Market review of card scheme and processing fees

Mastercard/Visa submissions to:

MR22/1.9: Market review of card scheme and processing fees interim report

April 2025

Contents

Names of individuals and information that may indirectly identify individuals have been redacted. The places in this document where confidential material has been redacted are marked with [✂].

Mastercard

Mastercard response to PSR "*Market review of card scheme and processing fees Interim Report*" MR22/1.9

30 JULY 2024

mastercard

1. Executive summary

The conclusions in the PSR's Interim Report are mistaken and unsupported by the evidence. Market outcomes (taking into account not just price and profitability but the value that system users receive as a result of Mastercard's innovation and service quality improvements) are consistent with a well-functioning market. By focusing almost entirely on prices, the Interim Report is unable to provide any conclusions on the value that customers receive in return for the fees charged by the schemes. Indeed, an objective review of the PSR's evidence would conclude that Mastercard has provided significant value to its customers during the relevant period. Moreover, price increases have been considerably more modest than the PSR has claimed, while the Interim Report acknowledges that there is insufficient evidence to support a finding of excessive profitability. Mastercard's analysis shows that profit margins are in line with comparable businesses operating in competitive markets.

The Interim Report instead places disproportionate weight on anecdotal evidence from unrepresentative samples of customers and documents. Further, it fails to reflect the competitive dynamics at play in the market and the competitive constraints faced by Mastercard, which in practice lead to these positive market outcomes.

As a result, the proposed remedies are unjustified and several would appear to conflict with the PSR's statutory duties of promoting competition and innovation. Depending on what the PSR ultimately proposes, some of the remedies might also exceed its powers. Nevertheless, Mastercard is willing to work with the PSR to continue to improve market outcomes for all system users.

Market outcomes

The conclusion that there is little or no link to improvements in quality is wholly unsupported by the evidence.

The Interim Report's analysis does not reflect the process of continual service enhancement of Mastercard scheme services. These require continued maintenance, improvement and innovation to remain competitive. These improvements and innovations benefit the ecosystem and therefore, at times, a recalibration of fees is undertaken to reflect more fundamental changes in the nature of Mastercard's offering. However, general improvements do not typically come with a specific fee change. Therefore there should not be an expectation that individual fees are necessarily introduced and/or increased at the same time that specific individual improvements are made to particular services. There may be many reasons why fees are not introduced and/or increased at the time the improvements are made.

The Interim Report analysis overlooks this process and instead concludes that the evidence "*points towards fees being increased with little or no link to changes in service quality*". The Interim Report's conclusions are not supported by the evidence.

First, it is not clear how these conclusions were drawn and how these are supported by the PSR's summary of the evidence. In Section 6, the Interim Report finds that (1) there has been service enhancement and innovation, that (2) there is evidence of "*the introduction of new or improved services being accompanied by new or increased fees*" and that (3) "*there is some evidence that innovation – whether in new services or improvements in existing ones – tends to be accompanied by new or increased fees*".

In reaching its conclusion that there is little or no link to changes in service quality, the Interim Report has also failed to take into account the substantial evidence provided by Mastercard on the continuous investments made by Mastercard in innovation and improving service quality. Mastercard provided a detailed analysis of changes to scheme activities over time ('Mastercard's scheme activities – changes over time').

There have been significant changes during the relevant period which have further improved the services that Mastercard's payment system delivers to issuers, acquirers, merchants and ultimately cardholders. Many of the fee changes that the PSR observes relate to these past and ongoing developments, investments and innovations. Other than a small number of fee changes resulting from a restructuring of fees, most of the recent fee changes which the PSR has considered relate to service enhancements.

The Interim Report finds that in addition to new services, these include new versions of services for cyber security and fraud detection, incentivising transition from a legacy service to an enhanced version and examples of investments in service enhancement. As evidenced by its internal documents, those changes were driven by Mastercard's effort to create a safe, secure, efficient ecosystem whilst trying to make its offering more attractive and competitive. While the PSR recognises that the evidence points to the introduction of new or improved services being accompanied by new or increased fees, the Interim Report makes no attempt to understand in detail the improvements in quality and innovation which have motivated many of the pricing changes. Accordingly, it has no basis on which to conclude there is little or no link between fee changes and improvements in quality.

As the Interim Report itself explains, "*some of the increase [in fees] for Mastercard may in part be due to the increase in optional services purchased by acquirers*". The PSR has observed and acknowledged that the new optional services which have been introduced come with additional fees and the take-up has increased over time, demonstrating that the new services are valued by customers.

The PSR acknowledges the service enhancement and innovation but concludes that "*responses from customers on the acquiring side of the schemes, in many cases, do not tend to support a view that quality of service has been rising in step with fee increases*." However, the PSR's analysis is not robust and does not allow it to conclude that "*there is little evidence that the quality of service has improved at the same rate*." The Interim Report draws conclusions from a very small sample of merchant responses (nine responded, out of millions of merchants in the UK) which is not representative of the merchant population. Notwithstanding the limitations of the evidence base, the Interim Report fails to take account of positive feedback from issuers, acquirers and merchants, selectively relying on a small number of more negative statements. The positive view of Mastercard's innovation is also consistent with the feedback Mastercard receives from a wide range of UK customers in its annual VOC survey which confirms that innovation is seen as an area of strength for Mastercard, by both issuers and acquirers.

The Interim Report draws inferences from the absence of detailed written considerations in Mastercard's internal documents. However, the sample of internal documents is limited and unrepresentative, but still shows the competitive constraints under which Mastercard operates, especially with respect to the quality and innovation dimensions of competition.

Indeed, in assessing Mastercard's recent fee changes, the Interim Report itself acknowledges that its review is unrepresentative, both as to the scope of the fee changes that are included in the sample and the scope of the internal documents that it has reviewed for each price change within its sample. Yet the findings fail to take into account these important limitations when reaching unduly broad and definitive conclusions as to the role of competition in constraining decisions on fees, as well as the links between any fee changes and changes in service quality.

Price increases over-stated

The Interim Report finds that the overall fee levels charged by Mastercard to acquirers have increased over the past five years by more than 30% in real terms. Although it correctly recognises that some of the increase for Mastercard may be due to the increase in optional services purchased by acquirers, its flawed econometric assessment leads to overstating the potential size of the increase.

Mastercard's economic advisers have previously suggested some important improvements to the economic model used. More precisely, the specification can be improved by the addition of average transaction value ('ATV') and 'square term of transaction value' control variables and the removal of ✂data due to missing values in two out of five years. This improved specification is sounder in principle and in practice.

The PSR gives no valid justification for not improving its model beyond an alleged small impact on its results. In principle, an improved model should not be dismissed only because the results are relatively similar to the original result. It is best practice to make adjustments to the model based on their merit not the effect on a specific variable. Furthermore, the effect is not small. With the improved specification, the estimate of the price change between 2017 and 2022 is ✂ percentage points lower than upper end of the Report's range resulting from the PSR's modelling choices or ✂ percentage points lower taking the mid-point. In addition, results estimated for mandatory fees on the sample of the 15 largest acquirers (accounting for 95% of UK transactions by volume in 2021) found a statistically insignificant ✂increase in unit revenue.

In any event, an assessment exclusively of price increases without an equally detailed assessment of the increased value delivered to customers during the relevant period is of limited, if any, value in assessing how well the payments market is functioning.

The assessment of Mastercard's margins is flawed

It is not clear how the Interim Report comes to the conclusion that "*Mastercard's margins are higher than would be expected in competitive market*". Mastercard's UK margins show a clear downward trend and even compared with the PSR's own set of comparators (which is unreliable and significantly underestimates the benchmark margins), Mastercard's margins are not high.

The Interim Report rejects the margins in the fully-loaded UK P&L prepared by Mastercard at the PSR's request and according to an approach with which the PSR agreed. Instead it uses the margins in Mastercard's European and global accounts as a proxy. This approach is wholly unjustified. Annex 10 raises technical concerns about how costs are allocated in the fully-loaded P&L but these concerns are unjustified. Mastercard has provided all the information and explanation that ought to be required to assess the cost allocation and any sensitivities raised by the PSR have only a limited impact on the margin.

More importantly, the Interim Report rejects the fully-loaded UK P&L on the basis that the treatment of rebates and incentives in relation to debit cards may have been overstated (in early years of specific contracts) and may be temporary, suggesting that the actual underlying profitability is much higher than the fully-loaded P&L indicates. Annex 10 argues that the costs should have been calculated based on incremental rather than fully-allocated costs. Neither of these points are valid.

Our analysis shows that the rebates and incentives in relation to debit cards have not been overstated and the rebates and incentives are not temporary. The Report's statements that the rebates and incentives are temporary are pure conjecture, largely based on a misinterpretation of just one Mastercard slide containing a statement of what <u>might</u> happen in the future, but which is inconsistent with the evidence which clearly shows that incentives and rebates have increased and are not expected to reduce materially in future.

Annex 10 does not provide any valid reason why it would be appropriate to calculate Mastercard's margin on the basis of incremental costs rather than fully-allocated costs. The fully-loaded P&L was prepared on the basis of the principles agreed with the PSR. It is well-established that a profitability analysis that is undertaken to inform an assessment of market power or the degree of competition in the market should be based on measuring margins using a fully-allocated cost (or stand-alone cost) approach.

Finally, Mastercard's margins in the UK cannot be proxied by European or global margins. European and global margins are different due to differences in unit revenues, unit rebates and incentives and unit costs between the UK, Europe and global business. The differences in these parameters are driven by differences in market conditions, fee levels as well as the mix of services provided.

The sample of comparators used to assess profitability is unnecessarily small and erroneous

In comparing the level of profit with that which would have been achieved in a competitive environment, care needs to be taken in selecting relevant comparators. Unfortunately, the approach taken in Annex 10 is not consistent with good practice by identifying a very small sample of comparators (two of which are not suitable) and rejecting companies in other industries that would be valid comparators.

- The Interim Report identifies a sample of comparators that is unnecessarily small, excluding companies in industries other than payment services. A sample of just three comparators opens the possibility of material distortion by a single data point. Indeed, the Interim Report underestimates the margin for PayPal, for the purpose of a comparison with Mastercard. There are relevant comparators that could be added to the sample to improve its robustness.
- The Interim Report is wrong to exclude Discover as a comparator. Discover's annual reports allow for a separation of the credit and payment services segments, which means that Discover's margin for its payment services (excluding credit provision) can be calculated and that Discover does not need to be excluded from the set of comparators.
- eftpos and OFX are not appropriate comparators for Mastercard due to their very substantially narrower business scope and lower risk profile. Their inclusion causes the Interim Report to underestimate the benchmark operating margin for Mastercard's operations in the UK.
- The Interim Report cross-checks the results of its comparator benchmark margin analysis using FTSE 100 companies (excluding banks, asset managers and insurers). As a result, it restricts its cross-check by considering only a small and selective sample of companies. It fails to include other relevant companies that are listed on other exchanges and/or companies included in indices produced by data providers (e.g. STOXX, S&P Global) for relevant economic sectors. By ignoring companies listed overseas (as Mastercard us listed in the US), the Report has overlooked various companies with higher margins.

In sum, in restricting its comparison of profitability to just three companies, two of which have much narrower scope and risk profiles, underestimating the profitability of the third and excluding other suitable comparators, the Interim Report unduly distorts its comparison of margins, depriving it of any evidential value. Accordingly, no conclusions can be reached as to whether Mastercard's margins are higher than would be expected in competitive markets.

Conclusion on transparency and complexity based on unreliable evidence and fails to recognise improvements already introduced by Mastercard

Mastercard understands the importance of acquirer feedback. In recent years it has taken various initiatives to improve access to information, such as: the creation of the technology account manager ('TAM'); the extension of notice periods before scheme changes; upgrades to the tools available on Mastercard Connect ('MC Connect') (such as the Pricing and Billing Resource Centre ('PBRC')); and the de-tiering of the UK volume fee. Mastercard actively seeks feedback from its customers on how to improve their offering, for example through the annual VOC survey.

The Interim Report fails to acknowledge many of the improvements Mastercard has already made to its offering to acquirers. Instead, it relies on anecdotal comments and case study evidence provided by individuals within a small sample of acquirers which is not unrepresentative of the acquirer market. In particular, it tends to generalise points made by a subset of acquirers to the whole acquiring market. The Interim Report groups all acquirers who have concerns with access to information (regardless of the severity of the concern) to conclude that around 90% of the acquiring market is affected by these issues. This is not supported by any evidence. Indeed, the anecdotal evidence demonstrates that concerns are expressed by a substantially lower proportion.

By contrast, acquirer feedback to Mastercard's own VOC survey, which is administered by a third party where all respondents remain anonymous and with greater quantitative rigour, demonstrates high levels of satisfaction with accessing information through Mastercard's account managers.

Competitive constraints

Competition for cardholders

Mastercard continuously competes for increased card portfolios, which is to a large extent driven by competition for cardholders. Competition for card use directly affects the fees that schemes can charge to acquirers and merchants. If a product is made more attractive to cardholders (through a lower price, or an improved product quality), this is likely to increase the number of cardholders. This, in turn, increases the potential value of card acceptance to merchants and may therefore affect the fees that merchants are willing to pay. Therefore, other payment methods may be less attractive, but still compete effectively, given their attractiveness to payers. The Interim Report does not take into account this aspect of competition and therefore understates the degree of competitive constraint faced by card schemes.

Absence of focus on innovation and service quality

By focusing almost exclusively on prices, the Interim Report attaches insufficient weight to the user experience and fostering of innovation and service quality, stimulated by competition for card use, as payers are end users who highly value innovation, convenience and service levels. This is evident in the Report's analysis of pass-through. While Mastercard agrees that it faces strong competitive constraints on the issuing side of the market, the Interim Report fails to take into account the benefits that are passed on to consumers through this intense competition, including rebates and incentives, on the issuer side.

The market is subject to the credible threat of entry

Two-sided network effects and multi-homing for consumers and merchants are key characteristics of the payments market and enable network competition. However, the Interim Report scarcely mentions these concepts, despite their significance in understanding the competitive dynamics of payment services. This oversight leads to an incorrect dismissal of the competitive constraints that Mastercard faces on the acquiring side.

