular business concerned. He also conducted a sectorisation exercise to extrapolate the results of Dr Trento's analysis, by matching Claimants in unanalysed sectors to one of the Analysed Sectors (as defined below, paragraph 359) by reference to features relevant to pricing. However, Visa pointed out that there were a number of sectors in which neither he, nor those that had assisted him in preparing his reports, had any real expertise.

288. In short, and as with Mr Harman, we place little reliance on this evidence. While there is useful material within these reports, it is really an analysis of the available factual evidence that we are in just as good a position to analyse for ourselves. Insofar as Mr Economides brings to bear his experience of how merchants in different sectors tend to price their goods or services, this is of

limited value in that his direct experience of many of the sectors is slim and there is no benefit in speculating in very general terms.

(g) Mr Richard Murgatroyd and Mr John Ramirez

289. Mr Murgatroyd is an economist and partner at RBB Economics LLP. He was instructed by Allianz in these proceedings and prepared two expert reports for these proceedings. However, as noted above, Allianz settled with both Defendants during the opening submissions and so Mr Murgatroyd's evidence was never tested in cross-examination. Although mention is made of one aspect of his report below, we place no reliance on his evidence in our findings.

290. The same applies to Mr Ramirez, the Managing Director of Econ One Research Inc. who was instructed by Primark in these proceedings. Again, Mr Ramirez put in two detailed expert reports, but because Primark settled its claims shortly before the trial began, he was not cross-examined. We therefore also cannot fairly place any reliance on his evidence.

(4) Relevant economic factors for pass-on of the MSC into price

291. The expert evidence summarised above raises a number of issues of economic theory as to the relative likelihood of the MSCs being passed on by the Claimants. There was broad agreement between the experts on these issues but there were some differences of opinion and emphasis. We therefore set out our understanding of the more important and relevant of those issues.

292. We will deal with the following:

a) Demand and Supply;

b) Marginal/Variable v. fixed costs;

c) *Ad valorem* v. per-unit/transaction cost;

d) Industry-wide cost argument;

e) Size of the MIF/MSC; and

f) Short term or long term.

(a) Demand and Supply

293. The experts agreed that the nature and intensity of competition in the market will affect the extent of pass-on in theory. There was also broad agreement in the hot tub, when discussing Professor Waterson's diagrams illustrating both perfect competition and a monopoly, of the relevance of the elasticities of demand and supply, including the curvatures of the demand and supply curves.

294. If the market is perfectly competitive and the marginal costs constant across the industry, one would expect the supply curve to be flat. In such a situation pass-on of marginal costs should be 100% as firms will set prices equal to the marginal costs that they face. But if there is imperfect competition, because products and services and costs are differentiated, and marginal costs are upward sloping, then the expectation would be that pass-on is less than 100%. Each merchant in that market would have a degree of market power such that they would be able to set their own prices, rather than simply being a price-taker.

295. As to the effect of demand on pass-on, [53] of the EU Guidelines 2019 is informative:

> "(53) Secondly, the product demand that the direct customer faces affects the level of passing-on. A standard price formation mechanism builds on the fact that the demand a firm faces (i.e. the quantity it sells) decreases when it raises its price. The extent to which a direct purchaser raises its own price when facing an overcharge depends on whether the demand reacts strongly to such a price change or not. For instance, if the direct purchaser is a monopolist and the demand that it faces is equally sensitive to a change in prices for all price levels and the direct purchaser is facing constant marginal costs, economic theory suggests that half of the overcharge will be passed on. If the demand the monopolist faces drops 'more and more' (i.e. at an increasing rate) when price increases, it is less likely that the overcharge will be passed on as compared to a situation in which the demand that such a monopolist faces drops 'less and less' (i.e. at a decreasing rate) as the price increases, all else being equal."

296. It is fairly clear that the more elastic the demand the less easy it would be for pass-on to take place because a price increase would affect volume. Conversely

therefore, the more inelastic the demand, such as for essential goods, the easier it is to pass on cost increases.

297. However, while these demand and supply factors affect the rate of pass-on as a matter of economic theory, as emphasised by Mr Holt, none of these factors can be measured across a particular market or sector with any precision or reliability. Accordingly, they cannot be a direct input into the empirical analysis that the experts have performed.

(b) Marginal/Variable v. fixed costs

298. We have discussed above the meaning of the terms 'marginal cost' and 'variable cost' and that the Claimants distinguish between the two, whereas the Defendants do not. The reason that the Claimants distinguish between the two is that they accept that the MSCs are a form of variable or semi-variable cost as a matter of economic characterisation, but they do not accept that, for most of the Analysed Claimants, they were treated as a component of marginal cost and thereby taken into account in their short-term profit-maximising pricing decisions.

299. We have also discussed above how firms maximise profits in the short run by setting prices to equal their marginal costs. By contrast fixed costs only affect long term strategic or investment decisions of merchants and do not impact on short term pricing decisions. Mr Holt accepted that fixed costs do not affect the profit-maximising price and would not generally be passed on.

300. Fixed costs are normally treated as overheads. But not all overheads are fixed costs. Some overheads may be variable, or semi-variable, such as a variable component of power consumption in an electricity bill, even if it is treated as an overhead by the business as a whole. It is not always easy to separate fixed from variable costs within the overheads category. Furthermore, as Mr Beal KC highlighted, the Defendants' experts did not try to separate out those components of overheads when talking about the indirect mechanisms for pass-on, such as EBITDA margins and targets, within which they said that MSCs were included (as they clearly were).

301. So as a variable or semi-variable cost, why are MSCs not treated as a component of marginal cost? As noted above, an MSC is not paid on all transactions, its size will vary depending on the type of card used or type of transaction, and a merchant cannot know in advance whether the marginal cost of an extra unit of output will include an increase in its MSC costs. Most merchants therefore treat the MSC as a form of cost of payment and aggregate them in their accounts with the costs of other forms of payment or even include them in a wider category of bank charges. These are treated collectively as a component of overheads and do not input directly into pricing decisions.

302. Mr Holt preferred to look at this question of whether a cost is a marginal/variable cost or a fixed cost as one of pure objective economic fact that depends on whether the cost varies with output. But again this strikes us as looking at economic theory rather than reality. Firms may wrongly, from an economic perspective, treat a cost as though it was a fixed rather than a variable cost for a particular purpose, such as setting its prices. We have to determine whether there is a causal connection between the cost and price, and that necessarily comes down to how the cost was regarded for the purpose of pricing.

303. This is also highly relevant to the experts' choice of proxy which is dealt with in detail below. Mr Holt looked at the fundamental economic characteristics of the MSC, particularly its variable, industry-wide nature. By contrast and because Dr Trento looked at the way the MSC was treated by the Analysed Claimants for the purpose of pricing, he concluded that total overheads was the most appropriate proxy for all but two of them. And that was despite Dr Trento accepting that from an economic theory perspective, the MSC was closer to COGS than to total overheads. Visa criticised Dr Trento for relying too much on what Mr Economides (as a non-economist and non-accountant) said about the treatment of MSCs, but we think that is unfair. The evidence before us is fairly clear as to the treatment of MSCs in the context of pricing.

304. Mr Holt carried out a number of experiments, called 'Monte Carlo' experiments, to test the reliability and accuracy of the rate of pass-on of variable overheads when using total overheads as the proxy. Mr Holt concluded from these experiments that using aggregate overheads data was liable to lead to a

significant underestimation of the rate of pass-on for the variable components of overhead costs, which would include MSCs. Mr Beal KC submitted that Mr Holt's experiments were flawed in that they assumed that, in the majority of scenarios, fixed costs varied more than variable costs when that could not be empirically proved. That had a considerable impact on whether the experiments showed a downward bias. Furthermore, if there was such a downward bias, it would mean that Mr Coombs' proxy of total costs should be materially lower than Mr Holt's pass-on figures, but they were not.

305. In any event Mr Holt's ultimate position is that it did not matter if the merchant did not really distinguish between fixed and variable costs, since in the long term, they would all be taken into account through the implicit mechanism of competitive pressure, or EBITDA margin and targeting. However, this does not satisfy the legal test for causation. It also does not explain how different rates of pass-on would be calculated for fixed overhead costs as opposed to variable or semi-variable overhead costs.

306. Ms Webster put the distinction between fixed and variable costs at the heart of her analysis. She assigned her high pass-on benchmark rate or her low pass-on rate depending on whether the merchant treated the MSC in its pricing decisions in the way that economic theory predicted it would for marginal costs. She accepted that whether a change in overhead costs would feed directly into a change in price would depend upon whether the merchant consciously identified the cost as being fixed or variable. Furthermore, she accepted that regression analyses could not demonstrate a clear causal link between costs and prices through an indirect mechanism affecting investment decisions and competitor pricing. In other words, and in accordance with the legal test, overhead costs passed-on through indirect mechanisms cannot establish a direct causal connection between those costs and prices.

(c) Ad valorem v. per-unit/transaction cost

307. There was no real dispute among the experts that, as a matter of economic theory, *ad valorem* costs would likely be passed on at a lower rate than per unit

costs. That is because *ad valorem* costs increase in line with price and there is therefore an inherent disincentive to raise prices.

308. There is difficulty however in distinguishing between the two types of MIFs/MSCs in any one sector because of the merchants being on different contracts with their acquirers. While MSCs typically had both *ad valorem* and per-transaction components to them, the MIF element has mostly been set on an *ad valorem* basis since the IFR, sometimes subject to caps. As a result of the unbundling obligation in the IFR, most of the larger merchants are on IC+/++ contracts (accounting for 77% in value of transactions) even though the number of merchants on blended contracts is substantially higher. As a result, most of the larger merchants are subject to *ad valorem* MSC rates but we acknowledge Mr Holt's point that it is difficult to draw "*any meaningful conclusion*" as to the degree and extent to which MSCs are *ad valorem* costs and therefore the effect on pass-on.

309. Neither Mr Holt nor Mr Coombs factored anything into their analysis that would account for lower pass-on of *ad valorem* costs. This was criticised by Mr Beal KC who said that their reasons for not factoring this in did not stack up. The first reason was that the distinction would only matter where gross margins are high but as they were looking at pass-on in the long run, and longer run margins are likely to be lower, the distinction becomes immaterial. This means that it probably should have been factored in on a short-term analysis of pass-on, which is what the legal test is focused on.

310. The second reason was Mr Holt's argument that, while it was agreed that economic theory dictates that there would be lower pass-on for *ad valorem* costs, there is no empirical evidence that the Claimants have passed on *ad valorem* costs at a lower rate. Mr Holt referred to studies dealing with changes to VAT and excise taxes that showed very high or full pass-on. But VAT is a very transparent tax that, save where the goods or services are exempt, is required to be charged to consumers. It is also considerably larger than the MSCs and business purchasers are able to set off their input and output VAT. Despite that, the studies showed that less than full pass-on of VAT changes was detected in certain circumstances, and when VAT rates were reduced, pass-on

was found to be even lower. We agree with Mr Beal KC that the empirical studies do not tell us much about the likely impact on rates of MSCs being regarded as *ad valorem* costs.

311. A further problem with the distinction is that the MSC is paid in respect of a complete transaction which may include several products. It can therefore be considered a per-transaction cost rather than a per-unit cost, insofar as it is not *ad valorem.* As such it would be unlike a normal marginal cost that would be factored into the particular product price. This makes it problematical in explaining how MSCs get passed on into the price of any particular product. Ms Webster sought to suggest that they could still be considered variable costs on the assumption that the product mix of the average transaction does not change and merchants will see the total cost of the MSCs rising with the number of transactions they make. Nevertheless, this may indicate and explain why MSCs were treated as overheads rather than COGS.

(d) Industry-wide cost argument

312. There was broad agreement between the experts that industry-wide, as opposed to firm-specific, cost changes are more likely to be passed on. As explained in the EU Guidelines 2019 at [183]:

> "Conversely where all the undertakings in a market are affected by an overcharge, i.e. the overcharge is industry-wide, all of the undertakings will face higher input costs, implying that they may be able to pass on at least part of the overcharge to their own customers. However, an industry-wide overcharge may still affect competitors differently."

313. The point was also made by the Supreme Court in [205] of *Sainsbury's SC*, that pass-on "*may be influenced by whether the cost was one to which it alone was subjected or was one which was shared by its competitors*."

314. We share the Defendants' experts' view that the MSC should be considered to be an industry-wide cost. Dr Trento, while not disagreeing with that general proposition, expressed doubt as to whether the MSC affects all firms in a given market similarly. He said that: "*the distinction between industry-wide and firm-specific costs is more theoretical than practical*." It is certainly true to say that

MSC costs will differ between firms in the same sector, for example by reference to transaction volume, customer payment preferences or type of acquirer contract. Nevertheless, the differences between competing firms should be minimal as they are typically serving similar customer demographics and are likely to have comparable commercial arrangements with acquirers. We think therefore that they should be regarded as industry-wide, rather than firm-specific.

315. But the point does not affect what type of cost the MSC is and whether it was actually taken into account by any particular firm in its profit-maximising pricing decisions.

(e) Size of the MIF/MSC

316. We are here considering whether the size of the MIF/MSC relative to a firm's total costs or revenue affects the likelihood of it being passed on into downstream prices. Size is also important in the context of the choice of proxy, and that is considered below.

317. The relative size of the overcharge was stated in *Royal Mail CAT* to be a factor in relation to pass-on (see [228]) and the majority's conclusion in that case that the very small size of the overcharge was an important factor in the Defendant failing to prove pass-on was specifically upheld by the Court of Appeal – see [149] of *Royal Mail CA*.[16] Size was also considered relevant in *Autoliv* – see [277] to [278] (quoted in [97] above).

318. There was no real dispute between the experts that the smallness of the MIF/MSC was relevant to pass-on in the short term. One of the reasons is that there may be price adjustment costs (otherwise known as "menu costs") which would likely deter price rises for very small changes in costs. Another reason is that such a small change in cost would not be noticed or monitored by anyone in the short term.

[16] Mr Ridyard's perhaps contrary view at [706] of *Royal Mail CAT* as to the relevance of size was not accepted by the Court of Appeal.

319. This point therefore comes down to the same issue as has been dealt with exhaustively above and that is the distinction between the direct and indirect mechanisms for pass-on. Mr Holt and Mr Coombs say that both the above reasons do not apply in the longer term and in relation to more indirect mechanisms for price setting, because the effect of price adjustment costs will diminish over time once they are consolidated with other cost impacts; and the MSC is clearly taken into account when firms monitor EBITDA and operating margins and set targets, even if it is not explicitly noticed.

320. The Defendants argue that, while it may be a relatively small cost (they say that it was considerably bigger in percentage terms to the overcharge in *Trucks*) it is significant relative to firms' operating or net margins in most cases, and certainly for those firms operating in competitive markets or those with high card usage. However, it seems to us that the Defendants' argument only really went to whether, as a result of its alleged significance, the MSC would be more likely to be noticed and taken into account in the long term. That may be correct but again that would only happen when operating margins, or EBITDA, was being considered and monitored as part of an overall review of budgets and larger investment decisions. Insofar as an MSC change might be recognised, such as would be likely to happen in the counterfactual of a dramatic reduction of the MIF to zero, that would only be taken account of via an indirect mechanism of effecting price changes.

321. The empirical evidence supports the view that size does not affect pass-on rates in the long term. This therefore only strengthens the distinction, made by the legal test for causation in this context, between short term direct mechanisms for pass-on and longer term, more indirect mechanisms. The fact that size is agreed to be relevant in the short term shows that it is relevant to considering whether there has been an effect on prices so as to amount to sufficient causation.

(f) Short term or long term

322. That leads neatly to our last aspect of economic theory, which has in large part already been covered, namely the time frame for considering pass-on. The

Defendants' position is that the relevant period for testing pass-on is the long run, Mr Holt saying that it covers the whole claim period which is more than 10 years.

323. Mr Coombs was also relying on the long run for the whole of the Merricks' claim period and his position was clear. It was because he was of the view that all costs become variable in the long run and that changes in variable costs affect the profit-maximising price calculus, the appropriate time frame is the long run and as a result pass-on would be expected to be high, even for what were originally fixed costs.

324. Visa and Mr Holt appeared to share that view initially but at trial seemed to shift. They still maintained that the relevant time period is the long run but that is because the MSCs should be characterised as industry-wide variable costs and on that basis, a high pass-on rate would be expected. Mr Holt was basically saying that, as with his chosen proxy of COGS, the MSCs would have a high pass-on rate in the long run because of their effect on the profit-maximising price.

325. It is not clear how the long run analysis of pass-on is said to work with the merchants' actual pricing and budgetary cycles. Mr Holt dismissed the prospect of price adjustment costs meaning that small costs changes would not be taken account of in short term pricing decisions. He did so on the basis that, over time, those costs would be borne by the merchant when the overall costs increases got to such a size that the merchant would have to increase prices. But it is impossible to say what that time period might be and firms do not, in the real world, price products on a more than 10-year plan. Mr Holt was unable to explain precisely how, if MSCs were not taken into account in pricing decisions in the short or even medium term, they would eventually be considered in the long run. He said that because of the underlying strength of the incentives, one or other of the channels for pass-on would be used at some point. We do not think that that vagueness and resort to economic theory really gets Visa anywhere near proving that pass-on in the long run is sufficiently closely connected to the MSC.

326. It comes back to the distinctions drawn above between fixed and variable costs, and the direct and indirect channels for pricing. Mr Holt is saying that the MSC should be regarded as a variable/marginal cost, which means it is highly likely to feature in the direct and short-term marginal cost pricing framework. If he is right on that, then he does not need to consider the long term because the MSCs will have been passed on at a high rate similar to COGS. This also would justify his choice of COGS as his proxy.

327. It is really only if he is wrong about the fact that the MSC was treated as a variable/marginal cost, that he needs to go to the long term, to say that as an overhead or fixed cost, it would become variable over time and the merchants would find a way of passing it on through prices. But that seems to be nothing more than saying that over time, a firm will recover its costs, otherwise it will be rendered insolvent. Also, if he is right, the logical extension is that every cost, in the fullness of time, will be passed on, and a solvent firm, not in administration, will never be able to claim damages, as it will never suffer loss. That cannot be right.

328. There are other problems with Visa's long term approach:

a) A number of the Claimants have only commenced their claims in recent years; indeed some have only recently, in 2021 and 2022, started trading. It is difficult to see how a long term approach could apply to these claims.

b) Visa cannot show at which particular point over the claim period, using indirect channels of pass-on, that the MSC was actually recovered – see *Royal Mail CAT* at [667].

329. We therefore, in accordance with our view of the law and the approach we have adopted, will only be looking at the direct and therefore short-term profit-maximising pricing channel, to test if the MSC is passed on and, if so, to what extent.

H. THE ECONOMETRIC ANALYSIS

330. With that examination of the economic theory around pass-on of the MSC, we now turn to look at the econometric analyses that the experts have conducted. Given our conclusions on the facts and the law, this is of much less significance now as the Defendants have, in the majority of cases, failed to prove that there was pass-on of the MSCs that satisfies the legal test for causation. Dr Trento's conclusion as an economist was also that it was not proven that the MSCs were passed on.

331. Nevertheless, we have read and heard much expert evidence on the econometric issues before us. The main issue is the choice of proxy; but there are also some other general issues around sectorisation, and the use of academic studies and public data.

(1) The experts' choices of proxy

332. The experts were all agreed that it is not possible to estimate directly the effects of the MSC because it is too small and there was only limited variance over time, at least in respect of domestic consumer cards. Regression analyses depend on there being sufficient variation for there to be meaningful statistical analysis of the effects of the variable in question. As a result, there is a "signal to noise ratio" problem with trying to measure the effect of the MSCs through regression analyses.

333. Having said that there was one expert, Mr Murgatroyd, who conducted a regression in relation to Allianz directly in respect of changes in the MIF, affecting its MSCs. He therefore did not use a costs proxy and he found that there was no pass-on. However, because Allianz settled with the Defendants shortly into the trial, he was not cross-examined and, as we have said above, we think it would be unfair to place any reliance on the results he obtained from his direct use of the MSC. Visa had said that his approach was flawed. We accept all the other experts' conclusions that because of the "signal to noise ratio" being so low, the only way realistically to measure the rate of pass-on of the MSC is by analysing a proxy cost instead.

334. In selecting an appropriate proxy, the expert must explain why it would be expected to have the same effect on price as the MSC. That means, in our view, addressing: whether it has similar economic characteristics to the MSC; whether it was treated in a similar way in practice as the MSC; and whether pass-on would be effected by the same or similar mechanism as the MSC. Accordingly, there is both a theoretical and evidential/practical test that has to be satisfied in order for the chosen proxy to be suitable.

335. The important but also potentially disabling feature of the chosen proxy must be that it is large enough and shows sufficient variance over the observations to have an effect on the price variable. This is to avoid the "signal to noise ratio" problem that assessing the MSC itself has. But there is then the problem that the much larger size of the proxy cost will mean that it is far more likely to have an effect on price than a very small cost such as the MSC. It also assumes that all variable costs are treated in the same way, which is probably not the case, certainly where the merchant has many different products and prices.

336. The use of a proxy was endorsed in the EU Guidelines 2019 but with caution on the grounds of relative differences in size. They also recognised the need for qualitative evidence. At [123] to [126] they said as follows:

> "(123) When using the passing-on rate approach, the court would typically endeavour to estimate the passing-on based on how changes in the cost of the affected input have previously been reflected in prices downstream. However, if such information is not available, the court may look at the development of other components of the purchaser's marginal cost and analyse how such cost changes affect downstream prices….
>
> (124) In most cases the infringement at issue concerns the cost of an input which constitutes just one component of the purchaser's marginal cost. If the input affected by the infringement constitutes only a very small fraction of the marginal cost, even a significant increase in the cost of that input may hardly be detected in the purchaser's price data, even if it is passed on in full. Although an alternative approach may be to estimate the passing-on rate based on changes of costs of more significant inputs and not just the cost of the affected less significant input, such an approach comes at the price of an assumption that may go too far, namely that the marginal cost increases are being passed on at an identical rate irrespective of the source for the cost increase…
>
> (125) …there are also good reasons why firms may not always pass on small changes in their marginal costs, at least not in the short run, even if they would pass on larger cost changes. Hence it may not be legitimate to assume that the passing-on rate will be similar for different changes in the input cost. One explanation may be that the firm may incur so-called price adjustment costs,

> and thus prefer waiting until marginal cost increases accumulate beyond a certain threshold before changing its prices.
>
> (126) When assessing the indirect evidence of passing-on based developments of cost components that are not affected by the overcharge, it is advisable to also take into account qualitative evidence that may show that the passing-on of small cost increases is in the specific case in line with the commercial practice of the direct or indirect purchaser."

337. Although Mr Holt agreed that the factual evidence may be "*potentially relevant*" in relation to the selection of the appropriate MSC cost proxy and the existence of mechanisms of pass-on, he actually based his choice of COGS on economic theory alone. He assumed that there were indirect mechanisms for pass-on and instead of directing his attention to how the Analysed Claimants said that they treated the MSC in their pricing decisions, he chose COGS as having the most similar economic characteristics to the MSC.

338. Dr Trento adopted a very different approach. Once he appreciated that the MSC itself could not be directly measured, Dr Trento first sought to follow Mr Economides' suggestions for suitable proxy costs to measure. This was largely based on how the Claimants appeared to treat the MSC in practice. We have described above that the evidence shows that even though the MSC has the characteristics of a variable cost, it was not treated in practice as a marginal cost that would inevitably be taken into account in their profit-maximising pricing decisions. Instead, it is both treated as, and categorised in their accounts as, an overhead cost. Mr Economides made a number of suggestions of suitable other overheads as proxy for the MSC, but these proved to be too small to measure and they also raised the "signal to noise ratio" problem.

339. Dr Trento and Mr Economides rejected COGS as a suitable proxy because it is the predominant marginal cost for most merchants and would therefore inevitably be passed on at a high rate, if not in full, as part of the direct profit-maximising price decision. Therefore, it would not be passed on in the same manner as an overhead like the MSC which was also not treated by most of the merchants as a marginal cost for the purpose of pricing.

340. One can see how the same issue of the direct and indirect mechanisms for pass-on affects not only whether the Defendants can prove that the MSC was passed

on in a manner that satisfies the legal test for causation but also as to the appropriate proxy to use. The mechanisms by which overhead costs may influence a merchant's prices are fundamentally different from how COGS would affect prices. Most overhead costs (there are exceptions) would generally only be considered in an indirect way such as influencing investment, exit and entrance decisions, or by causing a review of margin targets.

341. Dr Trento's third choice of proxy, after the MSC itself and the individually similar overhead costs, is total overheads. He chose this as the most reasonable available proxy cost in the circumstances on the basis that it was measurable and best fitted with the way that the Claimants treated the MSCs in practice. Also, for most of the Claimants, the MSC was within the overhead costs bucket that was being measured.

342. Dr Trento insisted that using total overheads as a proxy is very likely to overstate the importance of the MSC in the pricing process, given that it forms a very small component of the overhead costs bucket. It was for that reason that Dr Trento said that one cannot infer pass-on of the MSC from the pass-on of total overheads. He only assessed a pass-on rate for total overheads to assist the Tribunal if the Defendants could otherwise prove, as a matter of fact, that the MSC is likely to have been passed on. In other words, his analysis only becomes relevant if the Defendants establish that the MSC was in fact passed on to some extent.

343. Visa and Mastercard criticised Dr Trento's approach principally on the basis that he was overinfluenced by the way the Claimants categorised the MSC in their accounts and on Mr Economides' allegedly flawed analysis of this. However, this overstates the reliance on the accounting treatment of the MSC. Dr Trento was really relying on the factual evidence that showed that the MSC was not treated by most Claimants as a marginal cost that would be factored into their direct pricing decisions. The way that the MSC was categorised in the Claimants' accounts is not merely, as the Defendants say, for accounting or tax purposes; it is also a direct reflection of the way in which it was regarded and treated within the business structure.

344. It is interesting to note the history of Mr Holt's choice of COGS. In answer to questions from us, Mr Holt said that it was "*quite early on*" that he decided to select COGS, he thought around the time of his third or fifth report (these are much earlier reports than those for this trial on pass-on). As that was well before 2024, that would mean that he had selected his favoured proxy before considering any data or evidence provided by the Claimants as to how they or their sectors treated the MSC. Indeed, it was even before the Analysed Claimants had been selected and before the Tribunal and the parties had worked out how it would be best to assess pass-on in this case. It was also before the *Royal Mail CA* judgment had been delivered.

345. Mr Holt has consistently reasoned that the economic characteristics of the MSC – an industry-wide variable cost – were closest to COGS which was therefore the most suitable proxy. Having reached that view based on theory alone and before seeing any evidence from the Claimants as to how they actually treated the MSC in relation to price-setting, it has shaped Visa's approach to this trial and in particular the evidence adduced. Visa maintained its position that COGS is the appropriate proxy and it is no coincidence that it would necessarily produce a high pass-on result. As we have shown, Visa argued strongly both that the stricter legal test of causation and the issue of direct and indirect channels were not open to the Claimants and also that the factual evidence as to pass-on was irrelevant and should not be admitted. But having lost on both those points, Visa's and Mr Holt's persistence on using COGS ignores the reality that the MSC was treated by most Claimants as an overhead cost and that it is not possible to prove that the MSC was passed on through a direct channel in which it was specifically taken into account in profit-maximising price-setting.

346. Mr Jowell KC spent most of his submissions on this aspect criticising Dr Trento's choice of proxy, rather than justifying Mr Holt's choice of COGS. But the burden is on the Defendants to prove high pass-on and the only way that Visa seeks to do so is by the use of COGS as a proxy for the MSC. For the reasons set out above, we are unconvinced that COGS is an appropriate proxy as it cannot capture the effect of a much smaller cost on prices and it ignores the factual evidence as to how the MSC might be passed on, which is very different to the way COGS would influence prices.

347. We do accept some of the problems identified with Dr Trento's principal choice of total overheads as the appropriate proxy to measure. But Dr Trento himself also recognised the limitations of this proxy, and he considered that in most cases the evidence showed that there was likely to have been no pass-on. Use of total overheads was a last resort that meant, instead of giving up on the task, Dr Trento could conduct regression analyses on what he regarded as the least worst proxy. It does not avoid the inherent problems with this exercise, that any proxy in this case has to be large and variable enough to measure but then ends up being too large to work in the same way as the very small MSC.

348. We think that Visa went too far in arguing certain false assumptions that it says Dr Trento made in using total overheads as his proxy. Mr Jowell KC argued that, contrary to the Claimants' evidence, the "*accounting classification*" of the MSC as an overhead cost is not as important as the fundamental economic characteristics of the MSC. But this favours theory over reality.

349. Mr Jowell KC pointed to differences in the way firms in the same sector categorised the MSC as showing that the categorisation is somewhat arbitrary. For example, he identified that Booking.com and Expedia categorise the MSC or payment costs differently, with the former putting it in overheads and the latter in COGS. However Mr Economides sought to explain, with the caveat that he was not a qualified accountant, that this was likely because the companies operated very differently, with Booking.com acting more like an agent and not generally accepting payment for the cost of the booking (and so incurring far lower MSCs) whereas Expedia did generally purchase the holiday and sell it on to the customer thereby accepting full payment with the consequent MSCs. It seems to us to be more important to focus on how the respective firm categorised the MSC for pricing purposes, and that will normally come down to whether it regarded the MSC as a marginal cost that affected the profit-maximising price.

350. We will deal with sectorisation and extrapolation below. But the Defendants also raised issues about the practicability of using overheads as a proxy. Dr Trento accepted that it is easier to estimate pass-on of COGS because there is more variability in COGS than total overheads. He agreed that it is challenging

to estimate the pass-on of total overheads, but that he did the best he could. The aggregate nature of overheads data gives rise to practical issues that make it difficult to analyse pass-on in a statistically reliable way and could give rise to a risk of underestimating it. As the data records only total expenditure on overheads, it cannot be ascertained whether a change in that expenditure is due to a change in the prices of overheads or a change in the volume purchased. Furthermore, the data is considered "lumpy" in that overhead costs can spike at irregular points over time.

351. We therefore accept that the use of total overheads as a proxy is problematic. Furthermore, within overheads, there are fixed costs, semi-variable and variable costs. Most fixed costs also become variable over time. It is impossible to disentangle the different rates at which components of total overheads might be passed on, if they are.

352. But these problems do not mean that COGS is therefore a more suitable proxy, because Mr Holt can produce a more statistically reliable analysis of its effect on prices. The fact that a more accurate result can be obtained by using COGS does not justify using it if it is the wrong proxy to use for all the reasons explained above. Selecting COGS as the proxy assumes that the tiny MSC will have the same influence on prices as the main marginal cost of most businesses. We consider that it will inevitably grossly overstate the impact of changes in the MSC on prices and therefore the rate of pass-on. It means that Mr Holt's analysis is fatally flawed and cannot be used to prove that there was any relevant pass-on of the MSC, let alone at the high rates posited.

353. We think that Dr Trento had the better approach by trying to find a proxy that was treated similarly to the way that the Claimants treated the MSC in fact and would be passed on, if at all, through a similar mechanism. Dr Trento recognised that there were serious difficulties with using total overheads as a proxy but that in the circumstances it was the least worst option. We prefer this approach.

354. In some ways the whole process is unsatisfactory, and to a large extent, because of our conclusions on the law and the facts, for most Claimants the question does not arise. Where we do need to use a proxy, such as in the case of Travix

in respect of which the Defendants have proved that there was at least some pass-on, Dr Trento uses a component of COGS to estimate the rate of pass-on. As it turns out therefore, we do not actually rely on total overheads as a proxy for any of the Claimants. But if we were forced to decide, as between Mr Holt's choice of COGS or Dr Trento's choice of total overheads for those Claimants who treated the MSC as an overhead, we would have gone with Dr Trento's proxy.

355. Mr Coombs used total costs as his proxy, but this has the same problem as COGS, because COGS would be the main component of total costs for most Claimants.

356. Ms Webster did not rely on a proxy. Instead, she separated out those Claimants who treated the MSC as a variable cost and those who did not, and applied her benchmark case to those in the former category.

(2) Sectorisation

357. As this case concerned thousands of Claimants, it has always been accepted that a sectoral approach would be necessary. Unfortunately, the experts did not agree the sectors into which the Claimants should be grouped. The purpose of sectorisation is to extrapolate the MPO estimates obtained for the Analysed Claimants which have provided data and/or evidence to the other Claimants within that sector. It would also be necessary, if there is no Analysed Claimant within a particular sector, to extrapolate from one sector to another.

358. With that purpose in mind, it does seem to us that the sectors should group together Claimants which would be expected to have passed on the MSC to a similar extent and in a similar way. This is clearly a very imprecise exercise. That was the approach taken by Dr Trento, who was assisted in this task by the analysis of Mr Economides. They based their sectoral groupings on the Standard Industrial Classification of economic activities codes, which seems to us to be a sensible place to start. Manual adjustments were made to those groupings based on individual Claimants' specific business characteristics.

359. This resulted in there being two broad groups: (i) the first group is of nine sectors in which there is a Analysed Claimant, that is in respect of which there is merchant-specific evidence – the Claimants call these the "**Analysed Sectors**" – and these account for 66-68% of the total claim value; and (ii) the second group is of 21 additional sectors in which there are no Analysed Claimants – the Claimants call these the "**Additional Sectors**".

360. In the case of the Analysed Sectors, Dr Trento proposed extrapolating his MPO estimate to all Claimants within the respective sector. This is on the basis that there is no reason to think that the Analysed Claimant is an outlier in the Analysed Sector and that Analysed Claimant will be one of the largest Claimants. Visa has pointed to the large diversity of Claimants within the Analysed Sectors and questioned whether it is appropriate to apply the results in relation to a large Claimant to the much smaller Claimants that are in the same Analysed Sector, say for example Hilton applying to a single hotel Claimant. Visa has also highlighted some particular examples of different treatment of the MSCs within an Analysed Sector.

361. As to the Additional Sectors, Dr Trento extrapolated from the Analysed Sectors and for this purpose he relied on Mr Economides' matching exercise between those Sectors based on five factors that are most relevant to the way the MSC is likely to be treated in the context of price-setting. Visa objects to this because of its concerns about Mr Economides' expertise and experience in a number of those sectors. It also says that the exercise led to some unlikely, even "absurd", matching. Mr Economides himself accepted that there were serious limitations to this exercise.

362. We agree that there are such difficulties with the whole sectorisation process, but these will arise in any such exercise and will inevitably be present in the Defendants' sectors as well, as Mr Holt accepted. But at least the Claimants have attempted some sort of basis for their sectorisation and we think that the approach of grouping Claimants by reference to a considered expectation that they will pass on the MSC at a similar rate is credible and appropriate.

363. Mr Holt decided to use Visa's own pre-existing internal classification system which divides merchants into 14 sectors and 79 subsectors. This seemed to be more for convenience than anything else. There is no evidence as to the basis for these sectors, but it is presumably for Visa's own commercial and operational purposes, categorising all merchants that accept Visa's cards. So the sectorisation relied upon by Mr Holt was not based on any analysis of the issues of MPO that arise in this case.

364. Similarly, Mr Coombs used 12 sectors which were derived from publicly available card expenditure data. He was obviously not concerned with the Claimants' claims and was seeking to establish a UK-wide pass-on rate for the Merricks' claim period. But even so, some of his sectors, as we referred to above, group together very different merchants under broad headings such as "other retail" or "other services". He was not seeking to extrapolate for the purpose of applying to other Claimants, but only seeking to find an average within a diverse sector in order to come up with his economy-wide rate. Accordingly, Mr Coombs' sectors do not contribute to the issue before us as to MPO rates for the Claimants.

365. Ms Webster did not attempt any form of sectorisation save for her categorisation of the Claimants into producers, resellers and universities. But within those categories she still went on to opine on whether the Claimant treated the MSC as a variable cost and based her conclusion on that, rather than the category she had put the Claimant in.

366. A final point on this is that there is still the possibility of an "exceptions process" if any particular Claimant would want to suggest that it should be treated differently from the sector into which it was placed and the MPO rate that has been applied to it. That will only be considered after the end of this trial. So our findings, based on sectorisation, are not necessarily the end of this matter if a Claimant can show that it should be treated differently.

(3) The evidence and data relied on by the experts

367. For their econometric analyses there were three potential sources of information and data: (a) academic studies of pass-on; (b) publicly available data, normally from the Office for National Statistics ("**ONS**"), as to costs and prices; and (c) the Analysed Claimants' quantitative evidence. The experts used the three sources to different degrees and in some cases, not at all. Mr Holt uses all three sources and finds that they come up with a clear and consistent result. By contrast, Dr Trento largely relies only on (c) because he considered that the academic studies were uninformative and the public data unreliable as well as unhelpful.

(a) Academic Studies

368. As noted above Dr Trento does not place any reliance on academic studies because he does not think that they provide meaningful information about the pass-on of the MSC. He dismissed most of the studies on the basis that they are focused on the wrong cost proxy, a variable cost rather than overheads. He also criticised certain studies on the basis of geography, the time-period being different to these proceedings and that they would likely suffer from "publication bias" which is the tendency of published studies to overrepresent statistically significant results.

369. Ms Webster and Mr Coombs both place some reliance on these studies. Ms Webster reviewed 43 studies and concluded that they were consistent with her general expectations from economic theory. She considered that, because of their limitations, they could not be used to "*draw conclusions regarding the specific extent of variable cost pass-on for different merchant sectors or to make any direct inferences regarding the likely extent of MSC pass-on in general or for specific sectors*." But she considered that they supported her benchmark case of 70-100% pass-on and were part of the evidence that she assessed. Mr Coombs also regarded the studies as a "*cross-check*" on his estimates but he did not directly rely on them.

370. Only Mr Holt actually fed the results of certain studies into his estimates and relied on them as part of his consolidated estimates of pass-on. The table set out in [232] above shows his estimates alongside those from the other two sources leading to his consolidated figure. Mr Holt reviewed a colossal 272 studies, from which he identified a subset of 93 studies that he considered provided relevant and reliable estimates of pass-on for costs that are suitable proxies for MSCs in the particular sector they were dealing with. He added the studies that Ms Webster and Mr Coombs had identified, insofar as they were not included in his studies and to the extent that he considered them relevant and reliable. Mr Holt found that the sectoral estimates from this exercise showed high rates of pass-on consistent with the estimates he obtained from the other two sources.