The Interim Report's reference to the 'credible threat of entry' fails appropriately to capture that competition in the payments market is supported by the prospect of tipping points, facilitated by multi-homing which can enable rapid switching. The threat of existing players and new entrants achieving tipping points creates competitive pressures, which force Mastercard continuously to innovate, maintain quality and adjust pricing simply to maintain market share, leading to competitive outcomes without necessarily causing market share volatility. The continued and careful consideration of these competitive threats is evident from Mastercard's internal documents.

Optional services

Mastercard has provided objective data on the take-up of optional services by customers. This shows significant variation in the volume of services purchased by merchants in the same business category, thus following a similar business model and by the same merchants over time. This is clear data-driven evidence that merchants have viable alternatives for the services that Mastercard provides, but which the Interim Report chooses to dismiss in favour of anecdotal evidence from acquirers which it admits have limited knowledge of the choices made by merchants.

By contrast, the Interim Report concludes that Mastercard does not face effective competitive constraints in relation to certain optional services. This is misleading and not supported by its own analysis. Of the ten optional services it reviewed, the mixed evidence meant it was unable to reach firm conclusions in relation to seven. In relation to a further two, the Interim Report notes that the PSR has not asked acquirers to assess the specific alternatives suggested by the schemes, making it difficult to reach a firm conclusion. Finally, in relation to one service the Report concludes that the evidence is "*indicative of limited competitive constraints*", but based on an absence of a Mastercard response that was never requested. The further details now provided by Mastercard on this service should enable the PSR to dismiss any concerns.

The Interim Report recognises that the use of optional services is in many cases determined by merchants. This is the case for seven of the ten optional services considered in the analysis, although the PSR has not collected any evidence from them. Although Mastercard agrees that acquirers may be able to provide "*some insight*" on the choices made by merchants, relying exclusively on their anecdotal responses undermines the robustness of the Report's evidence base. This is especially the case given the flawed nature of the questions that were asked of acquirers and their limited incentives to provide detailed responses.

Finally, the Interim Report concludes that "*as Mastercard and Visa can provide a one-stop shop solution for core and optional services, they are in a stronger position than alternative providers of optional services*". This conclusion is not based upon any (quantitative or qualitative) evidence or analysis. It is not contained in the Annexes and is not drawn from the conclusions regarding the individual services. The questions contained in the section 81 request to acquirers do not contain any question inquiring about the position of the schemes in the payment landscape or whether acquirers obtain services related to card transactions from any other vendor. Accordingly, this statement should be regarded as mere assertion and removed from the Final Report.

Actions proposed by the Interim Report

The Interim Report proposes a number of possible actions. Mastercard looks forward to working with the PSR in the coming months to explore how Mastercard may be able to address some of its concerns. Nevertheless, Mastercard believes the need for remedies has not been justified by the evidence or findings made. The PSR's proposals are unlikely to meet the competition and innovation objectives and depending on the exact proposal may also exceed its powers.

Regulatory Financial Reporting

The Interim Report states that Regulatory Financial Reporting ('RFR') is proposed to enable the PSR potentially to pursue remedies such as price caps in the future. Given the limitations of the PSR's work, there is no evidence, even on an indicative basis, to conclude that prices or margins are above what would be expected in competitive markets. The Interim Report has not even attempted to understand the improvements in quality and innovation that Mastercard has introduced during the relevant period which underlie Mastercard's pricing changes.

It is widely acknowledged that price caps are not suitable in markets where investment and innovation are important to the ongoing functioning of the market and where barriers to entry are not so large as to prevent competition, as is the case with payments. Price caps in the payments sector are unlikely to achieve a desirable balance between the objective of reducing pricing for current merchants and the dynamic effects on entry, distortion of incentives and resulting reduction in innovation. Indeed, the PSR does not even consider the effect on current users of the payment system other than merchants. In addition, price caps would restrict Mastercard's ability to use pricing to balance both sides of the market, encourage behaviours which benefit users and encourage uptake of new innovative products. Accordingly, it is not clear how any such remedies, are consistent with the PSR's competition and innovation objectives.

In any event, Mastercard believes that the PSR does not have the power to impose a price cap remedy under FSBRA.

Pricing methodology and governance

The Interim Report states that the aims of this remedy would be to ensure that decisions were taken in a suitable way. There is, however, no evidence presented that pricing decisions have not been taken in a suitable way. Although it argues that price increases are not linked to value or improvements in service quality, it does not refer to any robust evidence to reach that conclusion. As discussed above, we have also shown that the estimate of price increases by Mastercard is overstated.

The Interim Report suggests adopting a cost-based pricing methodology. Basing any pricing methodology on cost alone would be entirely inappropriate in this industry and would amount in practice to a form of price regulation. In light of the continuous improvements in service quality and investments in innovation, it would restrict Mastercard's commercial freedom to improve existing services, introduce new services and reasonably price these to reward innovation and risks; and would negatively affect the incentives of other market participants to expand, invest, innovate and enter. In addition, a cost-based pricing methodology would restrict Mastercard's ability to use pricing to balance both sides of the market, encourage behaviours which benefit users and encourage uptake of new innovative products.

The proposed pricing methodology and governance remedies would therefore appear to run counter to the PSR's competition and innovation objectives. Depending on what the PSR ultimately proposes, it is also not clear that the PSR would have the necessary powers to take the actions proposed.

Mandatory consultation and timely notification requirements

The proposed remedies do not appear to be supported by the evidence cited in the Interim Report or to be based on concerns shared by even a majority of customers.

In any event, other than in exceptional circumstances, acquirers are already given nine months' notice of fee changes. This was increased from six months following feedback from acquirers.

In addition, these proposed remedies raise their own concerns. Firstly, sharing potential price changes to which Mastercard could raise competition law concerns relating to the exchange of sensitive commercial information. Secondly, consultation with acquirers may not improve pricing outcomes overall. Mastercard's pricing is sophisticated and designed to balance the interests of all participants in the scheme. Acquirers' incentives are not, however, necessarily aligned with those of other ecosystem participants, e.g. cardholders or merchants. Consultation would therefore need to take into account views of all participants. Yet, as the Interim Report recognises, extending consultation even to merchants would not be desirable.

Complexity and transparency

The proposed remedies are not proportionate to the scope of the issue identified. Most of the concerns expressed relate to behavioural fees which account for a small share of scheme and processing fee revenues. Even where concerns have been expressed more widely as to the complexity and transparency of Mastercard's pricing, Mastercard is already making improvements as part of its commercial interest in meeting its customers' needs. The added burden and inherent inflexibility of regulation is unlikely to be justified or the most effective and rapid means of redress in these circumstances.

The range of Mastercard fees reflects the range of services and seeks to link costs to users and the services that they use. It is the result of innovation in response to customer need and the evolving nature of the payments landscape. The PSR's suggestion to reduce the number of services offered by card schemes runs contrary to its objective to promote innovation. Any reduction in the number of services by way of bundling (rather than removing services that respond to customer demand) may create barriers to entry and expansion. It is therefore difficult to see how any such proposal would meet the PSR's competition and innovation objectives.

2. Competitive constraints

A. Introduction

The Interim Report has incorrectly framed its assessment of the competitive constraints that affect the scheme and has given insufficient weight to the competitive dynamics of its four-party nature.

It fails to give due regard to how two-sided markets operate and incorrectly asserts that competition for cardholders is not relevant in assessing competitive constraints on the payment services provided to merchants. This is clearly incorrect, since an essential aspect of the offering of any payment scheme is its payer uptake and its merchant acceptance. Its competitive success and the value it provides on either side is affected by its competitive success on the other side. Thus where the scheme fails to provide great service to merchants such that they accept the scheme and support its use, the scheme's offering to cardholders would be lower quality and it risks losing cardholders and issuers (and vice versa). The competitive dynamics on each side are inextricably linked and cannot be considered separately and in isolation.

The Interim Report has also incorrectly narrowed the lens through which it has assessed market outcomes. It is well-accepted that any assessment of whether a market is functioning well should consider prices, choice, quality and innovation. Indeed, such a broader assessment is codified within the aims of this PSR investigation of understanding if the supply of scheme and processing fees is working well having regard to its competition, innovation and protection of service-users objectives.[1] This means that an assessment of competitive constraints must consider (for example) the evidence of how innovation to improve transaction speed and efficiency has been affected by competitor activity. The Interim Report has not considered these factors. In general, fast-paced innovation, increasing choice and improved efficiency and quality should be given equal or more weight as evidence of successful competitive constraints. It is these dynamic improvements that particularly drive productivity and economic value.

In addition, the Interim Report presents an inconsistent theory of harm with respect to pass-on. In particular, it takes into account only the harm potentially passed on to consumers through a perceived

[1] PSR (2024), 'Market review of card scheme and processing fees, interim report' (**"PSR Interim Report"**), MR22/1.9, p 12.

lack of competition on the acquirer side. However, it does not simultaneously take into account the benefits that are passed on to consumers through the identified intense competition on the issuer side.[2]

As a result, no weight can be placed on the statement that the total scheme and processing fees that acquirers and merchants pay annually is at least £250m higher due to fee increases. First, as is acknowledged, those increases are partly due to the value attributed to additional optional services; as well as quality improvements in core services which are not acknowledged. Second, in the absence of a finding of excessive profitability, this is uninformative about the effect on all service users. The Interim Report has not considered the four party card scheme dynamics and how any reduction in fees to merchants might result in increased costs for cardholders or reduction in service offerings. To appropriately consider all service users, the PSR needs to consider the balance across cardholders and merchants, in addition to the complexities of pass-on.

'The competitive landscape for payment services in the UK', which provides a detailed analysis of the competitive dynamics and constraints on Mastercard's offering,[3] demonstrates that Mastercard is competing fiercely on multiple fronts, given the threat of entry and expansion by existing players. The Interim Report provides insufficient evidence to support its findings that Mastercard sets unduly high prices or may be earning margins that are higher than would be expected in competitive markets. In fact, it shows that merchants would pay higher prices were they to switch to alternatives.

B. Competitive dynamics of the four-party nature of card schemes

This section examines the Interim Report's analysis of the competitive dynamics within four-party card schemes, demonstrating that it has inadequately addressed these complexities. By setting out the nuances of competition for cardholders, the implications of the overreliance on price outcomes and the theory of pass-on, we demonstrate the complexities and interdependencies that the Interim Report has overlooked.

[2] We note that this dynamic is discussed in relation to Amex (in Annex 10) but not in relation to Mastercard: '…we also consider that it is possible that competitive pressures in the issuing side may mean that any higher prices on the acquiring side could be competed away by competition for credit card and debit card customers (e.g. through cardholder benefits), as well as for banking customers (e.g. through an acceptance of higher risk customers).' PSR Interim Report, para. 6.37.

[3] Mastercard response to PSR working paper dated 23 February 2023 [Mastercard response to PSR working paper MR22/1.4 (17 April 2023), 'The competitive landscape for payment services in the UK' an Oxera report prepared for Mastercard.]

Competition for cardholders

The PSR's assessment has not given sufficient, if any, weight to cardholders who are a key element of the four-party system.

First, the Interim Report argues that competition for cardholders does not have a direct impact on the fees that Mastercard and Visa charge to merchants. As a result, the PSR has taken the current (or expected) level of adoption of payment methods among cardholders as given for the analysis of competitive constraints on the acquiring side. This static approach fundamentally misunderstands the competitive dynamics of any payment system and is a serious error in the Interim Report's framework.

Second, the Interim Report ignores competition for use of a payment method and its effect on both sides of the market. In addition to card holding, card use is a necessary element of Mastercard's success. Mastercard continuously competes for increased card use (i.e. volume). It is also a decisive factor for merchants when they decide to accept or not accept a payment method as a method's widespread use determines the value of accepting it.

Competition for cardholders cannot be separated from competition on the acquiring side

The Interim Report argues that competition for cardholders does not have a direct impact on the fees that Mastercard and Visa can charge to merchants and analyses competition on the issuer and acquiring sides in isolation. However, competition for the holding and use of payment methods does influence the fees that schemes can charge to acquirers and merchants. The alternative payment options adopted by cardholders and offered by merchants exert a competitive constraint on schemes. This competitive pressure ensures card schemes are providing attractive services to cardholders, which make cards attractive to merchants.

Consideration needs to be paid to the scheme as a whole, reflecting the two-sided nature of payment. Indeed, Mastercard's payment network acts as an intermediary between issuers and acquirers. Mastercard's success relies on both issuers and acquirers (and ultimately, the cardholders and merchants) participating in the network.

In a two-sided transaction, any price or product decision on one side has a direct impact on the competitive standing on the other side. For example, if a product is made more attractive to cardholders (through a lower price, or an improved product quality), this is likely to increase the number of cardholders. This, in turn, increases the potential value of card acceptance on the merchant side and therefore changes the fees that merchants are willing to accept for the scheme. Competitors in a two-sided market need to balance the attractiveness of any offering on both sides, given one is necessarily affected by the other.

This means that other payment methods may have a less attractive offering than Mastercard on the merchant side, but still compete effectively with Mastercard, given their attractive offering to payers. For instance, Buy Now Pay Later (BNPL) solutions offer an attractive enhanced service to payers, enabling them to pay interest free for longer than a credit or debit card product (if insufficient funds are available). In doing so, they drive additional sales on the payer side. Such an option may be more expensive to merchants than a standard credit card. However, they provide access to payers who may not have otherwise made the purchase, i.e. incremental revenue, and as such are attractive to merchants. Payers and merchants thus benefit from the additional choice and BNPL is still exerting an important competitive constraint, given the price-service trade-off in their offering.

There is therefore a direct link between competition for cardholders/payers, the value that an issuer assigns to each card scheme and the value that merchants assign to different payment methods. The Interim Report explains that its "*competitive assessment has taken account of the relevant linkages between the issuing and acquiring sides of the market, but, in this context, the two-sided nature of the market does not mean that effective competition on one side constrains the setting of these fees on the other*".[4] The findings are erroneous in both of these assertions. First, by not analysing competition for cardholders the Interim Report does not consider the relevant linkages between both sides of the market. Second, the competitive dynamics of each side of the market will affect the value perceived by the player on the other side of the market and therefore market outcomes.

The Interim Report ignores the important element of competition for card use

As explained in previous submissions, payment methods compete at different levels.[5] On the issuing side of the market, competition occurs both for holding and use. The Interim Report ignores the importance of competition for use.

Mastercard does not generate any substantial revenues when cards are issued or from their general circulation. Revenue requires cardholders actually to use its debit and credit cards. Similarly, card use is a key point to consider when merchants decide to accept a payment method. They are interested in payment methods as a way of increasing sales, so the value of a payment method is strongly linked to how often they are effectively used.

If consumers generally held one unique payment method, the decision at the moment of payment would be determined by the decision of which payment method to hold. The holding decision would then competitively constrain the different potential suppliers of payment solutions. However, technological and regulatory developments have reduced the industry's minimum efficient scale,

[4] PSR Interim Report, para. 6.8.

[5] Mastercard response to PSR working paper dated 23 February 2023 [Mastercard response to PSR working paper MR22/1.4 (17 April 2023), 'The competitive landscape for payment services in the UK' an Oxera report prepared for Mastercard.]

facilitating the rapid entry of smaller players. With the increased entry of innovative products, consumers increasingly have multiple options at the point of checkout.

As the possibility of multi-homing rises, the relative importance of competition for the use of payment methods increases. As such, Mastercard faces intense competition to convince its cardholders that Mastercard products are the best option for any particular transaction.

When referring to the strong competitive constraints on the issuing side, the Interim Report concludes that "*these constraints are mainly a result of competition between Mastercard and Visa, rather than with providers of other payment methods, as each scheme competes to win issuing portfolios*". While it is obviously true that payment methods that don't use cards cannot compete for the issuing of cards, the Interim Report disregards competitive constraints from other payment methods on the issuing side of the market after explicitly deciding to exclude competition for payers from its analysis.

The failure to consider competition for card use also relates to another fundamental flaw o, which is to centre the analysis of market outcomes almost exclusively on prices. Other market outcomes are analysed only as context to fee changes. However, competition for use is centred around the user experience and hence fosters innovation and service quality, as payers are end users who highly value innovation, convenience and service levels. Overlooking the competition for cardholders/payers has contributed to the Interim Report's skewed approach, which relies disproportionately on price, while largely ignoring other elements of competition. This is discussed in more detail in the next section.

In summary, the Interim Report does not appropriately consider competition for cardholders as regards (i) its key impact on the competitive environment on the acquirer side, (ii) its full extent by ignoring competition for card use and (iii) its importance for competition in relation to factors like quality and innovation. As such, its conclusions regarding competitive constraints on both sides of the market are not reliable.

Overreliance on price outcomes

Successful payment propositions are distinguished by many factors other than price. These include speed and convenience at point of sale, access to both payers and payees, level of protection for payers and payees, settlement terms and the nature of credit extension. Therefore, competition must be assessed against the range of factors over which participants meaningfully differentiate themselves. To understand the competitive dynamics and constraints between payment providers, it is essential to consider factors such as innovation, quality, the range of features and price.

The Interim Report has given little consideration to these non-price features that influence how Mastercard and its rivals compete and ultimately market outcomes. In reality, Mastercard constantly monitors the demands of different users and the developments in the broader payments market, responding to ensure its service offering stays relevant.

To offer a valuable proposition to its users, Mastercard must continuously innovate to bring new solutions and higher quality to its different users. The 'Mastercard's scheme activities—changes over time' submission shows the breadth of the changes made in scheme activities over time, how Mastercard continues to innovate in response to competition and how its value proposition has evolved.[6] 'The competitive landscape for payment services in the UK' shows that overall, UK consumers and merchants have an increasing choice of payment options with different functionalities and services, with fees that reflect these differences. These outcomes are consistent with a well-functioning market, characterised by existing players being competitively constrained by other existing players, new entrants and the credible threat of further entry.[7]

Indeed, the functioning of any market should be assessed by the outcomes it delivers for end users. In the case of payment systems, this includes both payers and payees (consumers and merchants). These outcomes include consideration of volume, innovation, quality and choice, as well as prices.

Non-price factors are particularly important in competition for use, which affects competition on both sides of the market. As the issuers' business model depends on the use of their cards, they are interested in card schemes that innovate to give payers the best payment experience. Mastercard has submitted extensive evidence about the importance of innovation and improving its service over time, to which the Interim Report fails to give sufficient weight. These efforts are not arbitrary; if a card scheme fails to enhance its overall quality, it would be less favoured by payers and, therefore, also by issuers.

Furthermore, the Interim Report highlights that Mastercard is in fact cheaper to accept than many of the alternatives, which would not be the case if Mastercard faced limited competitive constraints on its pricing, or more generally.

The Interim Report's theory of harm and pass-through

The Interim Report states that "*In coming to a view on the likely harm that may arise from the lack of effective competitive constraints that we have provisionally identified, we have considered the issue of*

[6] Mastercard response to PSR working paper dated 23 February 2023 [Mastercard response to PSR working paper MR22/1.4 (17 April 2023), 'Mastercard's scheme activities - changes over time'.

[7] Mastercard response to PSR working paper dated 23 February 2023 [Mastercard response to PSR working paper MR22/1.4 (17 April 2023), 'The competitive landscape for payment services in the UK' an Oxera report prepared for Mastercard.

pass-through of prices that are set above competitive levels – from acquirers to merchants and then to consumers." [8]

However, it has not considered a similar analysis on the issuing side, where it acknowledges that there is intense competition among card schemes. Cardholders are clients of issuers and customers of merchants. 95% of people have a debit card and thus there is little difference between consumers and cardholders. Given that the Interim Report has already established that the rebates and incentives received by issuers have recently increased, it should recognise that these are likely to be passed on to cardholders. By ignoring this pass-on, the Interim Report delivers a flawed assessment of the outcomes for users in the payments market.

When referring to pass-through on the acquiring side, the Interim Report states "*The extent to which such additional costs can be passed through to consumers depends on a range of factors that characterise the affected industries and firms. These include intensity of competition, responsiveness of merchant demand, relevant marginal costs and whether the cost changes are industry-wide or affect only some firms*."[9] Mastercard agrees that it is highly complex to identify pass-on on the acquiring side.

Although the exact rate of pass-on is typically an empirical question (as it can depend on a range of relevant factors) market characteristics on the issuing side suggest that rebates and incentives to issuers should be passed on to some extent to cardholders. The retail banking sector is increasingly competitive. A recent report by the Financial Conduct Authority (FCA) found that "*large banks' historic advantage are starting to weaken, driven by digital innovation and changing consumer behaviour*".[10] It also found that "*Increased competition and innovation have improved outcomes for many consumers and some small businesses*".[11]

Additionally, incentives to issuers, particularly rebates, directly reduce issuers' marginal costs. As such, they will affect competition between issuers and it is likely that they will be passed through to their customers in some form. Moreover, as described in the documents analysed by the PSR, the increase in rebates and incentives is not specific to a few firms but is a broader trend in the UK market, which could be one factor to support a higher degree of pass-through to consumers.

---

[8] PSR Interim Report, para. 6.5

[9] PSR Interim Report, para. 6.7.

[10] Financial Conduct Authority (2022), 'FCA review finds evidence of growing competition in retail banking', 20 January, available at https://www.fca.org.uk/news/press-releases/fca-review-evidence-growing-competition-retail-banking

[11] Financial Conduct Authority (2022), 'Strategic Review of Retail Banking Business Models', January, available at https://www.fca.org.uk/publication/multi-firm-reviews/strategic-review-retail-banking-business-models-final-report-2022.pdf

In sum, according to the PSR's framework, the banking sector characteristics support the pass-on of rebates and incentives to cardholders. However, the Interim Report sets out its theory of harm, taking into account the impact on customers only on one side of the market, ignoring the outcomes on the issuing side.

A complete analysis requires issuer pass-through to be estimated. However, the Interim Report's theory of harm assumes no pass-through at all, so if some pass-through does occur this would invalidate the Interim Report's conclusions. We note that Annex 10 (in discussing Discover as a potential comparator) does recognise the potential pass-on to consumers: "*... it is possible that competitive pressures in the issuing side may mean that higher prices on the acquiring side could be competed away by competition for credit card customers (e.g. through cardholder benefits) as well as banking customers (e.g. through an acceptance of higher risk customers).*"

C. *Issuers*

The Interim Report's assessment of competitive constraints on the issuing side sets out the following main conclusions:

- "*Mastercard and Visa face stronger competitive constraints on the issuing side than on the acquiring side*";
- *"Although there are some barriers to issuers' ability to migrate between schemes, many issuers have been willing and are able to do so";*
- *"Competition between Mastercard and Visa has resulted in high incentives to issuers, in some cases more than totally offsetting the fees charged to issuers"*;
- *"Issuers have differing degrees of bargaining power – larger issuers, and those targeting affluent cardholders or cross-border transactions typically receive larger incentives"*; and
- *"Issuers' choice of card scheme can also be influenced by non-financial elements of their offerings. Product differentiation may therefore mitigate price competition"*.

Mastercard agrees that it faces strong competitive constraints on the issuing side but disagrees regarding the conclusion on switching costs and wants to clarify the measurement of the issuer incentive ratio and its interpretation, and the bargaining power from issuers.

Switching costs

The Interim Report appears to have introduced a new hypothesis that switching costs act as a '*barrier to migration*'.[12] It states *"financial and operational barriers to migrating between schemes can create an incumbency advantage for the current scheme on an issuing portfolio, potentially softening competition between schemes"*.[13]

However, the Interim Report does not present relevant analysis to test the existence of switching costs and their potential impact on competition between card schemes. Instead, it states that *"issuers outlined difficulties"* for switching.

The evidence presented in the Interim Report is weak and mainly consists of three disparate data points:

- The responses to the PSR's information request, in which half of the respondents broadly mentioned some difficulties when switching (although more than half of them said that they had in fact switched).
- An internal Mastercard document that shows, among ✂ lost deals, only ✂. Moreover, ✂ which is consistent with the fact that smaller contracts may have lower potential benefits from switching. The other mentioned contract ✂sets out several other reasons ✂
- Finally, another internal document presents summaries of interviews with executives of Mastercard's clients, which mention ✂ (amongst various other factors).

In sum, the evidence presented does not support the Interim Report's reference to switching costs and their potential impact on market competitive conditions. There has been a substantial degree of switching in recent years which suggests that even if there were some incumbency advantages, these can be overcome.

Issuer incentive ratio

The Interim Report defines the issuer incentive ratio ('IIR') as "*the financial support paid to the issuer divided by the gross fees charged to the issuer*". However, the most commonly used definition is the total financial support divided by the gross issuing **core** revenue.[14]

---

[12] PSR Interim Report, paras. 5.12-5.14.

[13] PSR Interim Report, para. 5.13.

[14] Some particular documents may deviate from this approach, but most documents that compare IIRs across contracts —including those cited by the PSR— will use this definition.

This misunderstanding leads to various incorrect conclusions or interpretations. For example, an IIR greater than 100% in Mastercard internal documents does not imply that *"the financial support to the issuer is higher than the value of the scheme and processing fees it pays"*[15] or that the contract has a *"negative price"*[16], as the Interim Report describes. Similarly, an IIR of 100% does not mean that *"an issuer would pay net zero scheme and processing fees"*. [17] This is because contracts will generate additional revenue from issuers through non-core services, which are generally not considered in the calculation of IIR. This is discussed in some of the documents cited in the Interim Report.[18]

Without this, the incorrect definition of the IIR results in misinterpretations. For example, it is simply incorrect for IIRs over 100% to be interpreted as a *"negative price"* or as net cash flows towards the issuers.

It follows that the correct definition of IIR, which should have been adopted, is therefore the total financial support divided by the gross issuing **core** revenue. [19]

Value of contract and issuer bargaining

A subtle but important misperception is that issuer characteristics (in particular size) are an important driver of their bargaining power and the incentives they receive from card schemes. Instead, the key factor influencing expected value and incentives is the characteristics of an issuer's portfolios.

The outcome in a competitive market is that card portfolios that bring more revenues to card schemes will receive, on average, higher discounts. Incentives following portfolio expected revenues are nothing else than a representation of fierce competition in the market. Indeed, the relationship between bargaining power and portfolio revenue is properly captured in the Interim Report, which says that *"issuing portfolios which are expected to generate higher revenue on the acquiring side confer greater bargaining power on their respective issuers, allowing them to achieve higher incentives"*.[20]

---

[15] PSR Interim Report, Annex 5, para. 5.38

[16] PSR Interim Report, para. 5.23

[17] PSR Interim Report, Annex 9, para. 2.20.

[18] ✂

[19] We also note that Annex 9 of the Interim Report provides an imbalanced interpretation of the evidence on the UK IIR. ✂

[20] PSR Interim Report, para. 5.29

However, after explaining this relationship, the Interim Report incorrectly concludes that bargaining power *"varies according to various issuer characteristics"*. This emphasises the issuer's characteristics and not the portfolios' characteristics, which is incorrect. An issuer may have portfolios with different levels of expected revenue, and these are likely to draw different levels of customer support.[21]

A similar misunderstanding is present when describing that *"Co-branded card issuers – and the merchants that co-brand them – also have higher bargaining power"*.[22] Similarly (although the Interim Report explains some characteristics of these portfolios) the focus of the conclusion is incorrectly placed on the issuer and not on the portfolios.

D. Acquirers

The Interim Report has given insufficient weight to the competitive dynamics affecting the acquiring side of the scheme. As a result, it does not account for the fact that where markets can tip, the current market share of a new entrant or existing competitor is unlikely to reflect the competitive constraint it represents. It also fails to consider that the threat of steering constrains Mastercard and it gives insufficient weight to the evidence provided by Mastercard in support of competitive constraints resulting from commoditisation.

Merchant constraints

The Interim Report's static view of competition disregards the current threat of new entrants and expansion of the many existing competitors and ignores the importance of growth opportunities in other segments.

Network effects and competitive dynamics

Two-sided network effects and multi-homing for consumers and merchants are key characteristics of the payments sector that enable network competition. The Interim Report scarcely mentions these concepts despite their significance in understanding the competitive dynamics in payments. This oversight leads to an incorrect dismissal of the competitive constraints that Mastercard faces.