371. This shows the enormous amount of literature there is on pass-on. The Claimants acknowledge this and accept that the empirical analyses within them are "*usually sound*". However, none of the studies relied on by Mr Holt concerned the MSC. It is curious that there was no citation of a study in Australia that did look at the consequences of the imposition of regulatory caps on MIFs on credit cards in Australia in 2003. This study by Chang, Evans and Swartz in December 2005 was actually financially supported by Visa and it is surprising that, given the vast array of studies looked at by Mr Holt, he did not consider this one to be relevant. The authors of the study did not find any empirical evidence that the decrease in MIFs was passed on by merchants to their customers in lower prices.

372. We consider that Mr Holt's use of the studies to feed into his estimates is problematic. While we can understand that it may be helpful to use them, with caution, as a cross-check for the pass-on rates obtained from other sources (as Ms Webster and Mr Coombs effectively did), we do not think there is sufficient reliability of the results and there are too many differences from the pass-on of the MSC, in relation to type of proxy, geography and time, for them to be used in the way Mr Holt sought to do. A major issue is the lack of consideration of the mechanisms for pass-on and the consideration over the long term, both of which are essential considerations for this case. Examples of the issues that therefore arise are as follows:

a) Mr Holt relied on a US study concerning the pass-on of tax changes into the sales price of clothes during the Great Depression (1925-1939) and for the post war period (1947-1977). Mr Holt said that this concerned an industry-wide variable cost and he was unconcerned about the very long time period for which pass-on was being estimated.

b) In relation to the Hotels sector, three of the four studies that Mr Holt relied upon relate to the time period from 1970 to 1989, which was well before dynamic pricing of hotel rooms via algorithms, which is a key feature for the Hotels sector in this case.

c) For the Automotive sector, Mr Holt relied on a study concerning the pass-on elasticity of labour costs on car prices in the US from 1984-1994 which, as Dr Trento pointed out, cannot shed light on the pass-on of MSCs for retailers such as Pendragon and other Claimants in the Vehicle & Accessory Sales sector because it was focused on car manufacturers' (not retailers') wages.

373. Mr Holt asserts that the studies he relied on are relevant and reliable. Consistent with his choice of proxy being COGS, he says that the studies are assessing the pass-on of costs that share the economic characteristics of the MSC, namely an industry-wide variable cost. We have already identified the problems with his choice of proxy. The studies often focus on tax changes, but as we also explained above at [310], there are problems with using tax as a proxy for the MSC. We recognise that some of the studies consider pass-on of overheads, albeit variable overheads, but do not think that really resolves the issue.

374. Mr Holt accepts that there are limitations to the studies in that they do not focus on pass-on in the UK during the relevant claim period; nor do they provide coverage across all of the Analysed Sectors. But he considers that there is no reason to believe that pass-on rates for merchants in the same sector should differ substantially across geographies or time-periods and he has run regression analyses to test this. However, we think that this cannot simply be approached by pure economic theory and it surely must be the case that Depression-era economic dynamics would be substantially different to the modern-day

economic conditions that will have affected the pass-on of the MSC. The other reason that Mr Holt gave for relying on those studies was that without them it would "*substantially reduce the number of relevant studies*" but that cannot be a justification for relying on an irrelevant or unreliable study.

375. There is also the issue of publication bias which would tend to lead to higher estimates of pass-on but which Mr Holt and Visa have dismissed as "*speculative assertion*" and did not make any adjustment for it. Dr Trento had referred to an analysis performed by Ioannidis et al (2017) which found that of over 6,700 empirical economics studies, nearly 80% reported exaggerated effects. We think that Mr Holt should have taken publication bias into account, particularly if he was using, as he was, the estimates from the studies as an input into his own estimates of pass-on.

376. We think, therefore, that Mr Holt should not have placed such reliance on academic studies. There are a number of areas of technical imprecision that will be present if those studies are being used in the way Mr Holt does, quite apart from the more fundamental issues identified above. Mr Holt did not apply any particular weighting to the studies based on their precision.

(b) Public Data

377. Mr Holt, Ms Webster and Mr Coombs all placed reliance on public data, mainly the indices compiled by the ONS, being: the Consumer Price Index ("**CPI**") for downstream prices; and the Producer Price Index ("**PPI**") for the merchants' costs paid to suppliers. That data can therefore only really measure COGS. There is no relevant data like that for overhead costs, save in some cases for labour costs. Accordingly, the use of public data depends on COGS being the appropriate costs proxy for the MSC. We have found that it is not, for the majority of Claimants. The public data cannot provide any meaningful pass-on estimate where the MSC was not treated as a marginal cost.

378. Furthermore, the use of a high-level comparison of a standard index of product prices with a standard index of consumer prices cannot distinguish between the direct and indirect mechanisms of pass-on discussed above. A regression

analysis using public data will produce a pass-on rate irrespective of whether the cost was directly passed on through the profit maximising price setting process or whether it was indirectly through changes to investment decisions or market entry or exit. As we have decided that this is critical for determining whether the pass-on was effective causation at law for the purposes of the Defendants' mitigation defence, it is another strong reason why the use of public data in this case does not yield meaningful results.

379. The results obtained by Mr Holt from public data are set out in the table at [232] above. He matched 30 sets of publicly available data with the Visa sectors and found there to be reliable estimates of pass-on for 12 of the 14 sectors.[17] He also took into account additional public domain data that Ms Webster and Mr Coombs had used and incorporated their results, where he considered them plausible, into his public data pass-on estimates.

380. There are a number of technical difficulties with using public data in this way and which Dr Trento relied on in deciding not to do a similar exercise. These are as follows:

a) Simultaneity bias – this is where the explanatory and dependent variable can influence one another. In this case, simultaneity bias may arise where changes in consumer prices reflecting general price inflation can affect the level of the relevant cost indices. For example, labour costs can be affected by price inflation. Dr Trento explained that: "*the standard assumption underlying regression analysis that there is only one direction of influence (i.e. the explanatory variable affecting the outcome variable and not vice versa) is not met*". The results can therefore be biased and lead to an incorrect interpretation as to the correlation that they appear to show. Dr Trento accepted that Mr Holt's use of first differences could slightly ameliorate this problem but there was no convincing answer to this issue by any of the experts using public data.

[17] There was no available public data for the Entertainment sector and he considered the data for the Education and Government sector to be unreliable.

b) Measurement error problem – which arises because the public cost indices, which only include a sub-set of costs, do not match up with the coverage of the price indices being used. This mismatch was highlighted by some examples in the evidence and it is undoubtedly a problem with the use of generalised and aggregated public data.

c) Omitted variable bias – which is where an explanatory variable is not included in the regression model. Mr Holt acknowledged that this is an issue and, if present, would be likely to lead to an over-estimate of pass-on. That is because the regression will attribute the omitted variable's influence to the explanatory variable whose pass-on rate is being estimated.

d) Conversion of elasticities to pass-on rates – the public data can be used to estimate pass-on elasticities but these need to be converted into pass-on rates by multiplying them by a price-cost ratio. But because that price-cost ratio cannot be determined from the public data, it has to be obtained from another source which necessarily means the degree of imprecision is magnified. Professor Waterson quizzed the experts on this in the hot tub showing that without reporting their standard errors, when the price-cost ratio is applied, the uncertainty in the reliability of the estimate is similarly multiplied.

381. Mr Holt, while recognising these difficulties and controlling for certain factors such as demand fluctuations by using time and seasonal dummies, felt that there was value in adopting as comprehensive an approach to the data as possible. By taking into account academic studies and public data, as well as the merchant data, Mr Holt thought that a more reliable assessment of pass-on would be obtained. However, because of the problems identified above, and particularly the fact that we have concluded that COGS is not the appropriate proxy for the MSC for most of the Claimants, we see little benefit in the results obtained from analysing the available public data.

(c) The merchant data

382. Before looking at the pass-on estimates of the Analysed Claimants, we will set out some general comments we have on the experts' approach to the merchant data.

383. Our conclusions set out above as to the legal test for causation requiring the Defendants to prove, on a balance of probabilities, that a direct mechanism for pass-on of the MSC was used, greatly affect the Defendants' use of the merchant data. Their econometric analyses using regression models cannot disentangle the costs passed on through a direct mechanism affecting the assessment of the profit-maximising price from the indirect mechanism used in the longer term through the change in costs affecting investment and budgetary decisions.

384. Our other significant conclusion is that for most of the Analysed Claimants, COGS is not the appropriate proxy for the MSC. This is what Mr Holt used and it means that his results are flawed because he used the wrong proxy that could not produce an accurate estimate for the pass-on rate of the MSC. As referred to above, Mr Holt argued in favour of COGS as a proxy that the data in respect of COGS is more disaggregated and is normally recorded separately for each product. This can be compared to total overheads which is normally reported on an aggregated basis for each month. However, the fact that a more accurate result can be obtained using a particular dataset cannot justify using the wrong dataset. If it is not representative as to the pass-on of the MSC in that firm or sector, the results will not prove any such pass-on.

385. Ms Webster did not seek to derive an estimate of pass-on for the Claimants from an econometric analysis of their data. Her methodology was to assign her high pass-on benchmark case of 70-100% to those Claimants that treated the MSC as a variable cost.

386. There were some problems with the Analysed Claimants' data. Mr Holt considered that three of them, the UOM, Sony and Ocado could not sustain proper econometric analysis. Mr Holt also had concerns about using the data from M&S and Wagamama which he felt could not yield robust estimates of

pass-on. He did however consider that reliable results could be obtained from the other Analysed Claimants and that they all showed that COGS or the chosen variable cost was passed on to a high degree.

387. Dr Trento shared some of Mr Holt's concerns about the data. But he was predominantly using total overheads as his proxy. We also concluded that this had its own set of problems, including one it shared with COGS, namely that it is a far bigger cost than the MSC and cannot therefore truly represent the pass-on of the very small MSC. Quite apart from that, the nature of the total overheads data, which is normally aggregated with many different types of costs, makes it more difficult to analyse pass-on in a statistically reliable way. But as we have said above, Dr Trento used total overheads as the only available and credible proxy so as to try to provide some meaningful evidence, should we have been of the view that the Defendants had proved that there was at least some pass-on of the MSC into prices. Dr Trento's primary position is that no such pass-on has been established on the available evidence.

388. We are largely with Dr Trento on that, but we will nevertheless set out our conclusions on the experts' econometric evidence in relation to those Analysed Claimants they were able to produce estimates for.

I. THE EXPERTS' ECONOMETRIC ANALYSIS

389. In the light of our conclusions on the law, the facts and COGS being the wrong choice of proxy in most cases, there is not much that is still live in the experts' econometric analyses of the available data. The Defendants' broad results are similar in there being high rates of pass-on, as one would expect if using COGS as the proxy. Furthermore, Dr Trento ran regressions on COGS data from some of the Analysed Claimants which unsurprisingly came up with high rates of pass-on, sometimes higher than Mr Holt's estimates.

390. As it is the Defendants' case to prove and Mr Holt has sought to establish sectoral rates of pass-on, we will look briefly at those sectoral rates, and compare them with the results obtained by the other experts. Accordingly, we will follow the Visa sectors, dealing with the Analysed Claimants' data within

their respective sector. In fairness, we do not really challenge the results obtained by Mr Holt by his thorough analysis of all the data. But we do more fundamentally challenge whether his estimates can be relied on to show any pass-on of the MSC in relation to most of the Claimants.

391. We will take Visa's sectors in alphabetical order.

(1) Automotive

392. This sector includes car and truck dealers, automotive services, auto maintenance and repair and boat dealers. Pendragon is an Analysed Claimant in this sector and it provided some data, but no witness evidence. Mr Holt estimated the pass-on of COGS from this data at 114%. Mr Coombs also analysed Pendragon's pass-on of COGS and he estimated a rate of 87% to 138%. Pulling together the analyses that he considered reliable, Mr Holt concluded that the average estimate for pass-on of COGS based on Pendragon data was 106%.

393. Dr Trento did not initially analyse the Pendragon data as it was not included in his nine Analysed Sectors. Somewhat oddly, Mr Economides had allocated this sector to two Additional Sectors: Vehicle & Accessory Sales; and Vehicle Maintenance and Repair. As part of the matching exercise referred to above, Dr Trento extrapolated his analysis of Wagamama and UOM to these two Additional Sectors. We do not need to decide if that was an appropriate thing to do, but it does seem curious. In his second report, Dr Trento did attempt a regression on Pendragon's total overheads as a proxy, but he found the data provided to be unworkable for such purpose.

394. In addition to the analysis of Pendragon, Mr Holt also relied on four empirical studies that he considered relevant to pass-on in this sector. We have referred to some criticism of these studies in [368] to [376] above. The average rate of pass-on in those studies was 87%.

395. Mr Holt and Mr Coombs also analysed public data: Mr Holt used the wholesale costs and retail prices of new and second-hand motor vehicles, and boats; Mr

Coombs used the fees for vehicle maintenance and repair work and the cost of labour in this industry. From this, Mr Holt estimated quite low rates of pass-on, being 16% for motor vehicles and 44% for boats. Mr Coombs by contrast estimated a rate of 111.3%, incl. VAT. Combining those results, Mr Holt calculated an average pass-on rate from public data of 54% for this sector.

396. Mr Holt's consolidated estimate for the Automotive sector was 82%. But this is based on either COGS or total labour costs.

(2) Business to Business

397. This sector includes various entities with corporate clients, such as those selling wholesale construction materials, office supplies and publishing and printing services. There are no Analysed Claimants in this sector and only Mr Holt has tried to calculate a pass-on rate for it. The Claimants again try to perform a matching exercise from various Analysed Sectors, but it is difficult to see that it really got them to a relevant position. There was also some mismatching between Mr Economides' suggestions and what Dr Trento actually tried to match.

398. Mr Holt identified five academic studies that he considered reliable and relevant to this sector. The average rate of pass-on from these studies was 94%. From three public data sources, Mr Holt calculated an average pass-on rate for this sector of 102%. His consolidated estimate was 98%. None of the other experts dealt directly with this sector.

(3) Department & Apparel

399. This sector includes retailers of clothing, accessories and shoes, both in-store and online. It aligns with Dr Trento's Fashion sector which is one of his Analysed Sectors.

400. The merchant data analysed for this sector is from M&S Clothing and Primark. Both Claimants had settled with the Defendants shortly before the trial began and so no witnesses were called on behalf of Primark. Its economist expert, Mr

Ramirez, had put in a report and estimated pass-on rates for both COGS and total overheads, considering the latter to be the appropriate proxy.

401. Mr Holt calculated pass-on rates for COGS of 171% for M&S and 131% for Primark. Ms Webster did her own analysis of the pass-on rate of COGS by Primark and estimated a rate of 65%. Mr Holt calculated Mr Coombs' estimate of pass-on of COGS for Primark to be 117%.

402. Dr Trento and Mr Ramirez analysed the data and estimated pass-on rates of COGS for these two Analysed Claimants. Dr Trento's estimates were 85% for Primark and 198% for M&S; Mr Ramirez's estimates were 171% for Primark and 96% for M&S.

403. Overall, taking into account what he considered reliable from these analyses, Mr Holt arrived at an estimated pass-on rate of COGS for this sector of 116%. Mr Holt also relied on one academic study for this sector and he estimated pass-on from this study at 117%.[18] He also analysed public data on the wholesale and retail prices of clothing and footwear and arrived at a pass-on estimate of 130%. No other experts analysed public data for this sector.

404. The above led Mr Holt to a consolidated pass-on estimate of 121%.

405. But turning to total overheads as the proxy, Dr Trento originally estimated a pass-on rate for the Fashion sector of 26%-27%. Mr Ramirez estimated 17.5%-20% using Primark data and 11%-33% using M&S data. Dr Trento in his second report, having considered all the other experts' analyses, revised his overall estimate for the Fashion sector to 19.5%, being the mid-point of a range of 0-39% using Primark data alone. On reflection he considered the M&S data to be too unstable to be relied upon, whereas the Primark data had proved to be stable across a number of different models.[19]

406. Visa says that this shows the unreliability of the overheads data which makes the results too wide and uncertain and introduces a potential downward bias.

[18] This was the study of the Great Depression and post-war period referred to in [372.a)] above.
[19] If using the M&S data as well, he estimated an overall rate of 40.5%.

Nevertheless, this was the best estimate in relation to the pass-on of overheads that the experts could come up with based on the data available to them.

(4) Education & Government

407. This sector covers card payments made for court fees, education fees and postal and government services. It can be aligned with Dr Trento's Universities sector which is one of the nine Analysed Sectors, with UOM the Analysed Claimant.

408. Mr Holt concluded that there was no reliable data source available to him to be analysed and so he resorted to his economy-wide pass-on rate which he suggested should be applied to Claimants in this sector. This is unsatisfactory but we understand why that is all Mr Holt feels he can do. He found UOM's data unsuitable for analysis, and he did not find any reliable academic studies; nor did he consider that reliable estimates could be made from public data.

409. Dr Trento was the only expert to use UOM's data. He estimated that 10% to 16% of UOM's programme delivery costs are passed on through to UOM's unregulated tuition fees. Mr Holt was concerned about the lack of granularity and the limited number of effective observations in the data. Dr Trento accepted in cross-examination that he was unable to account for the effects of changes in the average costs per student per course and that this was a limitation that could have a downward bias.

410. We also agree that this appears to be of limited value. But that does not justify use of the economy-wide pass-on rate which is largely based on the pass-on of COGS in very different sectors, particularly where we have found that the MSC would not be passed on through a direct channel.

(5) Entertainment

411. This sector includes subsectors such as attractions, gambling, sports entertainment, and subscriptions. It is aligned with Dr Trento's Video Games sector which is one of his nine Analysed Sectors, with Sony the Analysed Claimant.

412. As with the previous sector, Mr Holt concluded that there was no reliable data source that he could use to provide a pass-on estimate. All the experts except for Dr Trento felt that the data provided by Sony was unsuitable for econometric analysis. Visa again relies on Mr Holt's economy-wide pass-on rate. Ms Webster applied her benchmark rate of 70%-100%, saying that as the MSC was specifically categorised as COGS, the rate would tend towards 100%.

413. Dr Trento did regress the Sony data on the basis of his assessment, and our factual findings set out in [165] above, that the MSC was treated like COGS but not akin to the third party royalties, or the wholesale price, which was the only relevant component of COGS that was taken account of in setting the price of the games at a fixed **[✂]** margin over that price. In other words, Dr Trento used as his proxy all COGS other than third party royalties. The estimates he obtained from such an analysis indicated to him that there was no pass-on of this category of COGS (his estimates ranged from -18% to -40%).

414. Mr Holt has criticised this analysis on technical grounds, in particular as to whether the estimates should have been calculated in levels rather than logs. Dr Trento agreed that the data was not robust but it confirms what appears obvious on the facts, that COGS other than third party royalties did not feature in Sony's direct price setting. That is enough to find that, even though the MSC was categorised as COGS, it was not passed on through a channel that would satisfy the legal test for causation.

415. Mr Holt did not advance any positive case in relation to Sony, instead resorting to his economy-wide rate. This is an insufficient basis for Visa to prove that there was any pass-on of the MSC.

(6) Food & Drug

416. This sector includes food stores and supermarkets, as well as pharmacies and discount and wholesale stores. It corresponds with Dr Trento's Supermarkets sector, one of his nine Analysed Sectors, that has M&S Food as its Analysed Claimant.

417. Mr Holt identified 32 studies that he considered reliable and relevant and from which he derived a pass-on rate of 92%.

418. Mr Holt, Mr Coombs and Ms Webster used public data as part of their analyses. They looked at different categories of products but all were looking at the pass-on rate for COGS (although Mr Coombs also included labour costs). Mr Holt combined the experts' estimates based on public data to arrive at an average rate of 92%.

419. As for the M&S data, we have referred above to the unsatisfactory nature of it (under Department & Apparel). Nevertheless, Mr Holt did attempt to analyse it to calculate a pass-on rate of COGS in its food prices and his estimate was 120%. Dr Trento also analysed pass-on of COGS (even though he considered it not to be the correct proxy) and his estimate from that data was 111%.

420. Dr Trento obviously would have preferred to use M&S's overheads to calculate a relevant pass-on rate. He did so in his first report and came up with a revised estimate of 22% to 29.5%. In his second report, he changed his mind as to the reliability of these estimates and considered that the range was too broad to produce reliable results – the range was from zero (or even negative) to full (or even above 100%) for pass-on of overhead costs. Instead, Dr Trento relied on a study in the US of pass-on of minimum wages into supermarkets' price between 2001 and 2012. This found a pass-on rate of 52% to 97%.

421. Our conclusion however, based on our factual findings in relation to M&S set out above, is that the Defendants have not proved that the MSC was passed on through a direct channel of price setting.

(7) Fuel

422. This sector covers sellers of fuel, including service stations and automated fuel dispensers. There is no Analysed Claimant or Analysed Sector corresponding to this. The Claimants proposed matching M&S Food to the Additional Sector of Motorway Service Areas. Again we find it difficult to see that this is a relevant match that will yield reliable estimates for this sector.

423. Mr Holt identified 18 studies that he considered to be reliable and relevant to this sector. They had an average pass-on rate of 93%.

424. Mr Holt, Mr Coombs and Ms Webster all analysed slightly different public data indices, but all were concerned with the pass-on rate for COGS. Mr Holt combined their results and calculated an average pass-on rate of COGS of 104%.

(8) Health Care

425. This sector covers entities offering dental, veterinary, and health care services. There is no Analysed Claimant or Analysed Sector corresponding to this and the Claimants do not seem to have performed any matching exercise for the Claimants in this sector.

426. The only evidence in this sector is public data. Mr Holt analysed prices for services offered by hospitals and nursing home services, prices charged to medical outpatients and dental service prices, and the pass-on of relevant labour costs into those prices. The average pass-on rate that Mr Holt calculated was 92%.

427. Without any evidence as to how any Claimants in this sector treated the MSC, the Defendants cannot prove that there was any pass-on of the MSC into prices.[20]

(9) Home Improvement & Supply

428. This sector covers entities offering construction, office, and home furnishing and improvement services. There is no Analysed Claimant or Analysed Sector corresponding to this. The Claimants' matching exercise led Dr Trento to apply his analysis of M&S Clothing and Primark to an Additional Sector of Household Goods. Our view is that this matching is somewhat more aligned with Visa's

[20] We note that Mr Holt classified GrandVision as falling within the Health Care subsector, though Dr Trento matched this entity to the Fashion Analysed Sector.

sector and could be relied on with caution. Dr Trento did not conduct any separate econometric analysis for this sector.

429. Mr Holt identified one academic study that he considered reliable and relevant to this sector. That estimated pass-on at 77%.

430. Mr Holt, Mr Coombs and Ms Webster analysed public data for this sector. In relation to the prices for furniture and home equipment, pass-on was estimated of the wholesale costs (that is COGS). Mr Holt also estimated pass-on in relation to construction services and for that he used the cost of labour as well as construction materials. Mr Holt calculated the average pass-on rate for this sector, taking into account all the other experts' results from public data, at 94%.

431. Similarly with the previous sector, there is no evidence as to how any Claimants in this sector treated the MSC, whether as COGS or as overheads. In accordance with Dr Trento's extrapolation this can sensibly be aligned with his Fashion sector, i.e. with M&S Clothing and Primark, and our finding that the Defendants have not proved that the MSC was passed on into prices in a direct way.

(10) Restaurant & Quick Service Restaurants ("QSR")

432. This sector covers bars, fast food vendors and other restaurants. It is aligned with Dr Trento's Restaurants sector, which is one of the Analysed Sectors. Wagamama is the relevant Analysed Claimant.

433. As discussed in [191] to [205] above, Wagamama treats the MSC as an overhead cost, but it treats two other components of its overhead costs, labour and its central production unit costs, as akin to COGS for the purpose of pricing. This led to Mr Holt including labour costs with COGS in his analysis of the data. However, this misses the point that Wagamama clearly distinguished between labour costs and other overhead costs, only taking into account the former in its pricing decisions. We have already found that the MSC was not taken into account in a direct channel of pass-on.

434. Mr Holt considered that there were six reliable academic studies relevant to pass on in this sector. They had an average pass-on rate of 84%. Three of those studies looked at the pass-on of changes to labour costs and came up with rates of 98%, 100% and 70%.

435. As to public data, Mr Holt analysed pass-on rates for sales of beer and separately for food and beverages in cafes and restaurants, in both cases using the wholesale costs of the beer and food together with the labour costs. Mr Holt found an average rate of pass-on of 75%. Mr Coombs analysed the relationship between restaurant prices and total costs, which resulted in a pass-on rate of 115% incl. VAT. Mr Holt's combined average rate of pass-on from public data for this sector was 84%.

436. As for Wagamama's data, Mr Holt sought to estimate the pass-on rate of the "*cost of dishes*", basically COGS, into its prices. This resulted in a rate of 61% but Mr Holt said that he had low confidence in the estimate because of specific problems in the data, particularly its "*lumpiness*" and he decided to place no weight on this estimate in his overall calculation of pass-on. Using the same data, Dr Trento calculated a pass-on rate for COGS of c.300% to 400%, but this was dismissed by Mr Holt as being seriously affected by certain modelling choices made by Dr Trento. Ms Webster agreed with Mr Holt that Wagamama's data was not suitable for econometric analysis.

437. Dr Trento also used the data to estimate the pass-on of overheads, consistent with his preferred choice of proxy. His estimate for pass-on of total overheads was 13.5%, but as he pointed out, that included labour costs which is known to be passed on directly by Wagamama and was **[✂]** of Wagamama's total overhead costs. Dr Trento calculated that labour costs alone were passed on at a rate of 39%, which implied that non-labour related overhead costs, including the MSC, would be closer to or at zero. He did also accept that the data had limitations.

438. Mr Holt agreed with the latter point and said that the data was too limited and lumpy to be reliable in estimating a pass-on rate for total overheads. He also thought that the inclusion of labour costs which were passed on at a higher rate

than the other overhead costs showed that he was correct that the economic characteristics of a cost are more relevant to pass-on than their accounting classification. By that we assume he was saying that labour costs are an industry-wide variable cost and therefore passed on at a higher rate than the more fixed components of overheads. But in this case labour costs are specifically taken into account for the purpose of price-setting and it is therefore unsurprising that it has higher pass-on rates than other overheads that were not so taken into account. The evidence from Wagamama was clear that the MSC was not considered in any direct price-setting mechanism.

(11) Retail Goods

439. This sector covers retailers such as computer and electronics stores, florists, pet stores and sellers of sporting goods. It corresponds with Dr Trento's Health Retail sector, which is an Analysed Sector, with Holland & Barrett and Pets at Home as its Analysed Claimants.

440. Pets at Home did not provide qualitative evidence, whereas Holland & Barrett did. We made our factual findings on this above and concluded that, despite the somewhat unsatisfactory witness evidence, the MSC was not taken account of in any direct price-setting mechanism.

441. Mr Holt used all three sources of data for his consolidated pass-on rate of 90%. He identified two studies that he considered to be reliable and relevant and these had an average pass-on rate of 85%.

442. As to the public data, Mr Holt estimated an average pass-on rate from wholesale to retail prices of 111% for this sector. Ms Webster also used public data to estimate different types of products in this sector and her pass-on rate of COGS ranged from 36% to 162% depending on the model specification she used. Mr Coombs estimated pass-on of the wholesale costs of jewellery at 109% incl. VAT.

443. As for the Holland & Barrett data, Mr Holt estimated the pass-on of COGS to prices at 81% (although he later refined that to 69% after removing what he

considered to be unreliable regression results). Dr Trento also estimated the pass-on of COGS using the Holland & Barrett data and came up with a range of 167% to 190%.[21]

444. Dr Trento also tested his preferred choice of proxy, total overheads, and this showed either negative or close to zero pass-on. Mr Holt had various criticisms of the overheads data from Holland & Barrett, suggesting that it is too aggregated, temporally limited and "lumpy" to be informative as to pass-on. As we have recognised, there are serious problems with using overheads as the proxy and this only exacerbates them.

445. As to the Pets at Home data, Mr Holt and Mr Coombs both analysed the pass-on of COGS and this resulted in an overall average estimate of 81%.

446. Dr Trento did not originally attempt any econometric analysis of the Pets at Home data, but after seeing the other experts' estimates of COGS pass-on, he subsequently attempted to reach an estimate of the pass-on of overheads. His conclusion was a range between 0% and 49%, but he does not rely on that as it was a "*highly uncertain exercise*" without having any qualitative evidence from this Claimant.

(12) Retail Services

447. This sector includes services such as childcare, dry cleaning and laundry, health and beauty, and property rental. Even though WorldRemit which provides international money transfer services is within this sector, it is not one of Dr Trento's Analysed Sectors because it had not provided any qualitative evidence. Mr Holt considered that this sort of currency exchange or money transfer business should be treated separately from those firms providing other retail services because card spending is highly concentrated in the former category. He therefore thinks that distinguishing between those sub-sectors will provide more accurate and reliable estimates of pass-on.

[21] Mr Holt considered this to be implausibly high and made adjustments to Dr Trento's model that reduced his figures to 79% to 108%.

448. As it is not an Analysed Sector, Dr Trento's matching of the Additional Sectors covering retail services was to Three, M&S Food, Hilton, Travix and Wagamama. This is clearly not going to provide an accurate estimate of pass-on in this sector. Dr Trento admitted in cross-examination that it would be preferable, if it were possible, to estimate pass-on by reference to WorldRemit's data. He agreed that WorldRemit treated the MSC as COGS and that therefore it was appropriate to use COGS as a proxy.

449. Mr Holt identified twelve studies that he considered reliable and relevant to this sector. They produced a pass-on estimate of 78%.

450. Mr Holt also analysed public data for non-cash services businesses in this area, that is for childcare, dry cleaning and laundry, home removal and self-storage services, and hairdressing and personal grooming services. He calculated that labour costs were passed through to prices in the range of 38% to 59%, meaning that the average rate of pass-on was 47%.

451. Using WorldRemit's data, Mr Holt estimated that it passed on the costs of sending payments, being commission and payment processing fees, at a rate of 76%. Mr Coombs similarly analysed the pass-on of those costs but came up with higher rates of 132% to 142%. This led Mr Holt to put forward an overall estimate of 102%.

452. As noted above, Dr Trento accepted that this was an appropriate approach. He did say that there was an endogeneity problem as the MSC, as part of COGS, would rise as prices rose, but he agreed that it was better to use WorldRemit's data than the matching Analysed Claimants' data that he had originally suggested.

453. Accordingly, for WorldRemit, and the cash services sector, we agree that the Defendants have proved full pass-on of the MSC.

(13) Telecoms, Utilities & Insurance

454. This sector covers insurance services, telecommunications services, and utilities. Dr Trento has a Telecoms Analysed Sector, with Three as the Analysed Claimant. Mr Holt, together with Mr Coombs, Ms Webster and Mr Murgatroyd analysed the data from Allianz for the insurance sub-sector.

455. Mr Holt identified eight studies that he considered were reliable and relevant to this sector and the average pass-on rate from these was 68%.

456. As for public data in relation to this broad sector, Mr Holt analysed prices for electricity and gas and wholesale costs of energy which resulted in a pass-on rate of 80%. Ms Webster analysed wholesale and retail prices for certain utilities and estimated pass-on rates of between 115% to 122%. Mr Holt averaged these rates to come to a pass-on rate for this sector based on public data of 99%.

457. Mr Holt, Mr Coombs and Dr Trento analysed the data from Three. As we have set out above in our factual findings in relation to Three, very few of its customers pay by card and the MSC is a tiny proportion of its overall costs. The main and only real driver of price is the handset cost. We found that the Defendants had not proved that the MSC was passed on through any direct channel into its prices.

458. Nevertheless, Mr Holt sought to analyse the rate at which Three passed on handset costs, on the basis that this is a variable, industry-wide cost. He found that those costs were passed on at a rate of 111%, incl. VAT. Mr Coombs also analysed the data of a slightly wider range of COGS, including mobile usage and insurance as well as handsets, and he estimated a pass-on rate of these costs at 115% excl. VAT. Mr Holt's average of these was 109%.

459. Dr Trento also analysed the pass-on of handset costs and he came up with an estimate of 63%, using the same data as Mr Holt. Mr Holt thought that the discrepancy between their two estimates was because Dr Trento was using his model for assessing pass-on of overheads, which was not suited to assessing the

pass-on of COGS, and various other technical issues which he said led to an unreliable outcome.

460. But Dr Trento only did this as an experiment. His preferred analysis was as to the pass-on of Three's overheads and he estimated this at a rate of 33%. Mr Holt considered that this estimate had been arrived at on a flawed technical basis, because he was taking an average of estimates based on 3-, 6-, and 12-month moving averages when he should only have relied on the statistically significant 12-month average which would also better reflect the time frame for passing on of overheads. Mr Holt said that if Dr Trento had done the modelling in the way he was suggesting it would have resulted in a 91% pass-on rate for overheads. Dr Trento rejected the criticism and said that it was appropriate to form an overall average, as Mr Coombs had done. In any event, this dispute does not matter as we have found that there was no pass-on of the MSC through a direct mechanism into prices.

461. As for the Allianz data, we have already said that in relation to the underwriting side that includes LVIC and Fairmead, we would accept the Defendants' case that the MSC, as potentially part of the "manufactured costs", could have been passed on into premiums directly. Even though the MSC was categorised as an overhead, it seems to have been treated as COGS for the purpose of price setting.

462. Mr Holt analysed the data and used claim costs as the proxy. Claim costs, even though they are unknown in advance, are the main drivers of price and it is inevitable that they would show high pass-on rates. Mr Holt's estimate was 101%.[22]

463. Mr Coombs used only LVIC data and estimated the pass-on of total costs which came out at a rate 39.1% to 61.5% incl. Insurance Premium Tax. That perhaps indicates that costs other than claim costs were passed on at a much lower rate.

464. Ms Webster analysed only ABSL data, that is on the broking side of the business, which we considered was less likely to have passed on the MSC

[22] If he considered regressions in logs, as the other experts did, this was revised down to 99%.

directly into prices. Because she could not distinguish between fixed and variable costs she used total costs as her proxy and estimated that these were passed on at a rate of 70% to 85%. The trouble with this analysis was that it did not distinguish between large costs, such as labour costs which were specifically considered by the business and the effect of much smaller costs such as the MSC which were not specifically considered.

465. Mr Murgatroyd had uniquely sought to estimate the pass-on of MSCs into prices. But this produced a lot of statistically insignificant results, demonstrating the signal to noise problem that the other experts considered meant that pass-on of MSCs could not be measured directly. Given that Allianz settled with both Defendants shortly after the start of the trial and Mr Murgatroyd was not cross-examined, as we have already said, we do not think it would be fair to place any reliance on his estimates.

466. As Allianz did settle its claims, the pass-on estimates might only be relevant to the insurance sector generally. Dr Trento had matched this to the Telecoms sector, but given that the Claimants invited us to look at the Allianz evidence, we think that the estimates from the Defendants should be considered to be applicable to the Claimants within the insurance sector.

467. In relation to the underwriting businesses, we have found that the Defendants have proved that there was pass-on and we would tend towards Mr Coombs' estimates for the underwriting businesses, as claims costs are bound to be passed on at a much higher rate than other costs. We take the mid-point of his estimate of 31.9% to 61.5%, say 47%. For the same reason, reliance can be placed on Ms Webster's estimates for insurance broker businesses, but in respect of these we do not consider that the Defendants have proved pass-on.

(14) Travel

468. This sector covers air travel, car rental and lodging. It aligns with Dr Trento's two Analysed Sectors: Hotels, with Hilton as the Analysed Claimant; and Online Travel Agencies, with Travix as the Analysed Claimant. Mr Holt separately analysed pass-on rates for lodging/hotels and for other travel entities.

469. We too have distinguished between Hilton and Travix, finding in relation to the former that the MSC is not passed on through any direct channel, whereas it was in the latter.

470. Mr Holt looked at four studies that had pass-on estimates for the Travel sector, and their average rate was 89%.

471. The public data was a little problematic for this sector. Mr Holt and Ms Webster both analysed the pass-on rate of fuel costs to air fares. Mr Holt estimated a rate of only 20%; Ms Webster at 233%. Ms Webster considered her estimate to be unreliable, as did Mr Holt, who also doubted his own estimate.

472. Mr Coombs analysed the pass-on rate of air transport costs to the price of package holidays. His estimate was of 88% incl. VAT (80% excl. VAT). He also estimated from public data the pass-on of labour costs to hotel prices at 56% incl. VAT. However, Mr Holt thought that both of these estimates were unreliable. If he did not want to rely on them, there is no reason for us to take them into account as we are not now dealing with Mr Merricks' claim.[23] In fact, we do not think that the public data can be relied on at all for this sector.

473. Mr Holt sought to analyse Hilton's data by using a proxy of certain variable costs including travel agent and group commissions, laundry and dry cleaning, and operating supplies and this produced a pass-on rate of 63%. Ms Webster attempted to establish a pass-on rate of the costs for rooms and for food and beverages more generally and this resulted in rates of 69% and 48% respectively. Dr Trento's estimate for the pass-on of COGS by Hilton was c.5% to 61%, although this was for a shorter time period than Mr Holt and Ms Webster were using.

474. Of course, Dr Trento preferred to use total overheads as his proxy. He estimated a pass-on rate initially of 0% to 14%. However, when he modified the model more in line with Mr Holt's, he had a wider range of results – 0% to 73% – also

[23] Mr Holt did include them in his overall average so as to push his rate upwards, but we do not think this is justified.

depending on whether he modelled in logs or levels. There is no point trying to resolve these technical issues as our clear conclusion is that there was no pass-on by Hilton of the MSC into room prices.

475. As for Travix's data and given our conclusions above, it is appropriate to consider COGS or a component of COGS as the proxy and to estimate a pass-on rate for the MSC. Mr Holt used total COGS but this included the flights costs themselves. Travix is only acting as an intermediary between the airlines and the customer but as it purchases the flights, this is then the main cost incurred by Travix that will almost inevitably be passed on to the customer. Mr Holt's estimate of 103% confirms that. That was why Dr Trento used "meta costs" as his proxy, that being the amount paid to search engines such as Kayak and Skyscanner. He estimated a pass-on rate for those costs of 47.5%. Dr Trento did also do a regression of costs including flight costs and this gave rise to rates of 96% to 101%.

476. We consider that the inclusion of flight costs in the proxy is inappropriate and unlikely to capture reliably the pass-on rate of the MSC. A more reliable and relevant proxy is the "meta costs" which are smaller components of COGS and seem to have featured in the price-setting decisions that were made in a more similar way to the MSC, albeit that they are larger costs and so able to be measured. Mr Holt did have some technical issues with Dr Trento's modelling but we do not think that that seriously impacts on his results.