The Interim Report's reference to the *"credible threat of entry"* fails appropriately to capture that the prospect of tipping is an important driver of competition in the payments market.[23] In its analysis, it focuses on shares of transaction values, especially with reference to alternative payment methods

[21] Of course, Mastercard understand that some correlation should be expected for expected revenues among different portfolios from a given issuer, but even in those cases, what drives value and contract incentives is the characteristics from the portfolio.

[22] PSR Interim Report, para. 5.32

[23] PSR Interim Report, para. 1.16.

('APMs'), as the indicator of competitive weight. These are unlikely accurately to reflect the degree of competition Mastercard faces and overlooks the underlying competitive dynamics.

When a tipping point is reached, there can be rapid and substantial shifts towards APM, driven by the network effects. Consider an example of a credit card incumbent and a challenger offering a payment method using bank transfers through an easily accessible app. Were the credit card proposition to become less attractive than a bank transfer-based payment method, cardholders could immediately switch to using the alternative method for some of their purchases without any barriers to doing so. This makes accepting the APM more attractive to merchants and will increase adoption and prominence. If the virtuous circle of the network effects moves in favour of the challenger, this makes the alternative method even more attractive to consumers, meaning that more switch, usage increases and a potentially rapid cycle of lost users and transactions for incumbents.

In short, in two-sided markets, a new provider with an innovative offering can attract sufficient customers to achieve a critical mass on one side of the market, which can be used to gain traction on the other side. Through these inter-relationships, even a small competitive advantage can lead to meaningful shifts in market share.

The prospect and threat of tipping compels Mastercard to 'run to keep still'. By not recognising this reality, the Interim Report misses a crucial competitive dynamic. Tipping points are particularly important given the prevalence of multi-homing on both sides of the market. Multi-homing is not sufficient on its own, but it facilitates rapid switching to a payment method that offers substantial mutual advantages to merchants and consumers compared to rivals. Therefore, the presence of multi-homing and the innovative activity of challengers creates significant competitive pressure on larger payment providers, to continue to provide great outcomes to all their users or risk losing their position.

Recent market developments further illustrate the dynamic nature of competition and the significant role of network effects in the payments industry. For example, Capital One's acquisition of Discover for $35.3 billion has the potential to transform a relatively small alternative card scheme into a major competitor, combining a bank and payment scheme to drive significant changes in the payments landscape. [24] This merger highlights how consolidations can shift market dynamics, compelling Mastercard continuously to innovate and adjust their strategies.

Similarly, the launch and subsequent shift of Apple Pay Later, originally developed by Mastercard to allow lenders to offer instalment plans on all Mastercard transactions, underscores the competitive

[24] Barrons (2024), 'Capital One to Buy Discover in $35 Billion Deal. Why Visa and Mastercard Stocks Are Falling', 20 February, available at https://www.barrons.com/articles/capital-one-buying-discover-visa-mastercard-14daaaf6

pressures faced by Mastercard.[25] Apple's decision to directly signup lenders and disintermediate Mastercard from its platform role demonstrates how quickly market dynamics can change, potentially moving against existing players.[26] Indeed, we note that the PSR has recently highlighted and acknowledged the critical role which Apple Pay and other digital wallets can play in delivering and promoting account to account payments as an alternative to card, as already happens in other markets27.

The threat of existing players and new entrants achieving tipping points creates competitive pressures on Mastercard, which force it continuously and constantly to innovate, maintain quality and adjust pricing simply to maintain its market share. This leads to competitive outcomes without necessarily causing market share volatility. The credible threat of entry and expansion is sufficient to affect Mastercard's competitive behaviour. Observed entry not only exerts direct competitive pressure on Mastercard but also demonstrates the credibility of future entry threats, thus enhancing competitive constraints.

As previously submitted,[28] predicting market tipping is inherently difficult. This uncertainty drives ongoing innovation from both entrants and incumbents like Mastercard and Visa, who know it may be too late to respond once a challenger's innovation is visible, which the Interim Report fails to consider.

Proactive responses to future threats

In its assessment of APMs, the Interim Report highlights that digital wallets, for example, '*pose a risk of rail substitution in the longer term, but there is significant uncertainty over their incentive to move away from cards*'.[29] It is interesting to note that the PSR presents a much more positive view of the prospect of digital wallets driving rail substitution to cards in its recent 'Call for information'. Additionally, in the context of open banking, the Interim Report, expects '*open banking payments to become more widespread in the future*'.[30] Despite the competitive threat from the potential for APMs (like Open Banking and BNPL) to continue to grow in the future, the Interim Report considers the risk low and unlikely to materialise in the short-term. This narrow time horizon only allows for a partial view of the competitive dynamics that can arise.

[25] Apple (2023), 'Apple introduces Apple Pay Later to allow consumers to pay for purchases over time', 28 March, available at https://www.apple.com/newsroom/2023/03/apple-introduces-apple-pay-later/

[26] The National News (2024), 'Why is Apple killing its Pay Later service?', 18 June, available at https://www.thenationalnews.com/future/technology/2024/06/18/apple-pay-later/

27 CP24/9 Big tech and digital wallets call for information

[28] Mastercard response to PSR working paper dated 23 February 2023 [Mastercard response to PSR working paper MR22/1.4 (17 April 2023), 'The competitive landscape for payment services in the UK' an Oxera report prepared for Mastercard.]

[29] PSR Interim Report, Annex 1, para. 1.172.

[30] PSR Interim Report, Annex 1, para. 1.288.

Indeed, in products that can tip, Mastercard cannot afford to underestimate future threats and must enhance its products and services, innovate and ensure its value proposition strongly resonates with customers to avoid existing players and entrants tipping the market. This proactive response is evidenced by the various innovations and product enhancements undertaken by Mastercard.[31] Ultimately, competitive threats prompt current responses, improving outcomes for the payment ecosystem.

The continued and careful consideration of these competitive threats is evident from Mastercard's internal documents. For example, in response to the threat of shifting market dynamics and increasing competition, the documents outline several proactive measures Mastercard is taking to maintain its competitiveness. The internal documents highlight Mastercard's plans to enhance user experiences and security, enrich its propositions and provide choices across digital transactions. A key initiative includes implementing biometric authentication for card-on-file and guest checkout to improve approval rates and reduce fraud. Additionally, Mastercard outlines its desire to integrate *Mastercard Instalments* within the *Click to Pay* interface to boost conversion and simplify checkout for merchants. Furthermore, Mastercard plans to enable QR acceptance and other in-store remote experiences for '*a seamless omnichannel experience*'.[32] If (as is asserted) Mastercard was not subject to competitive constraints, it would have no need to undertake such improvements in its service offerings.

The static nature of the Interim Report's analysis

The Interim Report takes a static, rather than dynamic, view of the market and resulting competitive constraints and assumes it can make its assessment of competitive constraints on the acquiring side without considering changes in current (or expected) levels of adoption of other payment methods among cardholders. This static view fails to consider that Mastercard is continuously trying to reach new segments in the payments industry. Both Mastercard and Visa highlighted that most of the transactions that could be made with cards, are currently not made with cards.

Indeed, the need for various payment methods to compete in each segment has competitive effects on the other segments in which the payment methods participate. This means that Mastercard (and other payment providers) need to ensure that products are competitive in all the segments in which it operates and thus competitive threats from one segment create constraints for all segments.

[31] Mastercard response to PSR working paper dated 23 February 2023 [Mastercard response to PSR working paper MR22/1.4 (17 April 2023), 'Mastercard's scheme activities - changes over time'.] See also section market outcomes, innovation/ service improvements and recent fee changes (Section 3A) of this response.

[32] See for example MASTERCARD_2022_PSR_0013883, slide 13.

For example, a survey among small and medium-sized enterprises (SMEs) showed that online bank transfers are the preferred (57%) and most commonly accepted (79%) payment method.[33] Merchants can in future steer consumers towards APMs if cards no longer provide a competitive offering.

Further, the Interim Report's analysis only looks at current volumes and is not forward-looking. For example, the effect on Mastercard's future share of commercial payments from increasing scheme fees is not only the potential loss of current Mastercard customers but also the fact it will be less likely to succeed in winning more share from the 92% of the commercial channel that currently does not use cards.

For example, Mastercard has outlined its commitment to expanding its presence in the business to business (B2B) payment segment.[34] As part of its strategic initiatives, Mastercard has piloted a *B2B trust system*, whereby financial institutions and virtual asset service providers can verify the identities of other participants. This initiative aims to enhance the security and efficiency of B2B transactions by building trust among businesses. Mastercard also highlights, in the same document, *growing B2B accounts payable* is a key priority, underscoring its focus on capturing a larger share of the business payments market.

By failing to consider these dynamic and forward-looking elements, the Interim Report's analysis does not accurately reflect the competitive environment in which Mastercard operates. Therefore, it is imperative to revise the assessment taking into account the dynamic nature of market competition, the role of network effects and the credible threat of new entrants.

The role of steering

The Interim Report argues that in the absence of effective steering, the mere threat of entry of new payment methods is not in itself sufficient to impose a competitive constraint on card schemes. This is an incorrect characterisation because in reality, the credible threat of steering is sufficient to impose constraints in markets with strong network effects. As a result, it is not necessary to observe widespread execution of steering.

Mastercard's pricing is constrained as it faces potential entry from multiple fronts and the expansion of other providers with established user bases in the UK. Mastercard competes fiercely on multiple fronts and the credible threat of entry facilitated by multi-homing and threat of steering ensures the

[33] The survey included a nationally representative sample of 2,022 consumers and 1,022 SMEs. Consumer and SMEs survey conducted by YouGov for Bank of England (2022), 'The digital pound: a new form of money for households and businesses?', 7 February.

[34] MASTERCARD_2022_PSR_0013529

UK payments landscape delivers good outcomes for consumers and merchants in terms of innovation, quality, choice, and pricing.

There is evidence on merchants' ability to steer

Steering can occur in various ways, both online and offline. Examples include placing logos related to certain payment methods in prominent locations on a webpage or in-store, ordering payment methods at online checkout to favour preferred options, setting a minimum spend for specific payment methods in-store, and surcharging where permitted.

The Interim Report has not provided evidence that merchants lack the ability to steer; instead, it (wrongly) focuses its assessment on whether merchants currently have the incentive to steer and argues that the incentive to steer is not present because APMs often have higher costs than cards.

Whether any merchant has an incentive to steer is an *outcome* of the competitive process rather than a feature of it. The key question to be asked is whether merchants have the ability (that is effective means) to steer. While the evidence presented shows that currently the majority of merchants do not have the incentive to steer away from Mastercard given its attractive offering and pricing below alternatives, it also demonstrates that they have the ability to do so.[35]

The PSR itself has produced this evidence; a survey commissioned during the card-acquiring review highlights that when merchants were asked what they would do if their cost of accepting the main card schemes increased by 10%, 63% responded that they would stop accepting that payment method or influence consumers to use other payment methods.[36] This evidence also shows how credible the threat of steering is. Although only a small fraction of merchants had recently tried to influence consumers to use a different payment method, 83% were successful in their attempts.[37] The observation that steering does not currently occur is consistent with a conclusion that merchants currently do not prefer other payment methods over Mastercard, so they do not steer customers towards them.

[35] The Interim Report presents evidence of some merchants using steering techniques. For example, one merchant ran awareness campaigns via short-term checkout banners to promote Apple Pay and Google Pay, while another promoted more secure and lower-cost payment methods throughout the payment process, leading an appreciable number of customers to change their payment methods. PSR Interim Report, para. 4.87

[36] IFF Research (2020), 'PSR Card-Acquiring Market Review: Merchant Survey Results', September, p. 47. The merchants that would steer to other payment methods signalled cash and bank transfers as preferred methods, although this does not consider the changes that have occurred in the payments landscape in the last 5 years.

[37] IFF Research (2020), 'PSR Card-Acquiring Market Review: Merchant Survey Results', September, p. 45.

The Interim Report has given insufficient weight to the evidence provided by Mastercard in support of a constraint from commoditisation

In its assessment of the wallet-level constraints faced by Mastercard, the Interim Report places particular emphasis on the distinction between the risk of commoditisation and the risk of substitution. It concludes that Mastercard takes the risk of commoditisation seriously but that the risk is less relevant to its analysis of competitive constraints. Specifically, it concludes that "*while both substitution and commoditisation risks are important from a business perspective, the risk of substitution is more relevant for our assessment of competition in 'core' services*'".[38] It also concludes that "*the risk of commoditisation appears in the short term to be more significant than the risk of substitution*".[39] These are incorrect conclusions.

The Interim Report first correctly quotes Mastercard's description of the 'commoditisation' and 'substitution' risks:[40]

> *"Commoditisation refers to the risk that the role of scheme operators in the payments value chain will be diminished, which can lead to obfuscation of the scheme's brand, restrictions on the data scheme operators have access to, obstacles to their ability to tap into new revenue pools, and therefore overall pressure on scheme operators' profits".*

> *"Substitution refers to the risk that APMs make use of alternative payment rails, cutting scheme operators out of payment flows entirely".*

But the Interim Report goes on to draw incorrect conclusions from this evidence by stating the following:

> *"Commoditisation may lead to a reduction in the schemes' profitability, as they would have a reduced role in the payment value chain; however, in the absence of alternative rails, commoditisation itself is unlikely to result in pressure to reduce mandatory fees, as acquirers and merchants would still have limited alternatives to card transactions*."[41]

Mastercard disagrees with this assertion. It is inconsistent to acknowledge that commoditisation may reduce a scheme's profitability while simultaneously claiming that it poses no constraint on

[38] PSR Interim Report, Annex 1, para. 1.33.

[39] PSR Interim Report, Annex 1, para. 1.170.

[40] PSR Interim Report, para. 4.102.

[41] PSR Interim Report, Annex 1, para. 1.33

Mastercard. Commoditisation inherently leads to price pressure and the reduced role of card schemes in a commoditised market would naturally limit their ability to price appropriately. Furthermore, internal Mastercard documents illustrate how ✂

For example, in one document, Mastercard outlines its strategic response to the competitive pressures posed by new and emerging competitors, including digital-native tech giants and innovative small-scale players.[42] Some of the proposed strategies include: ✂

Mastercard internal documents ✂[43] In response, Mastercard emphasised the importance of scaling its '*Click to Pay*' initiative to unlock opportunities in guest checkout and digital payments, thus mitigating the threats posed by digital wallets.[44]

Furthermore, a separate document ✂Mastercard's stated response to this threat includes playing a bigger role in merchant acceptance by supporting and incorporating payments into the next generation of point of interaction with EMV standards. This demonstrates that as Mastercard faces the threat of being disintermediated on the cardholder side, it is the merchant side that remains important to balance.