477. Accordingly, we consider that a pass-on rate of c.47.5% is appropriate to apply to the travel agent sub-sector.

(15) Economy-wide pass-on rate

478. We decline Visa's invitation to calculate an UK economy-wide pass-on rate. Mr Holt calculated such a rate based on his pass-on rates for Visa's 14 sectors and by applying a weighting to those results based on proportionate MIF expenditure. Dr Trento was not asked to provide his own calculation of a UK economy-wide pass-on rate.

479. Visa wanted this established for two purposes: (i) to provide a result for two sectors – Education & Government and Entertainment – in respect of which Mr Holt considered that he did not have any reliable evidence (see above); and (ii) for the purposes of Trial 3 at which the economy-wide rate may be relevant to the exemptability issue.

480. In relation to (i), there are two reasons why we do not think that the economy-wide rate is needed to fill any gaps in the sectors. First, we have found that there is evidence for the two sectors that we can rely on – UOM for Education & Government; and Sony for Entertainment – and we have largely rejected Mr Holt's evidence on this issue. Second, the Claimants do not necessarily cover the whole economy. The Claimants before us in this Trial 2 are effectively resisting the Defendants' mitigation defence and they should not be required to deal with an issue, however straightforward, that does not directly affect them in this trial.

481. As to (ii) and the benefit for all the parties in Trial 3 in having an economy-wide rate established, we agree that there would be some advantage to be gained from having dealt with that issue here and now. But the fact is that our findings on individual and sectoral rates of pass-on will be available to, and binding on the parties (subject to appeal), and as Visa asserts, it is a relatively straightforward arithmetical exercise to convert those rates into an economy-wide rate. The only thing that would need to be determined would be the appropriate weightings to apply to the different sectors, and what those sectors are. Those issues were not properly before us in this trial and therefore there would be an unfairness to the Claimants if we went on to find an economy-wide pass-on rate. In any event, any such rate would have had to be based on our findings above, which have largely been that there was no pass-on at all.

(16) Surcharging

482. There was a broad measure of agreement between the Claimants and Visa in relation to mitigation through surcharging. The issue of surcharging only arises in relation to a relatively small number of Claimants, 20 in total, who had for a part of the claim period a policy of surcharging customers for using the

Defendants' cards. The Claimants have always accepted that surcharging is a distinct and direct channel of pass-on that is effective in law to amount to a mitigation of their loss. But the surcharge has to relate directly to the unlawful MIF element of the MSC.

483. Both Mr Holt and Dr Trento attempted to estimate the extent to which surcharging mitigated the particular Claimant's loss. There were a few methodological differences in their approaches and both had difficulties with a lack of information in relation to certain Claimants. Visa had suggested that adverse inferences should be drawn against Claimants who had not provided information. Alternatively, Visa suggested that the requisite information should be provided now and the calculations then done.

484. However, it emerged in the parties' closing submissions, first from Ms Boyd KC speaking to this point on behalf of Visa, and deriving from the cross-examination of Mr Holt, that a way through this issue could be for the surcharging Claimants simply to deduct their surcharging revenue from the damages recovered from Visa. Each surcharging Claimant would need to provide their surcharging revenue for the claim period and for that to be deducted from the proportion of its claim value that is attributable to surcharged transactions.

485. Mr Beal KC in his submissions effectively, as we understood him, accepted this way of dealing with the surcharging Claimants. He clarified that the surcharging revenue that should be deducted from the overcharge losses must be only the amount that was in respect of the unlawful MIF element of the MSC. This must be right, as surcharging can only mitigate the loss suffered through the unlawful MIF and anything over and above that in the surcharge should not be taken into account as it is not causally connected to the MIF.

486. We assume therefore that that calculation can be done in relation to each surcharging Claimant and will direct that this is an appropriate way of dealing with this matter.

J. SUPPLIER PASS-ON

487. Supplier pass-on, which is category (iii) in the Supreme Court's fourfold classification of forms of pass-on in [205] of *Sainsbury's SC* – "*the merchant can seek to reduce its costs by negotiation with its many suppliers*" – is odd in this case both in the way that it has been run by the Defendants and in terms of whether it has any real credibility. Visa barely mentioned it in its positive case and made no submissions at all on it at the trial. Mastercard, by contrast, said quite a lot about it, although not in oral submissions, but its case seems to be wholly based on asking us to make adverse inferences against the Claimants because they have not, allegedly, provided the evidence that would show that they negotiated with their suppliers in response to a change in the MIF. That seems to us to be misconceived and speculative.

488. The same legal test for causation – a direct causative link – applies in relation to this form of pass-on, meaning that the Defendants would have to show such a link between an increase in the MSC and a reduction in another cost, or *vice versa*. It is obvious that that is likely to be difficult to prove on the facts.

489. Economic theory would suggest that supplier pass-on is implausible. It involves the notion that the Claimants had failed to negotiate as hard as possible with their suppliers in procuring goods and services, such that there was the possibility of negotiating those costs down further. It also assumes that a cost-change as small as the MSC could have prompted the Claimants to take such steps and to perform extensive costs reviews to determine whether there was any scope to renegotiate with their suppliers.

490. The economics experts were not instructed to consider supplier pass-on. But they all accepted, including Mastercard's own expert, Ms Webster, that supplier pass-on is not something that an economist would expect to happen in a well-run firm that would have already ensured that it does not pay more than it should to its suppliers. This point was well made by Mr Derek Ridyard in his dissenting opinion in [699] to [700] of *Royal Mail CAT*. It was also made by the CAT in *Stellantis NV v NTN Corporation* [2021] CAT 14 (upheld in [78] to [80] of the Court of Appeal judgment in *Stellantis*).

491. Mastercard challenged this theory by saying that in reality firms do not have perfect information and limitless management time that would ensure that they always had the best deal with their suppliers. It principally relied on Mr Harman's evidence which was to the effect that firms flex the extent of negotiation or renegotiation with suppliers to allow them to hit profitability targets. He expanded on his observation in his oral evidence by suggesting that "principal-agent theory" means there could be a misalignment of incentives between principal and agent leading to there being scope to find more costs savings should the firm need to do so. But there is simply no evidence that that sort of theory is actually borne out by any factual evidence that is before us.

492. It is also difficult to follow Mastercard's postulated counterfactual which is a substantial reduction in the MSC because of the unlawful MIF being removed. It is not plausible to suggest that the Claimants would have sought to renegotiate with their suppliers in such circumstances – would they be offering to pay more to their suppliers? Mr Harman could only point to the general budgeting process and the fact that firms would be bound to reassess their overall costs position if there was a substantial saving of costs by the reduction of the MIF to zero. But then it would be difficult to show any causal connection if the overall costs position is being looked at.

493. The factual evidence that Mastercard relies on is largely the same as was relied on in relation to the indirect mechanisms for pass-on into downstream prices, such as the Wagamama walkthrough discussed above at [199] to [203]. It also referred to snippets from the oral evidence from the Claimants' witnesses that suggested that higher MSC costs may lead to action to control other costs, but Mastercard mainly criticised the Claimants' evidence for failing to deal with the correct issue or not providing any documentary evidence to support their case that changes to such a small cost as the MSC would not prompt any renegotiation of their other costs.

494. As to adverse inferences being drawn against the Claimants because of their alleged failure to disclose relevant documents, it is difficult to see both the documentation that should have been disclosed in relation to whether there would have been renegotiation with suppliers in the event of a costs change and

the adverse inferences that could fairly be drawn if there was such a failure to disclose. Mr Harman complained about the lack of disclosure but he was seeking disclosure of impossibly broad categories of documents that showed a Claimant's budgeting process and its monitoring of costs and how it may deal with underperformance or overperformance in relation to suppliers. He recognised that there would not be specific documents dealing with the MSC but wanted these general documents to be able to assess how the particular Claimant might respond to changes in costs. Even if such documents existed and were disclosed, we do not think they would actually get Mastercard anywhere in proving a direct causative link between changes in the MSC and changes in other costs. Furthermore, the Claimants are not in breach of any order for disclosure made during the Redfern process or elsewhere.

495. We also do not understand what adverse inferences could properly be drawn from such an alleged failure of disclosure. We could not possibly find on the facts that the Claimants would have actually passed-on a change in the MSC to their suppliers by renegotiating with them. That would be to shift the burden of proof to the Claimants, which even bearing in mind what the Supreme Court said about the "*heavy evidential burden*" on the Claimants,[24] cannot be justified. It would amount to inferring facts for which there is no evidence, that both economic theory and commercial rationality would suggest would not happen, and certainly not for such a small cost like the MSC. Furthermore, we think that Mr Beal KC was right to submit that a likely reason for there being no evidence of supplier pass-on is that it simply does not occur.

496. In the circumstances, we find that the Defendants have not proved on the balance of probabilities that the Claimants have mitigated their losses from the payment of the unlawful MIF by passing those losses on to their suppliers by renegotiation of other costs.

[24] *Sainsbury's SC* at [216].

K. CONCLUSION ON MPO

497. As a result of our reasoning and findings set out above, our conclusions in relation to the Defendants' mitigation defence of MPO are as follows:

(1) The Defendants have not proved on the balance of probabilities any pass-on of the MSC by the Claimants into prices, save in respect of Travix, WorldRemit and the insurance underwriting business of Allianz, together with the sectors and sub-sectors to which those Claimants have been matched and save in respect of those Claimants who surcharged;

(2) As to those sub-sectors in respect of which pass-on has been established, we find that the following rates are applicable:

Sub-Sector	Rate of pass-on
Cash services (based on WorldRemit)	100%
Insurance Underwriting (based on Allianz)	46.7%
Travel agents and online intermediaries (based on Travix)	47.5%

(3) The Defendants have not proved on the balance of probabilities that there was any supplier pass-on by any Claimants.

TRIAL 2B: APO

L. ACQUIRER PASS-ON

(1) Introduction

498. We now turn to Trial 2B and APO, which in a sense should come first because it is the prior question of the extent to which acquirers have passed on to merchants the assumed unlawful MIF overcharge.

499. One feature of the proceedings relating to APO is that the CICC Claimants were joined to the Umbrella Proceedings for the purposes of the APO trial.[25] Where we refer to both the Merchant Claimants and the CICC Claimants collectively (which will be the case in most of this section) we will simply call them the "Claimants". The CICC Claimants instructed Dr Trento as their expert alongside the Merchant Claimants.

500. The important points about the CICC proceedings for present purposes are that:

a) They concern only commercial card MIFs which merchants have paid to acquirers as part of their MSCs;

b) They are divided into opt-in and opt-out proceedings against Mastercard and Visa respectively, with merchants as part of undertakings with annual revenue of £100 million or less being included in the opt-out claims and merchants with annual revenue above that level being eligible only for the opt-in proceedings;

c) The acquirers themselves are not represented in the proceedings. How acquirers behave in response to changes in MIFs is thus evidenced by the Claimants and/or the Defendants;

[25] See Umbrella Proceedings Order (Additional host case) dated 14 November 2024.

501. The scope of the dispute between the parties about the extent of APO narrowed during the course of the proceedings and is now limited to a relatively small difference. This is because:

a) It is common ground between the parties that APO for IC+ and IC++ contracts is 100%. This is because the structure of those contracts essentially provides for acquirers to pass on to merchants the MIFs in their entirety at whatever level they might be from time to time;

b) It is agreed between the experts that there is a material degree of pass-on for merchants on standard contracts, with the lowest estimate being 60% (from Ms Webster) and the highest being 100% (from Dr Trento's upper possible range, and from Mr Holt in respect of larger merchants).

(2) Burden of proof issues

502. There was a dispute between the parties relating to a request from Visa that we should determine an "economy-wide" APO rate, for much the same reason as it was asking us to determine an economy-wide MPO rate for the purposes of Trial 3. As explained in [478] to [481] above, we declined Visa's invitation in relation to MPO, and we similarly decline to do so in relation to APO. Visa will bear the burden of this for the purposes of Trial 3. But if we are not determining an economy-wide rate, it is accepted that the Claimants bear the burden of proof in this trial in relation to establishing APO as part of the exercise of quantifying their claim for damages.

503. Visa may well be correct that the burden point is an arid one, as the necessary exercise for an economy-wide rate simply involves weighting the different APO rates that we determine for different merchant groups (for example, the IC+/IC++ APO rate of 100% and any such rate (or rates) that we determine applies to merchants on standard contracts) to come up with a weighted average for the whole economy. But that weighting exercise will have to wait until Trial 3.

(3) Counterfactual

504. Another area of contention was the correct basis to formulate a counterfactual scenario by which the quantum of the Claimants' claims could be assessed. This took two forms:

a) Mastercard argued that the correct counterfactual is for the MIFs in question to be reduced to zero at the beginning of the claim period. Accordingly, the right question to ask would be whether acquirers would pass on to merchants the benefit of lower MIF charges;

b) Mastercard also argued that the counterfactual for the CICC Claimants' claims should involve only the reduction of the MIF applying to commercial card transactions (which is the sole subject matter of those claims) and that such a change would be unlikely to affect the overall charges (the MSC) from acquirers to merchants.

505. The Claimants disputed Mastercard's proposed counterfactual analysis. As to the first of the above points, the Claimants said that the real question is whether acquirers had passed on MIFs during the claim period, which required an empirical analysis of actual increases in MIFs. As to the second point, the Claimants said that it would be artificial and wrong in principle to ignore the other MIFs which are assumed to be unlawful as well as commercial card MIFs.

506. Visa took an essentially neutral position on both points, submitting in particular that we should look at the totality of the evidence, be it increases or decreases, rather than just focusing on one of those.

507. In our view, neither of Mastercard's points are correct. Our task is to assess whether acquirers have in fact passed on the infringing MIFs to merchants, and if so, at what level. Unlike the debate about MPO, there is no real dispute between the parties that the Claimants have proved on the balance of probabilities that there was a direct causative link between the MIF and the MSC. The issue is therefore not about the test for, or the fact of, causation, but rather to what extent the MIF has actually been passed on, applying the broad

axe. Furthermore, in APO the MSC is the product of a bilateral negotiation between the acquirer and the merchant, whereas in MPO, the merchant makes its own commercial decision on price. The issue of mechanisms for effecting pass-on does not arise in APO where the legal test for causation is satisfied.

508. We do not see how that question can adequately be tested by restricting ourselves only to consideration of counterfactuals where MIFs have decreased. On the contrary, we would have thought that evidence of increases was more cogent, because the premise is that acquirers have passed on to merchants the additional costs with which they have been burdened and the counterfactual we adopt should be designed to test that proposition.

509. We consider that evidence about the responses of acquirers to both increases and decreases in the MIF is likely to shed light on the question of the economic relationship between the fees acquirers charge merchants (that is, the MSC) and the MIF. Accordingly, we are open to considering counterfactual scenarios where the MIF both increases and decreases and that is the approach we have adopted in this judgment.

510. As to the proposed counterfactual for the CICC Claimants' claims, we agree with the CICC Claimants that it is necessary to assume that all MIFs in issue in these proceedings are unlawful and should therefore be removed from the counterfactual. That is consistent with the principle that a counterfactual should not be based on unlawful conduct.[26]

(4) The evidence

(a) Factual evidence

511. The Claimants relied on witness evidence which was filed in Trial 1[27] for the proposition that merchants, in their dealings with acquirers, understood the MIF elements of the MSC to be non-negotiable. They also relied on

[26] See *Dune Group Ltd v Visa Europe Ltd* [2022] EWCA Civ 1278, [2023] 4 CMLR 15 per Newey LJ at [39].
[27] Judgment of the Tribunal (Trial 1) [2025] CAT 37.

contemporaneous documents which evidenced the course of negotiations about MSCs between acquirers and merchants, which (the Claimants said) indicated clearly that MIFs were not treated as part of the negotiation and also that reductions in MIFs had been passed on.

512. The Claimants also submitted that the annual reports and financial statements of acquirers tended to show that they treated MSC income net of MIFs and scheme fees. This was said to be inconsistent with any suggestion that acquirers absorbed any significant part of the MIF as a cost.

513. The Defendants responded to this material with various points. They said that:

a) much of it was uninformative because it reflected (either generally in relation to annual accounts or specifically in relation to certain merchants) the presence of IC+ and IC++ contracts, under which full pass-on was a given;

b) the references to lack of negotiation of the MIF as an element of the MSC did not prevent the adjustment of the MSC to reflect overall margin for the acquirer, which might have the same effect as negotiating the MIF;

c) the accounting treatment by acquirers was not revealing in relation to how acquirers priced standard contracts for smaller merchants; and

d) the suggestion by the Claimants that the factual material (and common sense) was inconsistent with acquirers absorbing MIF changes ignored the extent to which acquirers had profit margins which were sufficiently generous to allow commercial decisions not to pass on MIF increases in full.

514. There were three reports by the PSR which are relevant to the parties' arguments:

a) The PSR's final report in its market review into card-acquiring services, dated November 2021 (the "**PSR's 2021 Report**"). In the course of this market review, the PSR obtained data from the five largest acquirers in the UK and carried out econometric analysis to test various points, including whether the cost savings from the coming into force of capped MIFs under the IFR in December 2015 had been passed on to merchants;

b) The PSR's final report in its market review of UK-EEA consumer cross-border interchange fees dated December 2024 (the "**PSR's 2024 Report**"). This exercise addressed specifically the removal of the IFR caps from UK-EEA transactions following the UK's departure from the EU in January 2021. One question considered was the extent to which the increases in these MIFs post-Brexit were passed on;

c) The PSR's final report in its market review of card scheme and processing fees dated March 2025 (the "**PSR's 2025 Report**"). The review concerned the competitive landscape for fees which the Defendants charge acquirers. In the course of considering that issue, the PSR looked at the extent of pass-on of these fees by acquirers to merchants.

515. The Claimants relied on these reports for conclusions that there is a high level of pass-on from acquirers to merchants of changes in the MIF (the PSR's 2021 and 2024 Reports) and scheme fees (the PSR's 2025 Report). For example:

a) The PSR's 2021 Report found at [5.66] that:

> "Our econometric analysis, presented in detail in Annex 2, indicates that Mastercard and Visa scheme fees were passed through by acquirers in full to merchants in all turnover groups. Evidence that acquirers passed through cost increases but not cost decreases (the IFR savings) could constitute further evidence that the supply of card-acquiring services is not working well. However, we have some concerns about the data on scheme fees that underpin the pass-through analysis, and the evidence is therefore less strong."

b) The PSR's 2024 Report found at [4.12] that:

> "As discussed in more detail in Chapter 6, our analysis of UK acquirer data for 2022 shows that the financial impact of the outbound IF increases on UK acquirers was modest. This is because most of these fees were passed on to UK merchants. Approximately 95% of all the outbound IF increases were passed

on to UK merchants either immediately (80%) or at some point (15%). Only around 5% of these increases were '*absorbed*' by a small number of UK acquirers and never passed on to merchants."

c) The PSR's 2025 Report noted, at [4.150], that:

"We also consider that the very high pass-through of fees from acquirers to merchants is likely to dampen acquirers' incentives to resist increases in core scheme fees, when these apply equally to all acquirers. For the merchants on IC++ pricing contracts, which account for the largest proportion of transactions by value, fee increases are automatically passed on to merchants. Even under other contract types, acquirers told us they would still pass most fee increases on to merchants at some point, although possibly with a lag."

516. The Defendants submitted that these observations were consistent with their analysis of high, but not complete, pass-on. In relation to the PSR's 2021 Report, the data on which the PSR reached its conclusions was made available in these proceedings and was the subject of further analysis by the experts, as discussed in some detail below.

517. In relation to the PSR's conclusions about the pass-on of scheme fees (as opposed to MIFs) which are recorded in the PSR's 2021 and 2025 Reports, the Defendants argued that these could not be carried across to the APO analysis relating to MIFs and that, at least in relation to the 2021 findings, the PSR had acknowledged deficiencies in the data.

518. There is one aspect of the PSR's 2021 Report which was particularly relied on by Visa and Mr Holt. The PSR conducted its analysis of data from the five acquirers by categorising the merchants to which the data related into eight segments. The first seven segments were based on the annual card turnover of merchants on standard contracts, while the eighth included merchants on IC+/IC++ contracts only. The following explains the card turnover thresholds for groups one to seven and the number of merchants represented in each group[28]:

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7

[28] PSR 2021 Report, Annex 2 at [1.30].

0 to £15,000	£15,000 to £180,000	£180,000 to £380,000	£380,000 to £ 1 million	£1 million to £10 million	£10 million to £50 million	Above £50 million
5,068	20,571	5,022	3,181	1,677	184	52

519. Mr Holt was of the view that the PSR's findings across the seven segments for merchants on standard contracts revealed a difference in APO rates between smaller and larger merchants. The threshold for becoming a larger merchant was said to be annual card turnover of £50m, which is the threshold for inclusion in the PSR's seventh group of merchants in its analysis. Merchants in groups one to six fell into a category of smaller merchants. Mr Holt's position was that models based on the data from acquirers provided estimates for smaller merchants which were materially lower than larger merchants. This was hotly contested by Dr Trento and the Claimants, who disputed that there was such a pattern. We will deal with these arguments in more detail later in this judgment.

(b) Expert evidence

520. As in Trial 2A, the following economic experts gave evidence in relation to APO, both individually and in the hot tub:

a) Dr Trento for the Claimants;

b) Ms Webster for Mastercard; and

c) Mr Holt for Visa.

521. They were broadly in agreement that economic theory would predict high or complete APO, on the basis that the MIF is an *ad valorem*, industry-wide marginal cost.

522. During the hot tub relating to APO, Professor Waterson pointed out that, while MSCs constituted a small part of a merchant's costs, the MIF probably represented the major part of an acquirer's costs. Therefore, it seemed highly

improbable that acquirers would pass on to a lower extent than merchants would. Accordingly, estimates of pass-on from merchants to consumers should form a lower bound to pass-on from acquirers to merchants. Eventually, all the experts accepted this.[29]

523. Moreover, the acquirer business model is based on making a return after MIFs, scheme fees and their own costs have been covered, so that persistently failing to pass on MIF increases would quickly lead to difficulties. As regards MIF decreases, at least some merchants demonstrate a willingness to switch acquirers. Hence, pass-on is likely to be high as a matter of economic theory.

524. However, all experts said that determining APO is more of an empirical question than a question which can be resolved simply as a matter of economic theory. As Dr Trento put it in his evidence in the hot tub:

> "Yes. I agree with Mr Holt and Ms Webster […] that acquirer pass-on is more of an empirical question rather than a question that can be resolved as a matter of economic theory. I think what you can do with economic theory is you derive a framework that then you use to design the empirical analysis, or you use in order to assess whether your empirical analysis or the results of your empirical analysis make sense. In my case, I estimate a high degree of pass-on, possibly complete, between -- in the range between 75% and 100%."

525. Ms Webster and Mr Holt also placed emphasis on particular features of the acquiring market which they said might, or did, indicate a different outcome from predictions based on economic theory:

a) Ms Webster argued it was unlikely that changes in MIFs would affect all merchants to a similar extent, or that merchants' price sensitivity in responses to changes in the MSC would remain constant, both of which she said were necessary conditions for the prediction of complete pass-on to be correct;

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[29] Technically speaking, the demand for acquirer services is a derived demand by merchants, derived from the demand by consumers for the merchants' product(s). As such, that derived demand is in most reasonable circumstances significantly more inelastic (less elastic) than the demand for the product by consumers so that the impact of a change in the acquirers' marginal costs would mostly be on price rather than quantity. Given this, the conclusion in the paragraph follows straightforwardly from economic analysis.

b) Mr Holt said that the market conditions faced by smaller merchants were such that there might be less than complete APO.

526. We will consider both of these points as part of our discussion of the weight to be accorded to the various aspects of the empirical evidence.

527. The empirical evidence itself was drawn from two sources:

a) Data gathered by the PSR from the five acquirers in the course of preparing its 2021 Report (the "**PSR Data**"), which was then supplied by the PSR to the parties to these proceedings by way of third-party disclosure; and

b) Data gathered in the course of these proceedings by way of third-party disclosure from three acquirers: **[✂]** (called "**Acquirer A**") **[✂]** (called "**Acquirer B**") and **[✂]** (called "**Acquirer C**") (collectively, the "**Acquirer Data**").

528. However, both sources of data suffered from features which made empirical analysis more difficult. For example, in relation to the PSR Data:

a) Given the way the PSR Data was aggregated (in that it did not always differentiate between different types of MIF), it was difficult to avoid the problem that changes in the mix of MIF transactions (for example, where in any particular period there might have been higher or lower volumes of higher or lower value MIFs) might suggest greater or lesser correlation between MIFs and MSCs than was actually the case;

b) There was only one significant event during the period of the PSR Data (January 2014 to December 2018) in which there was a significant change in MIFs. That was the introduction of the IFR caps in December 2015 which would have been widely anticipated, making it less useful for an event study;

c) The number of larger merchants represented in the PSR Data is small compared with the representation of smaller merchants. Most (57.17%) of the merchants included had turnover in the £15,000 to £180,000 range, while fewer than 1% of merchants on standard contracts had turnover of greater than £10 million.

529. In relation to the Acquirer Data, Mastercard reminded us that this material is different from the transaction data processed by the Defendants at the time. It is instead cost and price data taken from an acquirer's internal accounting systems which the acquirers had been asked to compile, present and label in accordance with the requests from the parties to these proceedings. Material parts of the Acquirer Data seemed to suffer from serious problems which were acknowledged by the experts, but it was not possible (given the proximity to trial of the receipt of the data) to determine whether this was because of errors (and, if so, whether errors of recording or extraction), misunderstandings, or some other reason. Examples of the problems are as follows:

a) There were obvious anomalies in the data received from Acquirer A, which all experts agreed rendered it unsuitable for reliable empirical analysis. Although Ms Webster carried out some analysis based on this data, she acknowledged that it was not a reliable source of evidence;

b) In relation to the data from Acquirer B and Acquirer C, there were transactions recorded which seemed obviously contrary to the likely level of MIF charged, with some MIFs recorded as being many times higher than the level permitted by, for example, the IFR;

c) Similarly, there seemed to be timing anomalies whereby changes in MIF levels were recorded in the Acquirer Data at times which did not correspond to the actual dates on which those MIF levels were changed by the Defendants.

530. Overall, this meant that the various analyses conducted by the experts on both the PSR Data and the Acquirer Data needed to be approached with considerable care. It is fair to say that not one of the analyses carried out by an expert was

immune from serious criticism from one or more of the other experts, as a consequence of shortcomings in the data used in that analysis.

531. Beyond that, there were also significant disagreements between the experts about modelling approaches and choices. We set out the more important disagreements below, as background to the discussion of the empirical analyses that follows:

a) Event studies or general models: Ms Webster expressed a preference for analysing the relationship between MIFs and MSCs through general models which test for the correlation of the two. She primarily used the PSR Data for that purpose. Mr Holt preferred event studies, which consider changes in the MSC or MIF margin by reference to a specific change in the MIF (in other words, by reference to a natural experiment in which there has been a change in the MIF). Dr Trento carried out general analysis on the PSR Data in his initial report, but by his reply report had shifted to a preference for event-specific analysis. It should be noted that there were two different types of event studies put forward by the experts: (1) where a dummy variable is used as the main explanatory variable of interest alongside other independent variables; and (2) the more sophisticated "difference in difference" or "**DiD**" approach, in which the MSC or MIF margin for one group of merchants affected by the change (or "*treatment*" in DiD parlance) is compared with a group which is not affected (the "*control*" group). Only Mr Holt carried out a DiD study, although it was not a pure form of DiD as the comparator group of merchants was still affected by the MIF change, but just to a lesser extent.

b) Normalisation: In order to avoid spurious correlation between MIFs and MSCs, models need to account for changes in MSCs that are due to changes in the value of card transactions. This can be done by "normalising" the MSC by dividing it by the value of card transactions (the approach followed by the PSR) or dividing it by the number of transactions and including an explanatory variable to capture the effect of card transactions on the MSC. Dr Trento preferred this second

approach, because, he said, it is a more flexible approach, especially given the MSCs are not fully *ad valorem* (that is, there are some fixed elements in some of the fees). Ms Webster and Mr Holt said that Dr Trento's approach did not resolve the issue he identified and created further issues. This dispute only affects the general models, as Dr Trento used the same approach as the PSR in his event studies.

c) Levels and logs: Models in levels use the raw values from the data, whereas models in logs use natural logarithmic transformations. Models in levels tend to be most useful where there is an expectation of a constant pass-on rate and models in logs tend to be most useful when there is not that expectation. All experts modelled in logs and levels to some extent in Trial 2A. In Trial 2B, Dr Trento modelled in logs (and levels), while Ms Webster and Mr Holt primarily modelled in levels. Ms Webster and Mr Holt said that using logs unnecessarily complicated the exercise in Trial 2B, in particular given the need to determine a cost/price ratio for modelling in logs, which was itself an uncertain exercise.

d) Aggregation: The experts took different approaches to the level of aggregation of the data which they used in their models. Dr Trento and Ms Webster conducted analysis at a relatively high level of aggregation. Ms Webster did so to the extent that, in relation to the Acquirer Data, the number of observations was reduced from **[✂]** to between **[✂]** and **[✂]** observations, which was a decision criticised by Dr Trento and Mr Holt. Mr Holt conducted his analysis on the basis of a range of aggregated and disaggregated data.

e) Data Cleaning: The PSR had conducted a data cleaning exercise in relation to the PSR Data. All experts agreed that some degree of data cleaning was required, but Dr Trento was criticised for taking an extreme approach. For example, in relation to Acquirer B's data, he removed **[✂]** of the observations, in some cases without being able to identify the reasons why the data was apparently problematic and required removal.

f) Time trends: The experts took different approaches to the inclusion of a variable to control for changes in MSCs which are unrelated to changes in MIF rates over time. Mr Holt used time trends in his analysis. Ms Webster used one in some instances but generally took the view that it was not necessary as it was unlikely to be a major factor in the analysis. Dr Trento did not use a time trend, mainly on the basis that he had a preference for analysing the data over a short time window to avoid the problems of any variation which is unrelated to the event under consideration.

(5) Studies based on the PSR data

532. All three experts used the PSR Data in some of their models. Ms Webster and Mr Holt both recognised limitations in the PSR Data but considered those limitations to be manageable and therefore the PSR Data to be reliable. Ms Webster noted that:

a) The PSR Data captures the most significant pricing change for MIF-related events;

b) Given the wide range of consumer card transactions affected by the IFR, there is a relatively small "signal to noise" problem so that it should in principle be possible to identify the relationship between changes in the MIF and the MSC;

c) The PSR Data includes granular information on interchange fees, which helps control for transaction mix effects; and

d) The data gathering exercise by the PSR was robust and the subsequent analysis was thorough.

533. Dr Trento initially used the PSR Data for general analyses and event studies, but revisited that approach in his responsive report, preferring at that stage not to use the PSR Data:

a) In his third report, he reviewed the PSR's general analysis and identified a number of issues with that. Dr Trento then adjusted the PSR's models to adopt a different approach to normalisation and to use a model in logs, rather than the PSR's approach of a model in levels. This resulted in a range of estimates for APO between **[✂]** and **[✂]**, with an average of **[✂]** and a midpoint of **[✂]**;

b) Also in his third report, he conducted an alternative event analysis using the PSR Data, focusing just on consumer card transactions available from three of the acquirers, which gave rise to an estimated APO rate of **[✂]** for merchants on standard contracts, with the rate for larger merchants being **[✂]** and the rate for smaller merchants (less than £50 million turnover) of **[✂]** to **[✂]**, excluding the smallest group of merchants for which the estimated rate was **[✂]**.[30]

534. Ms Webster chose to undertake a general analysis of the PSR Data as her primary empirical analysis. Her reasons for this choice, over the use of event studies were as follows:

a) The changes in MIFs under the IFR occurred over a period of time, making an event analysis more complex;

b) A general analysis can be assumed to deal with mix effects more efficiently, on the assumption that mix will be reasonably constant over the longer term;

c) Event analysis cannot control for variation in MIFs outside of the IFR change, because it uses margin, not the MIF itself, as the dependent variable.

535. However, Ms Webster did acknowledge that general models might be more susceptible to pass-on estimates being affected by short term changes in transaction mix, if not properly controlled for. She included controls in her

[30] A negative pass on rate suggests that MSCs reduced in the face of increasing MIFs, and is generally considered by the experts to be an implausible outcome.

models which she said dealt with transaction mix factors to a reasonable extent and also conducted sensitivity analysis on additional controls, which suggested that any obvious additional controls would have no significant impact.

536. On the basis of that analysis, Ms Webster concluded that her analysis of the PSR Data indicated that the extent of APO for the IFR savings is likely to have been in the range of **[✂]** for merchants on standard contracts, reflecting an average of results across the five acquirers in the PSR Data of **[✂].**

537. The Claimants challenged that approach on a number of bases:

a) It was inconsistent with the economic theory adopted by Ms Webster, which she acknowledged led to a benchmark case of 100% pass-on;

b) The PSR Data on its face included one outlier figure for one of the five acquirers, which was **[✂]** being **[✂]** lower than the next lowest estimate. Ms Webster acknowledged in cross-examination that this figure was very far from her benchmark based on economic theory, but she had been unable to identify any particular problem with it or to advance theories as to why the figure for this particular acquirer might be lower than the others. She also calculated the average excluding this figure, with a resulting estimate of **[✂]** (as compared with **[✂]** with the figure included);

c) The estimated model exhibits a poor overall fit of the model to the data (evidenced by the low R^2 coefficient), suggesting that there is significant unexplained variation in the MSCs, quite possibly as a result of transaction mix effects;

d) Ms Webster adopted the PSR's approach to normalisation, which is problematic where the MIF is not entirely *ad valorem* (for example, because there are some fixed fee elements to the MIF such as a pence per transaction structure);

e) The small representation of larger merchants in the PSR Data made it inappropriate to rely on the results for that group of merchants. The Claimants said that Ms Webster had acknowledged this in her third report at [8.23].

538. Mr Holt used the PSR Data to adapt models which the PSR had used to run an event-specific analysis on changes in the margin for the MSC or MIF by reference to the implementation of the IFR. His adaptions were as follows:

a) The incorporation of a time trend in order to account for pre-existing trends in margins and MSCs — this produced an estimate of APO for merchants with annual card turnover between £15,000 and £50 million of **[✂]** (up from the **[✂]** identified by the PSR in its model);

b) Narrowing the analysis from all transaction types to just consumer transactions, given that the IFR only affected MIFs relating to consumer cards - this produced an estimate of APO for merchants with annual card turnover between £15,000 and £50 million of [✂];

c) Conducting a DiD analysis for consumer cards specifically - this produced an estimate of APO for consumer card MIFs for merchants on standard contracts of **[✂]**. As noted above, this was not in fact a clear DiD analysis, because the comparator group was affected by MIF changes, albeit to a lesser extent.

539. Mr Holt referred in his thirteenth report to a DiD analysis for another event, which was the Mastercard increase for contactless domestic commercial card transactions in 2017. An analysis conducted by Mr Holt in an earlier report suggested a pass-on rate for blended contracts of **[✂]**. We did not understand him to put any material emphasis on the results of this analysis.

540. The Claimants challenged Mr Holt's reliance on the PSR Data and his event studies in a number of ways:

a) The finding of **[✂]** APO and Mr Holt's reliance on **[✂]** in his adapted model were so low as to be obviously implausible. That undermined the plausibility of the higher figures of **[✂]** and **[✂]** he obtained and also undermined Mr Holt's theory of lower APO for smaller merchants;

b) Mr Holt's analysis included the outlier data from one acquirer (see the criticism of Ms Webster's analysis above), which skewed the APO rates downward by **[✂]**, as Mr Holt's own sensitivity analysis showed;

c) The PSR Data generally has other shortcomings (see the criticisms of Ms Webster's work above);

d) The models used by Mr Holt did not include all transactions affected by the IFR but did include large volumes of consumer transactions which were unaffected by the IFR. For example, the main effect of the IFR was on credit card transactions, whereas consumer debit card transactions were much less, if at all, affected. Additionally, international payments were unaffected.

541. The Claimants also challenged Mr Holt's reliance on trends across the PSR's merchant groupings to establish that there was a different APO outcome for smaller merchants. In fact, they said, there was no consistent or systematic relationship between the estimated rate of APO and merchant size.

(6) Studies based on the Acquirer Data

(a) General studies based on the Acquirer Data

542. Ms Webster used the Acquirer Data to conduct two sets of general pass-on analyses. The first was to analyse the relationship between the average MSCs and MIFs for all card transaction types, for each of the Acquirer A, Acquirer B and Acquirer C data. The second was limited to only inter-regional consumer transactions across all three acquirers. The more plausible (in her view) of the analyses indicated APO in the range of **[✂],** but she considered the estimates overall to be substantially less reliable than those emerging from her analysis of

the PSR Data. Both Mr Holt and Dr Trento agreed that Ms Webster's general pass-on analysis of the Acquirer Data was likely to give unreliable estimates of APO.

(b) Event Studies – the Brexit MIF increase

543. Dr Trento described in his third report an event study which he had carried out into the increase by Visa and Mastercard of MIFs for UK/EEA card not present ("**CNP**") transactions which followed the UK's exit from the EU on 31 December 2020 and the consequent dis-application of the IFR to those transactions. These MIFs increased from 0.2% and 0.3% (for debit and credit cards) to 1.15% and 1.5% (increases of 0.95 percentage points and 1.2 percentage points respectively).

544. Dr Trento used data from Acquirer B for this exercise, which involved six different models, all showing high (**[✂]**) rates of pass-on. The average estimated pass-on across all models was **[✂]**.

545. However, Dr Trento noted that there was a timing mismatch in the Acquirer B data, which suggested that the increase in the MIFs took place before the decision by the Defendants to increase those MIFs. It was not clear what the reason for that was and the Defendants suggested to Dr Trento that complexities as to the changes in the classification of inter-regional and intra-regional generally made Dr Trento's models unreliable as a guide to APO for the Brexit Event.

546. Dr Trento was reluctant to accept that, despite the uncertainties, his models were unreliable, relying on the increases shown in the Acquirer B data and the clear correlation with changes in the MSC.

547. Dr Trento was also criticised in relation to:

a) His data cleaning approach to the Acquirer B data, which removed a very significant proportion of the observations. He defended his position by saying that he had followed the cleaning approach adopted by the

PSR (although Dr Trento's approach removed a considerably greater proportion of observations than the PSR had);

b) The treatment of MIF rates in the Acquirer B data which exceeded the regulatory caps under the IFR (which were numerous and unexplained) and the rates that exceed the published rates charged by the Defendants at the time (which he did not remove);

c) Not checking whether there was any correlation between the MIF changes for card present ("**CP**") transactions in the Acquirer B data, given the potential for those changes to affect MSCs if Acquirer B did not offer separate rates for CP and CNP transactions in its MSC fee structure.