Additionally, Google's recent decision to turn off card acceptance for its ad services payments exemplifies the shifting landscape. This highlights a broader trend of bypassing traditional payment networks in favour of alternatives.[45] This decision not only reflects the competitive pressures from commoditisation but also illustrates the increasing preference for APMs, further challenging Mastercard's position in the payments' ecosystem.

As a whole, these examples clearly illustrate how Mastercard is actively attempting to differentiate its product and adjusting its strategies in response to the threat of commoditisation, thus highlighting that commoditisation does indeed exert competitive pressure on Mastercard. These efforts are observed both on the cardholder side and the merchant side.

Additionally, Mastercard does not agree with the Interim Report's premise that alternative rails do not exist. The introduction of Open Banking has enabled the development of APMs that use credit transfers as the underlying means to transfer funds. Mastercard also notes that Open Banking has been used to

---

[42] MASTERCARD_2022_PSR_0013250

[43] MASTERCARD_2022_PSR_0013883

[44] MASTERCARD_2022_PSR_0013883, slide 7; MASTERCARD_2022_PSR_0014010, slide 4.

[45] Search Engine Land (2024). 'Google Ads phasing out card payments', 14 June, available at https://searchengineland.com/google-ads-card-payments-443247

load wallets.[46] Indeed, the Interim Report itself highlights that *"all the stakeholders we engaged with expect Open Banking payments to improve in functionality and grow in usage in the coming years"*.[47]

Ultimately, it is essential to view the market dynamically. While alternative payment rails might not account for a large share of consumer retail transaction value in the UK, they possess significant growth potential. Ignoring their potential to grow and challenge existing card schemes overlooks a critical aspect of market evolution and competitive dynamics in the long-run.

Therefore, the analysis presented in the Interim Report should incorporate a forward-looking perspective, recognising the potential for APMs to reshape the competitive landscape.

Additional considerations

Optional services

In addition to the dynamic explained throughout this chapter, Mastercard also notes that optional services are clearly a response to market demand and therefore a sign of a dynamic, competitive process. Mastercard's detailed response to the Interim Report's assessment of optional services is set out in the next section optional services (section 2E).

Switching

The Interim Report is correct to highlight that at present all UK-based acquirers choose to have their transactions authorised, cleared and settled by the Mastercard or Visa switch. However, an important constraining factor for the Mastercard switch is losing customers to competing providers which operate internationally and *could* serve acquirers and issuers in the UK market.

The Interim Report notes that the processing providers with which it engaged do not plan on providing processing services in the UK. However, regardless of current intentions, it is important to note that they *could* enter the UK market if it presented a future business opportunity, as a result of changed market dynamics. This does not seem to have been addressed in the PSR's interactions with processors. Indeed, it is the *threat* of international entry that is sufficient to constrain Mastercard. The Interim Report itself draws this link when highlighting that internal documents show that ✂The Interim Report itself highlights that the lack of entry of alternative processors may be due to Mastercard's competitive response.

[46] PayPal has implemented Open Banking payments through Tink, a third-party payment initiation service provider ('PISP'). When adding a new payment method to the PayPal wallet, the consumer can use Open Banking as the default way to select and add their bank account to make payments.

[47] PSR Interim Report, para 4.65.

E. *Optional services*

The Interim Report acknowledged that the evidence collected in relation to optional services is flawed. As a result, it does not attempt to draw conclusions on the majority of optional services it analyses. We agree that the evidence collected from acquirers is flawed and highlight several additional shortcomings in this response. For several optional services the Interim Report does however appear to ignore the best available evidence and data submitted by Mastercard.

Introduction

The analysis and conclusions of Annex 4

The Interim Report defines optional services to acquirers as: [48]

> *"services which are complementary to the core scheme and processing services. Acquirers are under no obligation to purchase these services and they are not strictly necessary for acquirers or merchants to accept card payments or to process them."*

The Interim Report explains that competitive constraints and alternatives for optional services may take several forms, including:[49]

- *a supplier could offer a service that is very similar or identical to the optional service supplied by Mastercard or Visa. This could include Mastercard supplying a service which is scheme-agnostic and competes with a Visa service (or vice versa);*
- *an acquirer or merchant could take a different approach by using a different service (or services) provided by alternative suppliers which achieves the same outcome,*
- *an acquirer or merchant could take a different approach by using a different service (or services) provided by alternative suppliers which meets the same business needs;*
- *an acquirer or merchant could self-supply its own service which achieves the same outcome or similarly meets its needs;*
- *acquirers and merchants have a choice about whether to purchase the optional services at all;*
- *acquirers or merchants may have countervailing buyer power when negotiating with Mastercard and Visa.*

The Interim Report also mentions additional competitive constraints in relation to specific optional services, including:

---

[48] PSR Interim Report, Annex 4, p. 3

[49] PSR Interim Report, Annex 4, para. 4.8-4.11

- *In relation to Mastercom, Mastercard may be constrained in its pricing by alternatives or other competitive constraints in other geographies;*[50]
- *In relation to Identity Solutions and the address verification service, Mastercard may be constrained by merchants steering towards channels which do not require the optional services;*[51]

In relation to the *Automatic Billing Updater (ABU)*, the PSR mentions that comparable services available from Visa may serve as a benchmark for service quality and innovation even if they cannot be applied on Mastercard transactions.[52]

The Interim Report analyses the competitive constraints for ten individual Mastercard optional services. It does this by analysing acquirer responses to a PSR section 81 request and (to a limited extent) the submissions and analysis provided by Mastercard.

It acknowledges that in many cases the decision as to whether to use the optional service is taken by merchants. However, the PSR has not asked the merchants questions about optional services. The Interim Report also notes that it has not asked merchants or acquirers about the specific alternatives and competitive constraints suggested by the schemes in their submissions.[53] No reason is given for this omission.[54]

As a result, the analysis is subject to significant limitations, some of which are reflected in its conclusions:

- In the case of seven optional services (accounting for ✂ of optional services revenues analysed), the Interim Report considered that it was not able to draw 'firm' or 'definitive' conclusions about competitive constraints.
- In the case of two optional services, the Interim Report concludes that the evidence is indicative of the absence of effective competitive constraints but that *"we have not asked acquirers to assess the specific alternatives suggested by the schemes, making it difficult to reach a firm conclusion"*.

The Interim Report concludes in relation to one optional service (accounting for around ✂of Mastercard's 2021 UK acquiring revenue) that "*the evidence is indicative of limited competitive constraints*". We note that the PSR did not ask Mastercard for its views on competitive constraints in relation to this optional service until the publication of this Interim Report.

---

[50] PSR Interim Report, Annex 4, para. 4.135

[51] PSR Interim Report, Annex 4, para. 4.128, 4.82

[52] PSR Interim Report, Annex 4, para. 4.95

[53] PSR Interim Report, para. 4.167

[54] PSR Interim Report, para. 4.167

Table 1 Conclusions drawn in the Interim Report in relation to individual Mastercard optional services

Interim Report conclusion	Number of relevant services	Revenue generated in 2021 (£m)
'The evidence we have been able to collect does not, therefore, generally allows us to draw a definitive conclusion'[55]	5	✂
'The mixed evidence makes it difficult to reach a firm conclusion on the degree of competitive constraints.'[56]	2	✂
'The evidence is indicative of the absence of effective competitive constraints. However, we note that we have not asked acquirers to assess the specific alternatives suggested by the schemes, making it difficult to reach a firm conclusion.'[57]	2	✂
'The evidence is indicative of limited competitive constraints.'[58] [The conclusion was reached based on an absence of a Mastercard response that was not in fact requested]	1	✂

Note: The revenue data used in the review does not allow for the revenue generated from this service to be identified.
Source: Mastercard summary of PSR IR

In addition to the conclusions on individual optional services, the Interim Report also draws the following overarching conclusions about optional services:

- *'We have provisionally found that Mastercard and Visa do not face effective competitive constraints in respect of core scheme and processing services, and certain optional services where alternative providers do not exist,'*[59]
- *'In some optional services, alternative providers may provide varying degrees of constraint to Mastercard and Visa. However, as Mastercard and Visa can provide a one-stop shop solution for core and optional services, they are in a stronger position than alternative providers of optional services.'*[60]

[55] PSR Interim Report, para. 4.171

[56] PSR Interim Report, para. 4.172

[57] PSR Interim Report, para. 4.173

[58] PSR Interim Report, para. 4.171

[59] PSR Interim Report, para. 1.3

[60] PSR Interim Report, para. 6.2

As we explain below, these statements are inconsistent with the analysis provided in Annex 4 and hence it is not clear how these statements relate to the findings in that Annex or indeed any other analysis.

Mastercard's review of the PSR's analysis

The Interim Report correctly describes the nature of optional services. Optional services are an important part of the four-party model generally and Mastercard's business strategy in particular, which focuses on developing additional services beyond core payment functionality. They promote competition by supporting diversity and choice of product/service. They extend the range of what payments can provide, allowing service providers to compete in new areas of the market.

The Interim Report also correctly explains that competitive constraints and alternatives for optional services may take several forms (as summarised above). However, neither the approach itself, nor the way the empirical analysis has been undertaken, is robust. Nor is it consistent with how the Interim Report has described the various constraints and alternatives for optional services.

- First, the information request sent to acquirers does not reflect the analytical framework set out in the Interim Report and appears narrowly to focus on direct substitutes and does not consider the wider choices available to acquirers or merchants.
- Second, the approach to asking questions to relevant stakeholders is not robust. The questionnaire was only sent to a selective sample of (large) acquirers, which may not have taken great care in answering the questions and indeed some of them provided responses are clearly factually incorrect (but were unquestioningly included in the analysis). In making these choices, the PSR has not followed good practice, for example as set out in the guidance from the Competition and Markets Authority (CMA).[61]
- Third, the information request does not include questions about alternatives that were suggested by the schemes, which is an approach that the Interim Report acknowledges but does not explain.[62]
- Fourth, although the Interim Report acknowledges that merchants take decisions about whether to use an optional service, the PSR has not requested any evidence from merchants.[63]
- Fifth, the Interim Report concludes that it has found that *"Mastercard does not face effective competitive constraints in respect of certain optional services where alternative providers do not exist."* As the Interim Report explicitly acknowledges, competitive constraints on optional services can take many forms including self-supply, adapting the business approach, competitive

[61] CMA (2018), 'Good practice in the design and presentation of customer survey evidence in merger cases', May, available at: https://www.gov.uk/government/publications/mergers-consumer-survey-evidence-design-and-presentation/good-practice-in-the-design-and-presentation-of-customer-survey-evidence-in-merger-cases

[62] PSR Interim Report, para 4.167

[63] PSR Interim Report, para 4.166

benchmarking or the presence of strong alternatives in some markets in addition to a direct alternative. The analytical framework thus contradicts the statement that the absence of a direct alternative can be interpreted as ineffective competitive constraints.[64]

Finally, the Interim Report concludes that *"as Mastercard and Visa can provide a one-stop shop solution for core and optional services, they are in a stronger position than alternative providers of optional services."*[65] It is not clear upon what evidence this conclusion is based. It is not made in the Annex and is not drawn from the conclusions regarding the individual services either. The questions contained in the section 81 request sent to acquirers do not contain any question inquiring about the position of the schemes in the payment landscape or whether acquirers obtain services related to card transactions from any other vendor.

Moreover, the suggestion that schemes present a *"one-stop shop"* appears to be based on entirely circular logic. In analysing the optional services, the PSR has started from those services provided by the schemes (rather than by other suppliers). It is then a given that all of these services are indeed offered by the scheme, while competitive constraints and possible alternatives differ. The reality is that acquirers procure services from a range of different commercial suppliers, many of which are supplying services not offered by the scheme, which therefore does not constitute a "*one-stop shop*". Many of these suppliers will also supply optional services that compete with Mastercard.

It is further not clear what evidence supports the conclusion that such a hypothetical *"one-stop shop"* will lead to Mastercard and Visa being in a 'stronger' position. Indeed, the Interim Report has not set out, let alone quantified, what considerations are taken into account in reaching this conclusion. The only explanation given is a vague and ambiguous notion that it may be 'convenient' and that customers 'may prefer it'. In order for such a conclusion to be reached, the Interim Report should analyse the additional costs and administrative issues the acquirers may face when contracting with third-party suppliers. No such analysis appears to have been undertaken.

Mastercard analysis and submissions

Mastercard has submitted relevant evidence about optional services and the competitive constraints faced in the market. In particular, some of the evidence Mastercard submitted on this topic is:

- an explanation of the rationale for setting the optionality of services and the importance of these in a four-party model.[66]

---

[64] PSR Interim Report Annex 4, para 4.10

[65] PSR Interim Report, para 6.2

[66] Mastercard response to PSR Information Notice Part 1 'Competitive and market context' Scheme Fees

- analysis of the optional services' usage pattern by customer[67]
- a detailed response to the section 81 request on optional services, including an analysis of internal Mastercard data regarding the use of certain optional services by both acquirers and merchants.[68]

These previous submissions remain valid. The Interim Report ignores significant parts of this evidence and instead relies mainly on responses to a few narrow and flawed questions to acquirers. As explained below, this evidence base is not reliable and the Interim Report should consider previous Mastercard submissions to reassess their conclusions.

PSR evidence base

Lack of merchant evidence and inappropriateness of acquirer evidence

The Interim Report recognises that the use of optional services is in many cases determined by merchants. This is the case for seven of the ten optional services considered in the analysis.[69] Despite merchants making the decisions, the PSR has not collected any evidence from them. It notes that acquirers (and indeed the schemes) may not be aware of all alternatives and options available to merchants. These options may also further differ by merchant group and identity of the merchant.

The Interim Report considers that *"acquirers may be able to provide some insight as to how merchants use these optional services and the choices that merchants have available to them."*[70] While we agree that acquirers may have <u>some</u> information regarding the choices made by merchants, the approach taken to gathering information only from acquirers is not suited to understanding the rationale for these decisions.

<u>Reliability of acquirer responses</u>

It is not reasonable to expect individuals within the acquirer to possess detailed knowledge of all the optional services offered by Mastercard. As Mastercard's own experience demonstrates, gathering the relevant information to respond to questions relating to a wide variety of optional services is a resource-intensive exercise, requiring the involvement and expertise of multiple teams and individuals.

Other sections of the Interim Report describe that the same acquirers surveyed here report *"issues relating to understanding mandatory and optional scheme and processing fees"*. Therefore, in the PSR's

[67] Mastercard response to PSR card fees review 2nd information request Part 3 Fees and Transaction data (Scheme-Switch cover letter)

[68] Mastercard response to PSR card fees review 4th information request Optional Services, 26 October 2023

[69] We note that there is some confusion regarding the Multi-currency settlement service. ✂

[70] PSR Interim Report, Annex 4, para 4.15

evaluation, issues in understanding Mastercard services exist amongst those being asked to comment on available alternatives. Even in cases relevant to the business of the acquirer, we consider it highly unlikely that acquirers had the time or incentive to undertake information gathering exercises to provide insightful responses to the PSR's section 81 request asking about the use or availability of alternative services. That is particularly so in the context of a review not aimed at the acquiring market. Responses provided by acquirers will necessarily be based on the limited knowledge of the respondent and may simply be incomplete or incorrect.

Indeed, we observe that on several occasions, acquirers appear to have responded to the section 81 request with plainly incorrect information. For instance,

- two acquirers responded to the PSR stating that they would not be able to *"support merchants that want to process transactions for customers that do not use the same local currency as the merchant"* without the use of the dynamic currency matching service. This is incorrect. As is evident by Mastercard's description of the services, the *Dynamic Currency Matching* service and *Multi-Currency Settlement* service do not affect the ability of the acquirer or merchant to accept or process transactions in any currency (and settlement in any of Mastercard's 30 regional settlement currencies), but only the currency in which the acquirer receives its funds. This response is therefore factually incorrect.
- four acquirers stated that they would be *"unable to process or settle non-sterling transactions"* without the multi-currency settlement service. This is also incorrect. As is evident from Mastercard's description of the services, the *Dynamic Currency Matching* service and *Multi-Currency Settlement* service do not affect the ability of the acquirer or merchant to accept or process transactions in any currency (and settlement in any of Mastercard's 30 regional settlement currencies), but only the currency in which the acquirer receives its funds.
- in relation to the *Pre-Authorisation* service, the Interim Report states *"Three acquirers noted that merchants in sectors such as hotels, car hire, petrol stations, and e-commerce, where the final amount the cardholder must pay is unknown, may not be able to accept these transactions"*. In other words, the acquirers seem to indicate that these types of merchants cannot operate without using the pre-authorisation service. This is factually incorrect. As is evident from the data included in Mastercard's response to the section 81 request, several hotel chains (such as ✂and ✂), petrol stations (✂and others) and online-supermarkets (✂and others) accept card transactions without using the *Pre-Authorisation* service.

These incorrect answers are indicative of the limited knowledge on which acquirer responses are based. Nevertheless, it appears that the PSR has not assessed the accuracy of the evidence and has taken the statements of acquirers at face value. In fact, the Annex appears to place much greater weight on these responses when drawing its conclusions than on Mastercard submissions or available data.

<u>Design of the information request</u>

The information requested from acquirers, specifically in relation to merchants, is unsuited to identify relevant alternatives, even if knowledge of these alternatives were available to the acquirers. Specifically, the first question was:[71]

> *"Please indicate, based on your knowledge, the alternative services that merchants could use instead of the optional services provided by Mastercard and Visa. Specifically: (a) the names of the services; (b) the names of the providers of these services; (c) a short description of these services, if they differ from the service they are an alternative to. [emphasis added]"*

The framing of this question, requiring the acquirer to <u>name</u> service providers, may suggest to the recipients that the PSR is only interested in direct alternatives or at least products with very limited differences to the optional service offered by the scheme. It may also suggest that if the respondent is unable to name and accurately describe the alternative service, it must be excluded from the response. This framing of the question may discourage the respondent from considering wider alternatives.

Indeed, we also note that the section 81 request did not phrase its questions with respect to acquirers and merchants in the same way. While acquirers are invited to name services that *"could address the <u>same business need</u>"* with respect to their own business, they are only invited to name services that *"merchants <u>could use instead</u> of the optional services"* with respect to merchants.[72] This difference may suggest to the responding acquirers that the PSR was not concerned with the wider choices available to merchants (which we outline in section 3.2) and may have led them to omit these from the responses. Indeed, the framing of the equivalent question for acquirers, similarly steers the responses towards direct alternatives by requesting names of providers that could address the same business need.

The second question that the section 81 asked acquirers about merchants was:

> *"Please explain, based on your knowledge, what would be the implications of not using this optional service on the categories of merchants which commonly use this service. [emphasis added]"*

It is doubtful whether acquirers can realistically be expected to provide any meaningful response to this question. That is both because of the large number/wide range of their merchant customers

[71] PSR Interim Report, Annex 4, Table 1

[72] PSR Interim Report, Annex 4, Table 1

(meaning that the impact on different business models can vary significantly), but also because it is not their business (meaning that it is unreasonable to expect acquirers to have this level of detailed knowledge). Again, the framing of the question to acquirers is narrow. Acquirers are not directly asked to specify whether merchants could self-supply the service or whether they could set up the business in a way that eliminates the need for the service.

Thus, of the nine potential alternatives or competitive constraints outlined in the Interim Report, the questions posed to acquirers with respect to merchants relate only to a small subset, namely direct (or very similar) alternative products and not purchasing the service.

No request to any party was made to identify other services that could achieve: a similar outcome; services that address a similar business need (e.g. the use of insurance for pre-authorisation); self-supply of a similar service (e.g. trading currencies instead of purchasing currency services); countervailing buyer power of merchants (e.g. as ✂); alternatives in other geographies; or steering or benchmarking to Visa (e.g. in the case of *Mastercom*). Although it is unlikely that acquirers would have been able to respond meaningfully to such questions, it is obviously unsurprising that they did not even comment on those wider alternatives and competitive constraints.

Mastercard was not asked to provide evidence on the Authorisation Acquirer Exemption Indicator

We further note that the PSR draws conclusions regarding the Authorisation Acquirer Exemption Indicator. The PSR states that:[73]

> *"The only exception to this is the Acquirer Authentication Exemption Indicator, where Mastercard did not suggest a specific alternative [...]. In this case, the evidence is indicative of limited competitive constraints."*

The reason that Mastercard did not comment on alternatives available to merchants in relation to the Acquirer Authentication Exemption Indicator ('AAEI') is simply that question 2 of the section 81 request[74] did not include this service. The PSR's response template listed nine services for which Mastercard was asked to provide evidence regarding the availability of alternative suppliers. The Acquirer Authentication Exemption Indicator was not one of these services.[75]

The acquirer authentication exemption is based on the exemptions and exclusions in the revised Payment Services Directive ('PSD2'). PSD2 regulatory technical standards ('RTS') requires Strong

[73] PSR Interim Report, para 4.171

[74] PSR (2023), 'Notice requiring MASTERCARD EUROPE SA and MASTERCARD EUROPE SERVICES LIMITED and to provide information and documents under section 81 Financial Services (Banking Reform) Act 2013 ('FSBRA')', 2nd October.

[75] PSR (2023), 'Annex 2 to optional services section 81 (Mastercard)', tab 'Question 2'

Customer Authentication ('SCA') to be applied to all relevant transactions in scope unless an exemption or exclusion (based on the nature of the transaction and the identity of the merchant) applies. While the Exemption Indicator can be used for all SCA exemptions, the AAEI fee is only charged for the low-value payments, SCA delegation and acquirer Low-Fraud and Transaction Risk Analysis reason codes. Of the ✂% of card not present (CNP) transactions that make use of SCA exemptions, only ✂% are subject to the fee, while ✂% are not. This scope is the direct result of ✂, as ✂ resulted in these exclusions which reduce the effective fee level by ✂. In addition, there are different ways of complying with the PSD2 regulatory requirements and the Mastercard services themselves are optional and therefore give acquirers and merchants choice.

Evidence in relation to specific services

Acquirers' choices when purchasing optional services

We note that for the optional services *Reports* and *Mastercom*, the PSR presents the evidence on competitive constraints as 'mixed'.[76] With regards to Mastercard's *Dynamic Currency Matching service*, the Interim Report states that *"there are a lack of alternatives available and limited countervailing buyer power"*. We now discuss the evidence on these three services.[77]

Mastercom

Mastercard data shows that some acquirers have chargeback rates of less than ✂% of transactions, while other acquirers have rates of over ✂%, with a similar range of rates seen among issuers.[78] The low rates of chargebacks among many acquirers and issuers demonstrate that merchants, issuers and acquirers are indeed able effectively to avoid chargebacks and associated fees to a large extent.

Additionally, third party vendors offer a range of services to reduce the incidence of chargebacks and the need for dispute resolution. Examples include Accertify, Kount, Chargeback Gurus, Signifyd, FIS Global, Riskified, TSYS: PRIME Dispute Manager, Fiserv: Dispute Expert, Worldline: Chargeback management, Justt and Midigator. The third-party vendor solutions aim to resolve chargebacks outside of the network's formal chargeback process.

It is unclear why the Interim Report considers this evidence as 'mixed'. Acquirers and Mastercard both submitted that third parties are available to manage chargebacks. Indeed, acquirers accounting for a large proportion of UK card transaction by value stated that there were alternatives available or that

[76] PSR Interim Report, para 4.172

[77] PSR Interim Report, para 4.173

[78] Mastercard response to PSR card fees review 4th information request Optional Services, 26 October 2023, p. 24

they could operate without this service.[79] In the context of a market for acquiring services with relatively large players, the awareness of major customers of alternatives or their ability to operate without the service creates a competitive constraint as even a switch of a single customer could result in significant commercial impacts for Mastercard . Mastercard has to remain conscious of this threat when considering the service and its pricing.

Finally, the Interim Report discards relevant evidence, only because it would not be specific to the UK. For example, it states that:-

> *"A Mastercard internal document suggests that it does face some competitive pressure from third parties for its Mastercom service. However, we note this document covers Mastercard's global business and there is no indication of how much competitive pressure Mastercard faces specifically in the UK or whether competitive pressure varies substantially between countries."*[80]

We note that ✂When Mastercard faces significant threat from the existing competition from European or global competitors, it will affect current pricing and constraints for the UK.

Reports

A customer will only choose to opt in to receiving a specific report if it is convinced by the value provided by the report. If no active decision is taken, it will not receive the report and will not incur the associated fee. Further, customers are able to choose to receive only the reports that are of most value to them.

The insights in Mastercard's reports are based on an analysis of a customer's Mastercard transactions. As such, customers have the option to collect the same data themselves or from their processors and undertake the analysis themselves or seek third party support in undertaking the analysis. The analysis in the Interim Report appears to have mischaracterised the *Mastercard Reports* service as a monolithic product. Reports consist of a wide range of individual data insights. Acquirers can opt into reports individually.[81]

In portraying reports as a single service, the Interim Report also ignores evidence submitted by Mastercard on the take up of Reports. The data shows that usage of its reports varies widely, suggesting that many customers do indeed choose to use some of the alternative suppliers, choose not

[79] PSR Interim Report, Annex 4, para 4.140, 4.141

[80] PSR Interim Report, Annex 4, para 4.143

[81] Mastercard (2023), 'Market review of card scheme and processing fees

Draft notice requiring MASTERCARD EUROPE SA and MASTERCARD EUROPE SERVICES LIMITED to provide information and documents under section 81 Financial Services (Banking Reform) Act 2013 'FSBRA'', October, p.6 ('Mastercard S81 response') to receive these insights, or undertake some analysis themselves. At the time of the section 81 request, some UK acquirers opted to receive up to ✂ while the median UK acquirers chose to receive ✂.[82]

In addition to the variation in the number of reports taken by acquirers, there is significant variation in the uptake of the types of reports. Mastercard data shows that even its most popular reports are ✂ Mastercard's UK acquirers whereas ✂ Mastercard reports are used by ✂[83] Thus, while most acquirers choose to receive at least some reports from Mastercard, each individual report is typically ✂

In contrast, the questions to acquirers appear to treat reports as a bundle. Acquirers would of course find it more difficult to replace all data insights simultaneously (although, according to the responses from acquirers, one of the largest UK acquirers evidently managed to do so).[84] The commercial reality for Mastercard however is that acquirers can choose to opt-into or out of individual reports. The available data and some of the acquirers' responses suggests that acquirers are making active use of that choice. When considering competitive constraints for its *Reports* product, Mastercard thus needs to consider the impact of a price change on the take up of individual reports.

Currency services

Currency services is the collective term for multi-currency settlement and dynamic currency settlement of Mastercard transactions between Mastercard and the acquirer. As noted in Mastercard's previous response, the singular difference between the optional services and the default (i.e. free of additional charge) settlement relates to the composition of currencies in which the acquirer receives this settlement.[85]

As Mastercard explained in its response to the section 81 request for optional services, acquirers make active use of this choice. We observe that in 2021:[86]

- ✂choose not to take the *Dynamic Currency Matching Service*
- the effective rates paid by the acquirers differ ✂. This reflects that the shares of transactions included in the programme vary across acquirers.

It may be convenient for an acquirer to receive its settlement in a given composition. However, the fact remains that currencies can be freely traded for each other (and acquirers are sophisticated financial institutions with access to currency markets). Indeed, the answers from acquirers suggests that this alternative is available to acquirers and they are aware of it. Specifically:

[82] Mastercard S81 response, p. 26

[83] Ibid.