548. In his fourth report, Dr Trento carried out a similar event study for the Brexit Event using data from Acquirer C. This showed high levels of pass-on which Dr Trento said was consistent with full APO to merchants on standard contracts of the increase in MIFs associated with Brexit.

549. However, there were also problems with this data, which indicated, on a number of occasions, that the MIF rates charged differed materially from the rates which were actually set by the Defendants. This was the case for some rates where the data suggested rates above the IFR caps and the rates set by the Defendants, and also the case for some rates which the data suggested were substantially lower than the rates set by the Defendants. Dr Trento was also criticised for combining credit and debit transactions for Visa, despite knowing that there were problems with the data on credit transactions. He was also criticised for not investigating the potential for Visa CP and CNP rates to be blended in Acquirer C's standard contracts.

550. Dr Trento explained that the short time available for the preparation of his fourth report meant that it had not been possible to deal with some of the issues arising from the data. He accepted that there were problems with the analysis for the data relating to Mastercard and for Visa credit transactions but maintained that the data relating to Visa debit transactions was useful.

551. Mr Holt conducted some initial analysis of the Brexit Event by reference to the data of Acquirer B and Acquirer C but concluded that the anomalies in the data made them unsuitable for an event study. Ms Webster did not conduct a Brexit Event analysis using Acquirer Data.

(c) Event Studies – the 2019 Commitments decrease

552. In his thirteenth report, Mr Holt conducted an analysis of an event in which the MIFs for inter-regional cards were reduced by reason of commitments given by the Defendants to the European Commission in 2019. Mr Holt created separate models using data from Acquirer B and Acquirer C. The APO estimates this work produced were **[✂]** and **[✂]** respectively for smaller merchants and **[✂]** and **[✂]** respectively for larger merchants.

553. However, on 4 March 2025 and just before service of his reply report on APO, Mr Holt (through Visa's solicitors) advised us that, due to a coding error in the models he had used, he wished to amend his thirteenth report to reflect the correct, adjusted estimates for the models using Acquirer B and Acquirer C data. These became **[✂]** and **[✂]** respectively for smaller merchants and **[✂]** and **[✂]** respectively for larger merchants.

554. Unsurprisingly, the Claimants submitted that these corrected figures, and especially the extent of the change in the smaller merchant estimates, undermined the evidence base for, and the rationale of, Mr Holt's conclusions about a lower APO for smaller merchants.

555. Mr Holt also conducted, in his fourteenth report, an analysis of the 2019 Commitments decrease based on Acquirer C data and using (with some adjustments) the model specifications which Dr Trento had used to analyse the Brexit Event.[31] This produced a range of estimates between **[✂]** and **[✂]** APO. Mr Holt also used these models to analyse differences in APO between larger

[31] Mr Holt also performed the same exercise in relation to models which Mr Coombs had specified for the Brexit Event. Mr Coombs did not give evidence in Trial 2B and we have therefore not attached any weight to those models or Mr Holt's adaptation of them.

and smaller merchants. He concluded that there was a difference, but only as between **[✂]** for smaller merchants and **[✂]** for larger merchants.

556. Dr Trento also addressed the 2019 Commitments decrease in his reply report, by way of an event study using Acquirer B data and the model specifications which he had constructed for the Brexit Event in his third report. This produced an estimate for all merchants of between **[✂]** and **[✂]** (being **[✂]** at the lower end of the range than Mr Holt's amended estimate in his thirteenth report).

557. Dr Trento was criticised by the Defendants for failing to recognise that Acquirer B often charged a blended rate for CP and CNP transactions and also for discarding the CP estimates in favour of the CNP estimates. Dr Trento did so because he applied a sense-check of testing the model with IC++ data to see if it corresponded to expectations of complete pass-on. However, he was said to have performed the test inaccurately and therefore to have disregarded the CP estimates, which were intuitively more useful because the change in MIF rate was considerably greater.

558. Mastercard was critical of both Dr Trento's and Mr Holt's extensive cleaning of data which removed a large proportion of transactions in their event studies but still left in the data transactions which were inconsistent with the actual MIF rates set by Mastercard and Visa.

(d) Event Studies – the 2022 Visa Commercial Card increase

559. In his thirteenth report, Mr Holt also conducted an analysis of an event in which the MIFs for Visa-issued commercial cards increased in 2022. Again, Mr Holt created separate models using data from Acquirer B and Acquirer C. The estimates this work produced were **[✂]** and **[✂]** respectively for smaller merchants and **[✂]** and **[✂]** respectively for larger merchants.

560. These estimates were also subject to revision in Mr Holt's amended thirteenth report - they became **[✂]** and **[✂]** respectively for smaller merchants and **[✂]** and **[✂]** respectively for larger merchants.

561. In his fourth report, Dr Trento used Acquirer B's data to conduct an analysis of APO for Visa commercial debit card MIFs in relation to the 2022 Visa commercial card increase. The analysis was limited to debit cards only, as these were the only MIFs affected by the change, and Dr Trento's view was that Mr Holt's approach of including transactions for Visa commercial credit cards and Mastercard debit and credit commercial cards (all of which were unaffected by the MIF increase) diluted the effect of the event in the study. This nevertheless produced a similar outcome to Mr Holt's analysis, showing APO of [✂] over a twelve-month period.

562. The Defendants criticised Dr Trento's estimate of [✂] on the basis that he was extrapolating inappropriately from the estimates he had identified for shorter periods after the MIF changes, using a rolling average rather than the average for fixed periods. Mastercard was again critical of both Dr Trento and Mr Holt's extensive cleaning of the data which removed a large proportion of transactions.

(7) Summary of the range of expert estimates of APO

563. The Table below summarises what we consider to be the important outcomes from analyses undertaken by the experts using different data sources:

Data Source	Nature of study	Dr Trento	Mr Holt	Ms Webster
PSR Data	General pass-on model	[✂]	-	[✂] (excluding one acquirer)
	Event study – IFR	[✂]	[✂][32]	-
Acquirer Data	General pass-on model	-	-	[✂]

[32] The differing results refer to analysis undertaken using: PSR Unconstrained Model of the IFR and adding time trend; PSR Unconstrained Model of the IFR using only consumer card transactions and adding time trends; and Consumer cards DiD Analysis, respectively.

	Brexit Event	[✂][33]	-	-
	2019 Commitments decrease	[✂]	[✂][34] [✂][35]	-
	2022 Visa commercial card increase	[✂]	[✂][36] [✂][37]	-

(8) Analysis of the evidence of APO

(a) Introduction

564. In its closing written submissions on APO, Visa described the position as follows (the emphasis is ours):

> "3. The instructed economic experts for all three parties are agreed that (i) applying the tenets of economic theory alone, acquirer pass-on is likely to be material; but (ii) determination of the precise rate of "acquirer pass on is more of an empirical question than a question that can be resolved as a matter of economic theory". Each of the experts have addressed that relatively narrow empirical question using (to differing degrees) the two sources of data available to them, viz.: (i) data from five acquirers that the PSR gathered and cleaned for the purposes of the PSR [2021] Report […] and (ii) data provided by three acquirers specifically for the purposes of Trial 2B […]. They have taken different approaches to reliance on and preparation of that data, and they have also run different analyses on the data sets. Those differences are addressed in Section V below, where Visa explains why Mr Holt's choices are more reliable and to be preferred. Notwithstanding those differences, the experts' ultimate conclusions are relatively closely aligned, with Mr Holt concluding that pass-on was 75% for smaller merchants on standard contracts and 100% for larger merchants on standard contracts; Dr Trento concluding that pass-on for all merchants on standard contracts was between 75-100%; and Ms Webster

[33] [✂] is the average estimate across all models; and [✂] is the mid-point.

[34] This range refers to pass-on rates for merchants on standard contracts with card turnover of less than £50 million.

[35] This range refers to pass-on rates for merchants on standard contracts with card turnover of more than £50 million.

[36] This range refers to pass-on rates for merchants on standard contracts with card turnover of less than £50 million.

[37] This range refers to pass-on rates for merchants on standard contracts with card turnover of more than £50 million.

concluding that pass-on for all merchants on standard contracts was between 60-80%."

565. We think this summarises the position very well, and it also makes the point that the Defendants had by that stage, to a very large extent, conceded substantial APO. That is a position which is largely consistent with economic theory.

566. However, we do recognise that there are some aspects of economic theory which may point towards less than complete pass-on. As Ms Webster noted, a monopolist is presumed not to pass on cost increases or cost decreases in full, because out-of-market, not in-market, constraints will be the important factor in determining the firm's prices. While the acquirers are not operating as monopolists, they do have a degree of market power, in particular in relation to smaller merchants, where contracts tend to be open-ended, the merchants are unlikely to have dedicated teams managing their MSCs and (as Ms Webster again pointed out) there is evidence that for some merchants the MSC might amount to as much as 7% of their revenue. This provides a basis for an argument, at least in theory, that smaller merchants may face lower levels of APO than larger ones. We will return to this point in more detail shortly.

567. Ms Webster pointed out that there are four conditions which need to be satisfied in order for 100% pass-on to be assured. One of these is no "out-of-market" constraint, whereas arguably some sellers would base their decision as to whether to accept cards on the costs involved. She also argues that price sensitivity by merchants may vary depending on the size of the charges. Both of these are reasonable points at the theoretical level.

568. We therefore agree with the experts that economic theory is not sufficient to provide a reliable point estimate of APO and that we need to consider the evidence, and especially the empirical evidence, in order to reach a reasonably precise and reliable estimate of APO.

(b) Some general observations about the empirical studies

569. The exercise of empirical analysis might at first sight seem likely to be a simple one, given the availability of instances of MIF changes to study and the apparent

means to identify the effect through event studies in particular. However, in reality it is an inherently difficult exercise which does not easily lend itself to precise and reliable estimation. This is primarily because of the need to separate the different effects of MIF changes on different types of card.

570. For example, in any analysis of the IFR it is necessary to take into account different levels of change in the MIF relating to credit cards and debit cards. Similarly, other events which have led to MIF changes tend to involve relatively small categories of card transactions (such as inter-regional card transactions) with different MIF rates applying to CP and CNP transactions. In order properly to identify the relationship between a particular MIF change and a particular transaction type, it is necessary to be able to isolate the transactions clearly in the data. That is not always possible, because it is difficult to disentangle one type of card transaction from another in the relevant data sets.

571. There are also questions about the basis on which the data has been accumulated and presented, which have been difficult to resolve (especially in relation to the Acquirer Data, where the experts had insufficient time to pursue enquiries with the relevant acquirers).

572. Given these conditions, it is not surprising that we have been presented with a set of estimates which vary considerably from each other, with no obvious reason why that should be the case. For example, Mr Holt's event studies for the 2019 Commitments decrease vary materially for the two acquirers he studied, which is probably because the transactions in question (inter-regional card transactions) comprise a small subset of overall card transactions and are difficult to identify cleanly.

573. While the experts have done their best to address the problems identified above, their differing modelling choices for that purpose have illustrated the extent of the problem by producing a very wide range of results, and in some cases entirely implausible estimates. To a large extent, that has meant that the arguments about the modelling choices have become less impactful, as we do not have great confidence in the reliability of the underlying material even before the modelling choices have been applied. We will, however, deal further

below with the arguments about modelling choices and their relative importance.

574. In any event, the experts have between them managed to mount credible challenges to every one of the models the others have produced, so that none of the analyses conducted by them can be said to carry particular weight as an obviously reliable outcome. That applies also to the work of the PSR, given the issues that have been identified with the analysis it has carried out.

575. As a consequence, we are not in a position to, and do not, treat any of the studies carried out by the experts as anything other than indicative.

576. We should add that the experts all agreed that the data provided by Acquirer A was problematic for a variety of reasons and that any studies based on that should be given no weight. We agree. There is a subsidiary issue about whether data from the same acquirer within the PSR Data is reliable, which we will deal with shortly.

(c) Disputes about modelling choices

577. We can deal with most of these relatively briefly, as few of the points in dispute seemed to us to be material to our decision about the APO rate:

a) Event studies or general models: We consider event studies to be more informative than general studies, given in particular the existence of several events and the difficulties in dealing with the transaction mix problems which arise in relation to general studies. While we accept that Ms Webster has taken steps to address transaction mix effects to the extent she sensibly can, we have a preference for the more focused event studies which are more likely in our view to establish a causative relationship between changes in MIFs and MSCs. We would also have had a preference for a DiD study which included a comparator group which was unaffected by the MIF change, but no expert carried out such a study (no doubt because of the difficulty in identifying the relevant comparator group). Mr Holt's DiD studies in relation to the PSR Data

were in our view little better than dummy variable studies by reason of the MIF impact present in the comparator group.

b) Normalisation: In the period where the MIF had **[✂]**, as the PSR did, has the potential to yield erroneous values of the pass-on rate. For this reason, Dr Trento engages in alternative approaches including normalising by the volume of transactions, although this is again imperfect. Once the MIF became entirely *ad valorem*, as it did after the IFR, the need for normalisation drops away.

c) Levels and logs: It was not clear to us why Dr Trento thought it necessary to conduct studies using logs, other than (as he said) by reason of consistency with his work on MPO. It seems to us that studies using levels were adequate for the purposes of these proceedings. In any event, having the studies using logs has not been unhelpful in providing a further range of estimates to consider.

d) Aggregation: Ms Webster's approach of using highly aggregated data seemed suboptimal to us, given that the experts had access to a great deal of detailed observations, whereas Ms Webster's approach only led to consideration of a small number of those. We preferred Mr Holt's approach of using both aggregated and disaggregated data in his studies.

e) Data cleaning: We had some sympathy for Dr Trento's position that he needed to undertake extensive cleaning of the Acquirer Data, both to deal with anomalies in the data and to provide consistency with the PSR's approach. However, there did seem to be a degree of inconsistency in the approach in practice. The need for such significant intervention also tended to confirm our view that the underlying data was in many respects problematic, no doubt reflecting the way in which individual acquirers recorded and stored transaction data.

f) Time trends: We were inclined to agree with Ms Webster's view that time trends were not a major factor to control for. We found Mr Holt's

argument about the need for time trends to be unconvincing, as the data did not on its face seem to suggest a need.

578. As already noted, our view is that the difficulties in dealing with the underlying data mean that even a perfectly constructed model would be likely to exhibit some problematic features. While the arguments about model specifications have had some impact on our assessment of the various studies, they have not for the most part carried great significance when we have come to assess the weight to be given to the estimates arising from the different studies.

(d) Rockets and feathers

579. The debate about whether there might be different rates of APO for MIF increases and MIF decreases has little practical significance, given that we have rejected Mastercard's argument to the effect that we should prefer evidence which concerns MIF decreases. It seems to us that there might in principle be reasons why, for blended contracts, a MIF decrease might be passed on more slowly than a MIF increase, given the nature of those contracts and the processes for reviewing them, and the likelihood of a degree of market power for acquirers in their dealings with smaller merchants in particular.

580. However, all the experts agreed that they expect APO would take place in a relatively short window (most likely between eight months and a year) and that such APO as would occur, would take place within that period. We would therefore expect any timing difference arising from the nature of the change (increase or decrease) to resolve itself within that period. Beyond that, we would not expect (as a matter of principle and by reference to the evidence before us) there to be any persistent difference in pass-on rate for increases or decreases in the MIF.

(e) Different APO rates for different size merchants?

581. As we have already noted, there is some basis in economic theory for the proposition that smaller merchants may have a different APO rate from larger merchants, because of mainly practical issues relating to the management of

MSCs. There seems to be good reason to believe that smaller merchants are less likely to have the resources to review and challenge the treatment of MIF changes in relation to their MSCs.

582. That position is compounded by the lack of transparency in many blended contracts, so that it is not obvious what any particular MIF rate is, let alone what the impact of any change might be. That transparency is, we understand, the reason why merchants (and especially larger merchants) have tended to migrate to IC+ and IC++ contracts, where they are of course more directly exposed to the effect of any MIF changes, but also have greater clarity on the components of the MSC charge and, in particular, the competitive level of the acquirer's own fees.

583. Having said that, it was apparent to us that the delineation of blended contracts and IC+/IC++ contracts was not a bright line, but instead was more nuanced, with many so-called blended contracts providing considerable, itemised detail about various charges for card types, implying that a differential charging structure for MIFs was being operated. The parties each referred us to statements from merchant acquirers, which suggested that blended contracts involved multiple pricing options that evolved over time and varied across sales channels. One acquirer's data suggested that for certain tariff categories, detailed transaction breakdowns were available to merchants, which included breakdowns on a transaction level of the MSC, the interchange fee and relevant scheme fees.

584. The Claimants argued that it was not economically rational for acquirers to do anything other than pass on increases in MIF rates. Even if it was possible that acquirers might take some time to pass on MIF decreases (or indeed, might never pass them on in full), they argued that acquirers had both the means (under the blended contracts) and the incentive to pass on MIF increases. They submitted that it was implausible that acquirers would pass on more of a MIF increase to larger merchants (who would have greater bargaining power) than to smaller merchants.

585. The Defendants submitted that that was not necessarily the case, as the extent of acquirer margins with smaller merchants might allow them to absorb MIF increases, at least to some extent and for some period. The reason to act that way was said to be to avoid the risk of provoking those smaller merchants to consider switching, which would put the entire margin (as opposed to just the lost margin associated with the MIF increase) at risk.

586. We agree that there is at least an arguable basis for the proposition that acquirers might choose to refrain from passing on MIF changes (increases and decreases) to some merchants for at least some period of time. While the Claimants' arguments about the inconsistency of that outcome with the relative bargaining positions of the respective merchant groups has considerable force, we would not wish to exclude the possibility that the market structure and features might provide different real-world incentives for acquirers to take such an approach.

587. The question then becomes how one determines which merchants might be treated in that way and whether the evidence supports a finding of differential APO rates over any period by reason of size of merchant.

588. Mr Holt was the only expert who attempted a comprehensive answer to this question. He adopted the classification in the PSR's 2021 Report of merchants into seven different groups by virtue of their annual card turnover. He then used those same groups to analyse pass-on rates in his various studies, reaching the conclusion that there were differential rates suggesting lower pass-on rates for smaller merchants.

589. However, following the amendments made by Mr Holt to his thirteenth report, it became apparent that the event studies in relation to the 2022 Visa commercial card increase and (to some extent) the 2019 Commitments decrease no longer supported his argument that smaller merchants had lower pass-on rates. For example, in one of his models for the 2019 event, the implied pass-on rate for the smallest merchants in the Acquirer C sample now showed **[✂]** pass-on, compared with less than **[✂]** for group 6 (annual card turnover between £10 and £50 million) and just over **[✂]** for group 7 (annual card turnover in excess of £50 million).

590. Similarly, his amended analysis of the 2022 event showed the average of both Acquirer B and Acquirer C merchants with annual card turnover under £50 million exceeding **[✂]**, while the Acquirer C merchants with annual card turnover in excess of £50 million has an estimated pass-on rate of under **[✂]**.