[84] PSR Interim Report, Annex 4, para 4.177

[85] Mastercard S81 response, p. 12

[86] Mastercard response to PSR card fees review 4th information request Optional Services, 26 October 2023, p. 28

- Three major acquirers state that they would need to undertake 'internal development work'.[87] This suggests a change to the internal currency trading and hedging set up, rather than a significant obstacle. A further major acquirer does not purchase this service and may thus have such a set up to trade currencies in place already.[88]
- Two major acquirers explained that this would lead to a loss of foreign exchange ('FX') revenue to the acquirer.[89] This statement implies that these acquirers charge a mark-up to Mastercard's competitive FX rates to their merchant customers, recognises that acquirers have alternatives to access foreign currency funds and shows how competitive Mastercard's fees are within a highly competitive landscape for FX services.
- Two major acquirers stated that not using this service would expose merchants to foreign exchange risk.[90] This suggests that the acquirers recognise that the difference between the settlement using currency services and the default settlement is the currencies acquirers receive funds in. A widely available solution to manage the foreign exchange risk is trading in currencies to offset liabilities, as suggested by Mastercard.[91]

Therefore, acquirers appear manifestly aware of the option to use FX markets in addition to or as a replacement of Mastercard currency services, which compete in this market. Given the competitiveness of the wholesale FX market, it is not credible that these markets do not exercise a competitive constraint on *Mastercard Currency Services*. Indeed, the fact that multiple major acquirers choose not to purchase the service contradicts the assertion made that not purchasing the service is not an option.

We also note that the speculation that this choice may be driven by an acquirer's business model is not supported by any evidence. Indeed, we expect that all large UK acquirers acquire merchant customers who engage in cross-border transactions.

This finding that this service has a "*lack of alternatives available and limited countervailing buyer power*" demonstrates the unreliability of the approach taken i.e. asking acquirers' views without undertaking any proper analysis or even attempting to verify the validity of the responses. Acquirers are sophisticated companies and are clearly able to procure currency exchange services from providers other than Mastercard. FX services are readily available and offered by many different banks. In many cases acquirers are even part of a banking group, which means that these services can be provided by the group company.

[87] PSR Interim Report, Annex 4, para 103

[88] PSR Interim Report, Annex 4, para 101

[89] PSR Interim Report, Annex 4, para 150

[90] PSR Interim Report, Annex 4, para 150

[91] We note that the statement that this risk is held by the merchant (rather than the acquirer) merely implies that the acquirers in question do not currently convert currencies for their merchants. However, there are no restrictions to the acquirer providing this service to its merchant customers.

Merchants have choices when purchasing optional services

The Interim Report does not draw conclusions on the competitive constraints for optional services for which merchants are the final users. It recognises the limitations of the evidence in this regard as merchants were not asked any questions about optional services.

We note that many optional services are chosen by merchants and for several of these Mastercard submitted evidence on merchant behaviour. For instance, Mastercard submitted data on the use of ASI, which is acknowledged in the Interim Report, but only in so far as to note the fact that ASI use is ✂,[92] whereas Mastercard's evidence also showed that ✂

Mastercard also submitted evidence ✂ However, the Interim Report suggests that differences in usage do not imply competitive constraints and instead suggests variation in business models among merchants.[93] Mastercard has however also submitted evidence on the use of optional services <u>within</u> merchant categories. It is not clear why the Interim Report does not refer to or use this evidence in its analysis and assessment. The data presented shows that the use of the service varies significantly among different merchants, even within merchant categories that most commonly use a service. For instance ✂do not appear to use pre-authorisation. Therefore, even where merchants may have similar business models or face a similar business need, the data shows that merchants find different ways to address the need beyond purchasing optional Mastercard services.

This confirms that merchants take different approaches to their use of the options described by Mastercard. Even in the absence of evidence from merchants, this merchant-level data can inform the PSR's analysis and assessment of competitive constraints, as in cases in which documentary evidence suggested the presence of competitive constraints, such as *Brighterion*, *Mastercom*, the *Mastercard Loyalty Platform* and *Mastercard Send*.[94]

We have highlighted two such examples here.

<u>*Pre-Authorisation*</u>

Pre-authorisations give merchants a payment guarantee regarding a future transaction, which allows them to better manage payment risk. It is the decision of an individual merchant as to whether and how they choose to take active steps to manage this risk.

[92] PSR Interim Report footnote 24

[93] PSR Interim Report para 4.25

[94] PSR Interim Report, para 4.169

Merchants could also charge the customer up front and if necessary, process a partial refund (where the final amount is less) or additional authorisation (where the final amount is more) once the service has been delivered. Merchants could also charge a certain amount (at the point the customer makes the order) that is less than the value of the order and subsequently charge an additional amount. Such a strategy means that there is unlikely a need for processing a refund.

Merchants who use pre-authorisations to manage payment risks have multiple alternatives, which will depend on the characteristics of each business. For example:

- A petrol station providing automatic fuel dispensers could provide a checkout option after refuelling, or they could limit usage to pre-set amounts.
- Car rental companies can use pre-authorisations as a way to manage risk, but have other methods available to them as well. These include charging their customers a deposit to cover potential damage to the car or selling additional 'excess waiver' insurance which means that any damage would be covered by the insurance company.
- An online supermarket could charge the customer when the order has been finalised and issue a refund where an item is not in stock, or they could charge an amount smaller than the value of the order (when the order has been finalised) and then charge the remainder when the order is being delivered.
- Hotels also have various ways to manage payment risks without using pre-authorisations. At the booking stage, hotels can charge the customer at the point of booking and refund in case of cancellations. Similarly, they could charge the customer at the point where they are no longer able to cancel a booking without charge. Hotels also provide additional chargeable services during the stay and in these, a separate transaction could be made for each service. For example, services such as restaurants, mini-bars and use of facilities could be paid for at the point of use rather than at the end of the stay.

Mastercard also submitted data which confirmed that merchants take different approaches to their use of the options described above.

The Interim Report does not appear to consider the data or alternatives submitted by Mastercard in its analysis of the pre-authorisation service and does not mention the options for self-supply or business adaptation available to merchants. Merchants have various options and various of these include not using pre-authorisation and only using the mandatory services offered by Mastercard:

- providing a checkout option instead, i.e. charging customers the exact amount for what they purchase;
- limiting usage to a pre-set amount;
- charging customers a deposit to cover expenses.

It is unclear what led the PSR to ignore these alternatives and the evidence in its subsequent analysis. The evidence shows that merchants *within* the categories of merchant that most commonly use this service make different choices as to whether to use the service.[95] As is evident from the data, merchants have a choice as to whether or not to use the pre-authorisation service and can adapt their business model accordingly, even in the sectors in which it is most used. Again, it is not clear why this evidence was ignored.

We also observe merchants changing their choices over time. For instance, among the most active users of Pre-authorisation:

- For the Hotel-Motel merchant group
    - ✂
    - ✂
- For the Gas Stations merchant group
    - ✂
    - ✂
- For the Auto Rental merchant group:
    - ✂
    - ✂

This means that even merchants in those categories that most commonly use this service appear to make choices as to whether to use this service. In addition, individual merchants appear ✂ over time. This is in stark contrast to the conclusions made on the basis of acquirer responses that there would be 'significant consequences' for merchants that stopped using this service.[96] These consequences were not analysed in the Interim Report.

<u>Account status inquiry (ASI)</u>

During 2021, a total of ✂ASI queries were made by merchants. Of these, ✂checks (equivalent to ✂of the total) were requested by three merchants, ✂The total ✂ASI queries are equivalent to ✂of the total CNP Mastercard transactions in 2021 and only ✂checks per Mastercard debit or credit card that was in issue in 2021.

While there is value in using the service, the partial uptake by merchants shows that they have the option not to use this type of pre-emptive account or transaction validation.

- In the case of subscription services, the merchant has the option to charge the first payment while the customer signs up for the subscription.
- A merchant could also request proof of identity from the cardholder before registering a card on file or subscribing to a service for the first time.

[95] Mastercard S81 response, Figure 1, 2, 3

[96] PSR Interim Report, Annex 4, para 170

- Similarly, a merchant could reduce the incidence of mistakes being made by the cardholder when registering a new card, by requiring the cardholder to submit the details more than once.
- Finally, where a merchant uses ASI to query active cards-on-file, it could instead contact their customers directly to request a confirmation that the card is still valid and requesting an update if necessary.

The Interim Report does not appear to consider the data or alternatives submitted by Mastercard in its analysis of the ASI service. In relation to Mastercard's submission the 'Analysis' subsection simply states that:[97]

> *"In addition, we also note that while ✂of Mastercard's CNP transactions did not make use of ASI, it is not clear why this was the case. For these transactions, it may be the case that the merchant did not require the use of ASI or may have used an alternative service."*

First, both options mentioned in the Interim Report (i.e. operating the merchant's business in a way that does not require ASI and using alternative services) are competitive constraints to Mastercard's pricing. Therefore, while the tone of the paragraph appears to dismiss the point made by Mastercard, the Interim Report seems to recognise that the low take-up of this service is driven by competitive constraints on Mastercard.

However, the Interim Report also omits data submitted by Mastercard, specifically that ✂of ASI transactions are initialised by only three merchants, ✂.[98] In this context the choices of these merchants, which may respond to changes in price, form a key constraint on Mastercard pricing.

The data supports the view that merchants that commonly use ASI have a choice in purchasing the service. We observe that while some online merchants such as ✂ make extensive use of the ASI service (using it on c. ✂of transactions), other online merchants such as✂ (no use✂only use the service sparingly. We do not consider that there are particular constraints on ✂ that would prevent it from using ASI at a lower rate in the same way as ✂ or✂as these merchants operate in a similar sector. Similarly, we observe merchants changing their choices over time. For instance, among the most active users of ASI:

- ✂ increased the share of ASI transactions as a percentage of CNP transactions from ✂between 2021 and 2022, tripling the amount of requests.
- ✂decreased the share of ASI transactions as a percentage of CNP transactions from ✂between 2021 and 2022, reducing the amount of requests by ✂

---

[97] PSR Interim Report, Annex 4, para 4.48

[98] Mastercard S81 response, p. 21

- ✂, the 10th-largest user of ASI in 2021 with over ✂requests only submitted ✂ of ASI requests in 2022.
- ✂, which only submitted ✂ ASI requests in 2021 ✂of CNP transactions), became the twelfth-largest user of ASI in 2022, using it on ✂of CNP transactions.

This also means that, as in the case of pre-authorisation, even merchants in those categories that most commonly use this service appear to choose whether to so. In addition, individual merchants appear to stop (and start) using ASI over time. This is in stark contrast to the conclusions in the Interim Report on the basis of acquirer responses, that there would be 'significant consequences' for merchants that stopped using this service.[99]

Identity solutions

While PSD2 mandates SCA for certain transactions, it is the responsibility of issuers and acquirers to implement the mandate. In other words, although SCA has been mandated by regulation, Mastercard itself does not mandate the services that can be used to comply with SCA. There are different ways of complying with the regulatory requirements and the Mastercard services are optional and therefore give acquirers and merchants choice.

Also, there is a degree of flexibility within the PSD2 SCA mandate since acquirers and merchants can make use of SCA exemptions. Exemptions to SCA include: i) trusted payees (or whitelists); ii) recurring transactions; iii) low-value transactions; and iv) low-risk transactions. Between June and September 2023, around ✂of Mastercard's CNP transactions were initiated making use of SCA exemptions.

Mastercard data shows that ✂ of Mastercard's CNP transactions between October 2022 and September 2023 were authenticated using *Identity Check*. This includes transactions for which there was no SCA exemption applicable as well as transactions for which an SCA exemption was available, but merchants still decided to use the *Identity Check* service e.g. to improve approval rates. This shows that acquirers use different ways of complying with their obligations, managing risks and increasing approval rates. Mastercard also offers a delegated authentication service, which is used for tokenised transactions. This means for example that transactions using digital wallets can be authenticated without using the *Identity Check* service.

Address Verification Service ('AVS') & Card Validation Code 2 ('CVC2')

The *AVS* and *CVC2* services are offered at a fee or free of charge when utilised alongside the *Identity Check* service. Between December 2022 and September 2023, ✂ of the CNP Mastercard transactions

[99] PSR Interim Report, Annex 4, para 4.50

processed by a UK acquirer used the *AVS* service. In the same period, ✂of the same type of transactions used the *CVC2* service.

There are several options provided by third parties and Mastercard that acquirers and merchants could use to minimise fraud risks and which are therefore alternatives to *AVS* and *CVC2*. Competitors offering alternatives in this space include Falcon, Featurespace, AI Corporation, Biocatch, Call Sign, Threatmetrix, IBM Trusteer and Vital Signs. Credit reference agencies also support merchants and acquirers in cardholder screening to reduce fraud risk. Some of the alternatives offered by Mastercard are *Ekata*, *Identity Check*, *NuDetect* for Merchants and *Trusted Device API*, among others.

The *AVS* service is commonly used in transactions that will be followed by product delivery or a service installation at the cardholder's residence. This suggests that the service is not exclusively used for security purposes, but also as a way of reducing the risk of cardholders submitting incorrect address information during checkout. Merchants have several alternative ways to address this issue, such as using postcode finder application programming interfaces ('APIs'), requesting proof of address documentation from cardholder and requesting address confirmation during the checkout, among others. Acquirers can also connect with issuers for the confirmation of this information.[100]

Automatic Billing Updater

Automatic Billing Updater (ABU) is a global platform that updates cardholder account data to reduce the number of card-not-present (CNP) transactions being declined due to expiration date and account number changes. Mastercard's ABU automatically maintains the accuracy of customer card data, prevents disruptions to card-on-file payments and extends the life of recurring payment arrangements. Merchants have alternatives to ABU. For instance, since merchants hold information about when each of their cards on file will expire, they can contact their customers prior to expiration requesting their payment method be updated.

Many merchants also enable customers to register multiple payment methods. In particular, many mobile phone apps come with the option of registering multiple payment methods. This means that if a card expires, another registered payment method will automatically become the 'default' payment method.

From the cardholder's perspective, the alternative is directly to update all their records after a card expires or is replaced. This can be done with their replacement card or with any other payment methods they hold. Similarly, cardholders can actively add more than one payment method to their card-on-file

[100] Some banks offer an API service for address verification. For example, NatWest has introduced such a service; see: https://www.bankofapis.com/products/customer-attribute-sharing/address-verification/

or subscription merchants, which will ensure continuity of service in case one of their cards expires or is lost/stolen.