591. His analysis therefore ultimately depended on:

a) The event study for the 2019 Commitments Decrease using Acquirer B data, which showed a higher APO rate for group 6 than for groups 1 to 5. However, the estimate for the APO rate for groups 1 to 5 varied considerably, with group 2 having a rate of nearly **[✂]**, while the rate for groups 3 and 4 was comfortably under **[✂]**;

b) The data from the PSR's 2021 Report, both by reference to the PSR's own analysis and the adjusted models used by Mr Holt. While we agree with Mr Holt that there is some evidence on the basis of that report to suggest differential rates for the seven groups, we do not accept that the evidence shows a monotonic relationship between the smaller and larger merchants. Instead, in most cases, the evidence suggests a variability of APO rate which is not obviously related to merchant turnover. To take just one example, in his analysis of the PSR's data which focuses on consumer card transactions only, the APO rate for group 3 was **[✂]** while the rate for groups 4 and 6 were **[✂]** and **[✂]** respectively. Mr Holt was presented in cross-examination with a table prepared by the Claimants which showed (in relation to all of the models relied on by him) the estimated APO rate rising and falling from group to group, with no discernible pattern.

592. Mr Holt accepted in the course of that cross-examination that there was not a monotonic relationship between the different groups. He maintained that there was a pattern of evidence, despite some "noise", that suggested lower pass-on rates for merchants with annual card turnover less than £50 million, compared with merchants with higher annual card turnover. However, he acknowledged in his oral evidence, in answer to a question from Professor Waterson, that he had not conducted a basic statistical test to support his hypothesis of a pattern:

> "PROFESSOR WATERSON: So in looking at these groups and in looking at the group as the set of cases as a whole, is it the case that you can accept the hypothesis that there is no distinction between the groups 1 to 6, or 1 to 5, or whatever? In other words, did you do Chow tests?[38]
>
> A. No, I didn't sort of statistically test for whether the individual estimates are -- are different. Again, I'm accepting that there is a degree of noise and I'm therefore looking at all of this in the round. I'm looking at the average for the 1 to 6 from one estimate, but then weighing that alongside similar estimates from a range of other studies, or other acquirers, and then forming a view in the round based on all of that."

593. In our view Mr Holt's efforts fall short of establishing that there is reliable evidence of a difference in APO rate between merchants with annual card turnover below and above £50 million. It seems to us that the selection of that threshold is not supported by the evidence, which tends to demonstrate a divergence of APO rates between the groups identified by the PSR, but no real pattern to that. To the extent that the Acquirer B data for the 2019 Commitments decrease suggested a higher rate of pass-on for groups 6 and 7, it is one result among a set of studies which we regard as insufficiently reliable to provide point estimates on which we can place full weight. The failure to test for statistical significance considerably undermines the argument.

594. We also regard Mr Holt's attempt to equate the £50 million annual card turnover with the £100 million threshold for the CICC opt-out collective proceedings as entirely speculative. As Mr Holt acknowledged, this "simplifying" assumption was not based on any data that would allow a precise assessment of what annual revenue a business with £50m annual card turnover might have. We do not therefore accept Mr Holt's evidence on this point.

595. Our conclusion is that it is not possible, on the material before us, to determine whether there are indeed different APO rates for smaller and larger merchants and, if so, at what level of annual card turnover that distinction arises. It is also not possible, on the evidence before us, to equate any such level of annual card

[38] A Chow test refers to a statistical test developed by economist Gregory Chow which is used to test whether the coefficients in two different regression models on different datasets are equal. It is often used to identify structural breaks in data in order better to assess patterns in the data.

turnover with annual revenue, with particular reference to the £100 million threshold for the opt-out collective proceedings.

(f) Analysis of the General Studies

596. As we have already noted, we have a general preference for event studies over general studies where the former can be performed properly. That is particularly the case for the general studies of the PSR Data where:

a) The PSR Data has significant transaction mix issues, which are not straightforward to resolve;

b) There is apparently not a good fit for the PSR Data in the general model, as Ms Webster accepted;

c) Despite the number of observations, there is quite a lot of unexplained variance in the data, which may mean there is a misspecification problem;

d) At least one of the results from one of the acquirers (Acquirer A) in the PSR Data set seems implausibly low at **[✂]**, which is considerably lower than the results from other acquirers in the PSR data set and is inconsistent with the agreed economic theory.

597. These considerations all seem to suggest that we should approach the general studies of the PSR Data with some caution. However, if we adopt the alternative approach taken by Ms Webster of removing the low outlying observation of **[✂]** (which seems appropriate given the significant difference from the other results, even before taking into account our knowledge of the issues with the same acquirer in the Acquirer Data), the average of the other acquirer estimates becomes **[✂]** (instead of **[✂]**).

598. Mastercard invited us also to remove the highest observation in Ms Webster's general model, which was **[✂]** for Acquirer C. This was on the basis that Ms Webster was concerned about whether this data was distorted by the inclusion

of IC+ contracts. However, she had concluded from her review of the PSR material that the PSR had decided to classify the contracts as standard (blended) contracts, suggesting they were not IC+ contracts. On that basis, Ms Webster did not suggest the removal of the Acquirer C estimates from her analysis, and we are not inclined to do so either.

599. Recognising the efforts that Ms Webster has made to control for transaction mix and to test for other aspects of the model specification, we consider **[✂]** to be a reasonably reliable estimate to inform the likely rate of APO.

600. None of the experts expressed much enthusiasm for the general study which Ms Webster performed on the Acquirer Data, and we attach no weight to that.

(g) Analysis of the Brexit Decrease Event Studies

601. It is clear that there are serious anomalies in relation to the data from Acquirer B and Acquirer C in relation to the Brexit Event study:

a) The difference in timing between the change in MIF rates for Acquirer B and the change in the rates implemented by the Defendants is unexplained. While Dr Trento maintains that it is not necessary for the two to be aligned, we would be concerned about relying on data which showed adjusted MIF rates which did not correspond to an actual change in the MIF rate, given that only the Defendants are entitled to vary that rate;

b) The extent of the difference between the published MIF rates and the MIFs apparently charged by Acquirer C also suggested a serious problem with that data. In addition, Dr Trento acknowledged that there were problems with separating out different transaction types (debit and credit, CP and CNP) which he had not had time to fully investigate.

602. In light of these matters, we place little weight on the Brexit Event studies.

(h) Analysis of the 2019 Commitments Decrease Event Studies

603. There do appear to be some problems associated with events studies which focus on the data of Acquirer C, given the difficulty of classifying CP and CNP transactions separately. According to Mr Holt, that was not such a significant problem for the Acquirer B data, as Acquirer B in practice often set a single MSC across inter-regional CP and CNP transactions.

604. Broadly speaking, the two experts who performed event studies for the 2019 Commitments decrease reached fairly consistent outcomes from their analysis:

a) Dr Trento came up with a range of **[✂]** based on Acquirer B data for CNP transactions only and estimating the outcome 12 months after the event;

b) Mr Holt came up with three ranges, being **[✂]** (using Dr Trento's models from the Brexit Event study).

605. Dr Trento adopted a practice of testing his models using data from IC++ contracts, with the expectation that well-specified models would reflect the expected 100% pass-on that all the experts agreed (and were instructed) applied to those contracts. If the models produced a figure in the region of 100% then he considered that to be evidence that the models were reliable. If the models produced a materially different figure for IC++ contracts then he took that as evidence that the models had a problem.

606. Dr Trento was criticised for misapplying the test so that he should instead have concluded that the CP estimates passed the IC++ test and the CNP estimates failed it. The basis of the criticism was that he had extrapolated the CNP results from six to twelve months and when the same was done for the IC++ data, it failed the test by producing an estimate significantly larger than 100%. Dr Trento resisted that argument on the basis that pass-on for IC++ contracts would be automatic, the difference was not extreme and the estimates were averages in any event. We had some sympathy for Dr Trento's position, although it was not a point which was answered conclusively either way. It seems to us that the

IC++ test lends weight to Dr Trento's 2019 event estimates based on Acquirer B data.

607. As for the point that Dr Trento had disregarded the blending of CP and CNP rates by Acquirer B, there seems to be little clear evidence about the extent of this practice, but we accept Dr Trento's evidence that this would in any event be likely to produce an underestimate of pass-on.

608. We accept that there is a material degree of uncertainty about the data and the potential for disagreement about the modelling choices (including data cleaning), but we do consider Dr Trento's 2019 Commitments analysis to be informative and useful evidence on which we can place some weight.

609. Mr Holt's ranges in his models were weighted to take account of his split between merchants under and over £50 million of annual card turnover. His simple averages across all blended contracts were **[✂]** for Acquirer B data and **[✂]** for Acquirer C data. Noting Mr Holt's own preference for using Acquirer B data (which seems sensible), his figures align with Dr Trento's as being in the region of **[✂]**.

610. It seems to us that this convergence in a range of **[✂]** is useful evidence, even bearing in mind the observations we have already made about the difficulty of conducting analysis on this data, especially given the small category of card transactions (inter-regional cards) involved in the 2019 event. We do attach some weight to these estimates and we note that they are consistent with what would be expected as a matter of economic theory.

(i) Analysis of the 2022 Visa Commercial Card Increase Event Studies

611. Mr Holt's models for the 2022 event study produced some significant outlying estimates for both the Acquirer B and Acquirer C data sets. These included estimates over **[✂]** in group 6 for the Acquirer B data and almost **[✂]** for group 3 in the Acquirer C data. The results for IC++ contracts were also **[✂]**, thereby failing Dr Trento's IC++ test.

612. There are therefore some indications that the problems inherent in the data sets and the modelling choices Mr Holt has made tend to make the estimates somewhat unreliable overall. Mr Holt sought to suggest that we should accept some of the estimates as reliable (in particular those that supported his view of lower APO rates for smaller merchants), but it seems to us that his estimates from these models should generally be treated with some caution.

613. Dr Trento's models were subject to criticisms similar to those of his work on the 2019 Commitments decrease, with challenges based on excessive data cleaning, retention of problematic data, a failure to deal with blended CP and CNP rates and an inconsistent rejection of some results but not others.

614. In fact, the extent of data cleaning carried out by Dr Trento in relation to the 2022 event data from Acquirer B was less than in his other event studies, at around **[✂]**. His response to the CP/CNP blending point is recorded in the section on the 2019 Commitments event above. We also consider his decision to focus on a narrower set of transactions (**[✂]** transactions) to be a useful one, although it does enhance the problem of a small data set, especially after exclusion of the CP results which Dr Trento said were anomalous.

615. The criticism of Dr Trento for extrapolating estimates on the basis of a moving average seemed to be as much based on an allegation of inconstancy with his analysis of MPO as a challenge in principle. It seems to us to be a legitimate exercise to conduct, recognising that an average pass-on for the second six months might well exhibit an increase in pass-on rates, which would suggest that the position at the end of twelve months would be different from, say, the position in the seventh month.

616. We should add that all of the experts seemed at stages to exhibit a degree of inconstancy between their opinions in relation to MPO and APO. While this may have been influenced on occasion by a desire to support a particular outcome, we have preferred to deal with the matter by examining the particular circumstances in which the approach has been taken and asking ourselves whether it was objectively defensible.

617. We do consider Dr Trento's estimates for the 2022 Visa commercial card increase event to have evidential value, noting again all the difficulties we have identified in analysing this data. We therefore attach some weight to the indication they give of full pass-on of the MIF increase for CNP transactions

(j) Conclusions about the empirical evidence

618. We have concluded that the following studies have evidential value and should be given some weight in our assessment of the APO rate for the purposes of these proceedings:

a) The estimate of **[✂]** derived as an alternative figure by Ms Webster from her general study of the PSR's Data relating to the IFR;

b) The estimate of **[✂]** from Dr Trento's 2019 event study and the estimate of **[✂]** from Mr Holt's 2019 event study, both in relation to Acquirer B data;

c) The estimate of **[✂]** from Dr Trento's 2022 event study based on Acquirer B data.

619. We have treated these as indicative rather than determinative, although we note that there is a strong level of consistency between them, with a relatively narrow range of **[✂].** As noted earlier in this judgment, we have a preference for event studies and we give slightly more weight to the 2019 and 2022 event studies over the general study of the PSR Data, notwithstanding the issues we have identified above in relation to the event studies.

(9) Findings on the APO rate

620. We do not consider that it is appropriate to identify any separate rate for groups of merchants. While we accept that certain groups may experience pass-on at different rates, and there is some empirical evidence of such a variation, the evidence is not sufficiently clear or consistent to be able to form any firm view about what rates might apply to which groups of merchants.

621. The empirical evidence which we have identified as having evidential value points clearly to a substantial level of pass-on, in accordance with economic theory, which predicts high levels of pass-on for a cost like the MIF. That is broadly consistent with the views of all of the experts, once one removes from consideration the determination of rates for subsets of merchants.

622. We do not consider that the factual material advanced by the Claimants adds materially to this analysis. As the Defendants pointed out, the flexibility acquirers have in setting MSCs and the possibility that MIF changes might only adjust, rather than remove, margin, provide potential explanations which are inconsistent with the Claimants' submissions on this material.

623. We find, as acknowledged by the experts and the parties in their closing submissions, that the APO rate for IC+ and IC++ contracts is 100%.

624. In relation to standard or blended contracts, we need to make a broad axe assessment based on economic theory and the empirical evidence to which we wish to give weight. That is to some extent a speculative exercise, given the uncertainties in the material before us. We consider however that a reasonable assessment in the round, taking into account the evidence we have identified, is an APO rate of 85% for all standard/blended contracts.

625. We see no basis on which we should identify a different figure for the CICC opt out claimants and our finding applies to all blended/standard contracts in those proceedings.

Mr Justice Michael Green
Chair

Ben Tidswell

Michael Waterson

Charles Dhanowa CBE, KC (Hon)
Registrar

Date: 18 February 2026

ANNEX 1

TERMS AND ABBREVIATIONS USED IN THE JUDGMENT

Term/Abbreviation	Meaning	First reference in Judgment
ABSL	Allianz Business Services Ltd	[111]
Acquirer A	[✂]	[527.b)]
Acquirer B	[✂]	[527.b)]
Acquirer C	[✂]	[527.b)]
Additional Sectors	The 21 additional sectors used by the Merchant Claimants in which there is no Analysed Claimant	[359]
Allianz	The six Allianz entities making claims in these proceedings, comprising LVIC, Fairmead, Allianz PLC, ABSL, Home and Legacy and Pet Plan	[111]
Allianz Holdings	Allianz Holdings PLC	[111]
Allianz PLC	Allianz Insurance PLC	[111]
Analysed Claimants	The Merchant Claimants that provided evidence analysed by the experts	[15]
Analysed Sectors	The nine sectors in which there is an Analysed Claimant used by the Merchant Claimants	[287]
APO	Acquirer Pass-On	[4.b)]
Autoliv	*Stellantis Auto SAS v Autoliv AB* [2025] CAT 9	[97]
British Westinghouse	*British Westinghouse Electric and Manufacturing Company Ltd v Underground Electric Railways Company of London Ltd* [1912] 1 AC 673	[61]
Brexit Event	Brexit Event – The significant increase in MIFs involving CNP consumer card transactions relating to UK Merchants and EEA issuers. Prior to Brexit these MIFs were subject to the EU IFR.	[545]
CAT	Competition Appeal Tribunal	[3]
CCMs	Commercial Category Managers	[138]
CICC Claimants	Commercial and Interregional Card Claims I Limited and Commercial and Interregional Card Claims II Limited	[11]
COGS	Cost of Goods Sold	[16]

CNP	Card not Present	[543]
CP	Card Present	[547.c)]
CPI	Consumer Price Index	[377]
Damages Directive	DIRECTIVE 2014/104/EU of the European Parliament and of the Council of 26 November 2014 on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union	[71]
DiD	Difference in Difference	[531.a)]
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation	[136]
EC Decision	Commission Decision of 19 December 2007 (COMP/34.579 MasterCard; COMP/36.518 EuroCommerce; and COMP/38.580 Commercial Cards)	[8]
EU Guidelines 2019	Guidelines for national courts on how to estimate the share of overcharge which was passed on to the indirect purchaser (2019/C 267/07)	[71]
Fulton Shipping	*Fulton Shipping Inc v Globalia Business Travel SAU* [2017] UKSC 43, [2017] 1 WLR 2581	[62]
GI Direct	A cost category including the MIF used by Allianz	[114]
GRO System	A third party pricing algorithm used by Hilton	[125]
Home and Legacy	Home and Legacy Insurance Services Ltd	[111]
IC+ and **IC++**	Interchange Plus Contracts	[26]
IFR	Interchange Fee Regulation (Regulation (EU) 2015/751 of the European Parliament and Council of 29 April 2015)	[26]
July 2022 Judgment	Judgment (Pass On) [2022] CAT 31	[31]
LVIC	Liverpool Victoria Insurance Company Ltd	[111]
M&S	Marks & Spencer	[143]
March 2024 Ruling	Ruling [2024] CAT 21	[90]
Mastercard	The Mastercard Defendants in these proceedings	[1]
McGregor	Jason Varuhas, Andrew Higgins & James Edelman (eds), McGregor on Damages (22nd ed, Sweet & Maxwell/Thomson Reuters 2024)	[55]
Merchant Claimants	Claimants in the Umbrella Proceedings	[6]

Merricks SC	*Mastercard Inc. v Walter Merricks CBE* [2020] UKSC 51	[73]
MIFs	Multilateral Interchange Fees	[1]
MPO	Merchant Pass-On	[4.a)]
MSC	Merchant Service Charge	[1]
ONS	Office of National Statistics	[367]
Pet Plan	Pet Plan Ltd	[111]
PPI	Producer Price Index	[377]
PSR	Payment Services Regulator	[247]
PSR's 2021 Report	PSR Final Report: Market review into card-acquiring services, dated November 2021	[514.a)]
PSR's 2024 Report	PSR Final Report: Market review of UK-EEA consumer cross-border interchange fees dated December 2024	[514.b)]
PSR's 2025 Report	PSR Final Report: in its market review of card scheme and processing fees dated March 2025	[514.c)]
PSR Data	Data gathered by the PSR from five acquirers as part of preparing the PSR's 2021 Report	[527.a)]
RBB 2016 Report	Study on the Passing-on of Overcharges: Final Report, prepared for the European Commission by RBB Economics and Cuatrecasas, Goncalves Pereira	[225]
RevPAR	Revenue per room	[126]
Royal Mail CA	*DAF Trucks Ltd and ors v Royal Mail Group Ltd and ors* [2024] EWCA Civ 181	[82]
Royal Mail CAT	*Royal Mail Group Ltd and ors v DAF Trucks Ltd and ors* [2023] CAT 6	[79]
RSP	Retail Selling Price	[138]
Sainsbury's CA	*Sainsbury's Supermarkets Ltd v Mastercard Incorporated and ors* [2018] EWCA Civ 1536	[62]
Sainsbury's CAT	*Sainsbury's Supermarkets Ltd v Mastercard Incorporated and ors* [2016] CAT 11	[58]
Sainsbury's SC	*Sainsbury's Supermarkets Ltd v Visa Europe Services LLC and ors* [2020] UKSC 24, [2020] Bus LR 1196	[24]
Stellantis	*NTN Corp v Stellantis NV* [2022] EWCA Civ 16	[77]
SSC	Store Support Centre	[139]

TFEU	Treaty on the Functioning of the European Union	[2]
Umbrella Proceedings	Merchant Interchange Fee Umbrella Proceedings (Case 1517/7/7/22 (UM))	[6]
UOM	University of Manchester	[181]
Visa	The Visa Defendants in these proceedings	[1]
Willing Claimants	The Merchant Claimants that provided evidence analysed by the experts	[35]
2019 Commitments	2019 Commitments – Commitments offered by each of Mastercard and Visa and accepted by the European Commission to cap consumer card MIFs on transactions involving cards issued outside the EEA and merchants in the EEA.	[552]