In analysing responses from acquirers, the Interim Report explicitly considers countervailing buyer power and self-supply of services as competitive constraints on the pricing of Mastercard's optional services.

In relation to both self-supply and countervailing buyer power, the PSR appears to dismiss these competitive constraints as limited to larger merchants. For instance,

- In relation to the pre-authorisation service, the PSR obtained evidence that "✂."[101] The Interim Report states that "*while deals for larger or important merchants may provide some competitive constraint on Mastercard, we have not seen evidence of widespread countervailing buyer power - for example among smaller merchants - which would indicate strong competitive constraint on Mastercard*".[102]
- In relation to the Address verification service, Visa stated that merchants could develop their own authentication capabilities. The PSR dismisses this possibility, stating that "*we believe this would not be viable for the vast majority of merchants. This is because it is very unlikely that small merchants (which constitute the majority of merchants in the UK) will have the technical or financial capabilities to develop authentication solutions (or card payment solutions more widely) in-house*"[103]. Similar language is included for Account Status Inquiry and Identity Solutions.

In relation to both constraints, the analysis in the Interim Report does not take account of the commercial reality that Mastercard faces when setting its fees. As already mentioned in relation to Account Status Inquiry, ✂. These large purchasers of optional services are highly sophisticated technology companies, such as ✂[redacted] which with their knowledge and financial resources have the ability to develop such solutions in-house.

Therefore, even if the same technical capabilities may not be present for smaller merchants, Mastercard has to consider the ability of large merchants to self-supply or to obtain rebates as a competitive constraint when setting prices for the optional services. This creates countervailing buyer power, regardless of the (in)ability of smaller merchants to develop similar services themselves.

[101] PSR Interim Report, Annex 4, para 4.171

[102] PSR Interim Report, Annex 4, para 4.171

[103] PSR Interim Report, Annex 4, para 4.80

3. Market outcomes

In addition to analysing the competitive process and constraints, the Interim Report concludes on overall market outcomes. The Interim Report takes a narrow view of 'outcomes' as it defines the scope of its investigation into outcomes as pricing and profitability. For reasons which it does not explain, the PSR considers that quality of service is accounted for in the profitability analysis.

By focussing on a narrow set of outcomes, the Interim Report ignores elements of card services that are very important to end users, as well as the card ecosystem as a whole. The PSR states that this is 'by design' and that the review focusses on the competitive pricing of the services, rather than the services themselves. Given that the PSR considers pricing and profitability the two key outcomes it is reviewing, we comment in detail on its findings below.

As a result of the misguided narrow focus of the review, this analysis appears as an afterthought and does not consider the evidence available to the PSR. We do not however consider that it is possible to abstract pricing and profitability of a product, from the characteristics and evolution of the underlying product. Indeed, the Interim Report does briefly mention innovation and the changes in service quality, as the PSR appears to have recognised that commenting on changes in price but not changes in the underlying product is not useful. We therefore draw together the available evidence below.

A. Innovation/ service improvements and recent fee changes

Introduction

In Section 1 of its Interim Report, the PSR concludes that its evidence "*points towards fees being increased with little or no link to changes in service quality*" and in its press release the PSR states that "*…Mastercard and Visa have increased their scheme and processing fees by more than 30% in real terms. There is little evidence that the quality of service has improved at the same rate.*" These conclusions are not supported by the evidence. They are based on an analysis that is not robust, but which is selective, relying on limited and flawed evidence.

First, it is not clear how these conclusions are supported by the PSR's own assessment of the evidence, as summarised in Section 6. The PSR finds that (i) there has been service enhancement and innovation (ii) there is evidence of "*the introduction of new or improved services being accompanied by new or* *increased fees"* [104] and (iii) "*there is some evidence that innovation – whether in new services or improvements in existing ones – tends to be accompanied by new or increased fees*".

Second, the Interim Report's analysis does not reflect the process of continual maintenance, service enhancement and innovation for the Mastercard services. These improvements and innovations are to the benefit of the ecosystem. Mastercard provided the PSR with a detailed analysis of changes in Mastercard's scheme activities over time ('Mastercard's scheme activities – changes over time'). Therefore, at times, a recalibration of fees is undertaken to reflect the investment in and the benefits arising from, the improving nature of Mastercard's offering. Such improvements do not always come with a specific fee change because individual fees may not always be introduced and/or increased at the point at which individual improvements are made to particular services.

Furthermore, the PSR appears only to focus on innovation, improvements and fee changes, associated with individual products/services. Its assumption appears to be that the core network and scheme services do not evolve or improve and that no changes to fees are justified (unless on a cost basis). This is a fundamental misunderstanding in the PSR's analysis, because Mastercard continually develops its core network and services, for which investment is required. Therefore, as discussed below, there may be many reasons why fees are not introduced and/or increased at the time the improvements are made either to individual products or services or to the core. The Interim Report appears to overlook this market feature in its analysis.

Third, as the Interim Report itself explains, "*some of the increase [in fees] for Mastercard may in part be due to the increase in optional services purchased by acquirers*". The PSR has observed and acknowledged that the new optional services come with additional fees and the take-up of optional services has increased over time, indicating that the new services are valued by customers.

Fourth, the PSR acknowledges the service enhancement and innovation but concludes that "*responses from customers on the acquiring side of the schemes, in many cases, do not tend to support a view that quality of service has been rising in step with fee increases.*" However, the Interim Report draws conclusions from an extremely small sample of merchant responses (nine responded, out of the millions of merchants in the UK) which is not representative of the merchant population. Accordingly, the PSR's analysis is not robust and does not allow it to conclude: "*[t]here is little evidence that the quality of service has improved at the same rate*."

Fifth, the Interim Report draws inferences from the absence of detailed written considerations in Mastercard's internal documents. However, the sample of internal documents relied upon is limited

[104] For example, PSR Interim Report para. 6.49, 6.56.

and not representative of the full discussions that take place, which is acknowledged in the Interim Report.[105] Yet the findings fail to take account of these important limitations of its analysis when reaching unduly broad and definitive conclusions as to the role of competition in constraining fee decisions, as well as the links between any fee changes and changes in service quality. That said, even the limited documentary evidence the PSR cites does show the competitive constraints under which Mastercard operates, especially with respect to the quality and innovation dimensions of competition.

The Interim Report also fails to take account of positive feedback from issuers, acquirers and merchants, selectively relying on a small number of more negative statements. The positive view of Mastercard's innovation is also consistent with the feedback Mastercard receives from a wide range of UK customers in its annual Voic of the Customer (VOC) survey, which confirms that innovation is seen as an area of strength for Mastercard, by both issuers and acquirers.

There have been significant changes during the relevant period which have further improved the services that Mastercard's payment system delivers to issuers, acquirers, merchants and ultimately cardholders. Many of the fee changes that the PSR observes relate to these past and ongoing developments, investments and innovations. While the PSR recognises that its evidence points to the introduction of new or improved services being accompanied by new or increased fees,[106] it makes no attempt to understand in detail the improvements in quality and innovation which have motivated the pricing changes. Accordingly, it has no basis on which to conclude there is no link between fee changes and improvements in quality.

The rest of this section is structured as follows:

- We sets out further evidence of the service enhancement and innovation that Mastercard delivers.
- We outline outline how PSR's conclusions are based on an analysis of innovation and service enhancement that relies on a limited and flawed evidence base.
- We explain he limitations of the PSR's analysis of recent fee changes.

There is sufficient evidence on service enhancements/innovations and on the link between fee increases and service enhancement/innovations

The Interim Report has misrepresented the process of innovation for core services and the accompanying fee changes and/or introduction of new fees. Furthermore, a significant portion of the

[105] In assessing Mastercard's recent fee changes, the PSR itself acknowledges that its review is not representative – either as to the scope of the fee changes that are included in the PSR's sample, or as to the scope of the Mastercard internal documents that it has reviewed for each price change within its sample.

[106] PSR Interim Report, paragraph 6.49.

evidence demonstrates the enhancements made to on-going services and the introduction of new and innovative services to Mastercard's customers.

The Interim Report does not reflect an understanding of Mastercard's process of enhancement and innovation.

Any assessment of how Mastercard's fees have changed over time needs to be undertaken with an awareness of how the activities associated with those fees have changed, together with an understanding of how and when these changes take place.

In the context of an ever-evolving payments landscape, Mastercard must continually adapt, innovate and invest and must 'run to keep still'. In some cases, investments in new service enhancements are accompanied by a change in fees and in such cases, there is a link between service enhancement and increased fees. However, this only reflects one aspect of the way in which Mastercard delivers service enhancement and innovation.

Many of the services provided by Mastercard are by their very nature fundamental to ensuring that the payment network functions properly, efficiently, and in a safe and secure manner. Mastercard is therefore continually developing, maintaining and enhancing its activities and services to meet the needs of its various customers and users. Conclusions in the Interim Report based on a requirement for '*evidence of direct links*'[107] in relation to service quality and fees therefore reflect a misunderstanding of the process of Mastercard's quality enhancement and innovation. General improvements do not always come with an immediate or specific fee change.

Where a particular service or element of the core network is enhanced, there are many reasons why prices may not be introduced/increased at the time the improvements are made.[108] For example, Mastercard may first want to demonstrate the value of the enhancement or service to its users before increasing the fee. It may wish to take time to determine the correct level of the fee according to the level of value/usage, as it may not be a business priority to charge for a service which may initially have fairly low usage. One service improvement might not justify an increase, but five service improvements introduced over a period of time would collectively do so. Increases in opt-in or opt-out fees observed by the PSR often took effect after the introduction of new services (e.g[redacted] ✂,[109] etc.) or improvement to existing ones (e.g., ✂).

[107] For instance PSR Interim Report, para. 6.150.

[108] For example, as explained below, Mastercard's investment and continual improvement in security for contactless payments after the service was first introduced facilitated the subsequent raises in the limit – to the benefit of merchants and consumers. This was not directly linked to a simultaneous fee increase.

[109] In 2021, Mastercard increased its fees associated with a new service providing issuers with predictive scores to aid in preventing and mitigating fraud and security risks.

This is consistent with the experience of the issuers and acquirers which have engaged with the PSR. For example, one acquirer told the PSR that the card schemes typically "*offer services first free of charge to allow for the market to adapt. At a later point in time, the payment networks introduce pricing and require payment for those services. Therefore, the scheme-level innovations at the time of the fee introductions are less relevant as the services are already adapted, accepted, and needed in the market.*" The acquirer added that such scheme-level innovative services often enhance the quality and security of payments.[110]

Mastercard's initiatives to enhance the existing offering and develop new services

As previously submitted to the PSR,[111] the payments landscape has seen considerable change due to technological developments, entry by new providers, regulatory changes and constantly evolving risks in the ecosystem. The security and fraud risks are dynamic and increasing over time, including as potential fraudsters use technology to reach a large number of potential victims, and become increasingly sophisticated in their approach.

These changes have direct implications for Mastercard, as well as for all participants in the broader ecosystem. In response, Mastercard continually develops and enhances its scheme activities and services, ensuring that the entire card product continues to deliver a competitive and attractive experience to merchants and cardholders in terms of convenience, speed and protection, security and stability and costs.

To be clear, this requires that Mastercard develop and enhance aspects of its core business and franchise (which typically do not have specific fees attached to them) as well to develop new products/services for which fees are more usually charged. Mastercard's core business is dynamic and subject to as much evolution as the individual products and services, which seem to be the PSR's primary focus. The nature of competition means that Mastercard does not operate its core business on some kind of static utility-style model, but rather it constantly invests to respond to the expectations and demands of its customers, as well as the continually evolving threats in the ecosystem.

As a result of its service enhancements and innovation, Mastercard generates value by boosting the economy, working for consumers and helping businesses both inside and outside the financial services sector. As set out in detail in previous Mastercard responses,[112] the value generated can be highlighted by mapping Mastercard's scheme activities against four key drivers of economic growth.

---

[110] PSR Interim Report, Annex 8, para 8.142.

[111] For further detail, see Mastercard's response to PSR working paper MR22/1.4 (17 April 2023) and 'Mastercard's scheme and switch activities and changes over time' submission dated May 2022.

[112] For instance, the 'Mastercard's scheme and switch activities and changes over time' submission dated May 2022, and 'The competitive landscape for payment services in the UK' report dated April 2023.

(i) *Improving payment efficiency*

By making payment transactions safe, simple and smart, Mastercard improves payment efficiency in the transactions between consumers and merchants and ensures that customers have a route to protection and refund when things go wrong (e.g. by continually developing and enhancing its scheme rules on chargebacks and its dispute-resolution platform *Mastercom*[113] and by improving authentication solutions). Examples of recent developments include *NuData*, *Accountholder Authentication Value (AAV)*, [114] and the continued development of the *Mastercard Digital Enablement Services (MDES)*.[115] Mastercard has also been integral to leading and coordinating the industry's implementation of SCA requirements. It made significant investments to ensure that the ecosystem was ready for this change, including substantial efforts in collaborations with retailers and optimising authentication guidance documentation.[116] Mastercard has also provided SCA-compliant solutions that use payment authentication protocols to provide a better customer experience, as well as to reduce fraud and basket abandonment.[117]

(ii) *Facilitating new entry*

The Mastercard scheme facilitates the entry of a range of newer 'non-bank' issuers (e.g., Revolut, N26, Transferwise, Monese and previously Monzo and Starling) and acquirers (e.g., Tyl[118] and Ayden[119]), as well as third-party players, facilitating competition within the ecosystem. *Start Path* is Mastercard's start-up engagement programme focussed on finding the best new payments businesses to help into the market. So far, it has worked with over 400 start-ups on everything from blockchain to open banking, many of which will be working on new ideas which will benefit acquirers and merchants. Mastercard has traditionally played an important role in reducing barriers to entry. For example, Mastercard offers payment facilitators and fintechs new services that cater to their needs (e.g. *Trends Platform*, *Trends Startpath*, *Mastercard Intelligence Centre (MIC)*, *Mastercard Loyalty Solutions*. Such initiatives allowed players such as Adyen (which entered as a payment facilitator and is now an acquirer) and Monese (a third-party player offering current accounts and money transfer services) to enter and expand within the payments ecosystem.

---

[113] Mastercard estimates that issuers and merchants can achieve a chargeback reduction of more than 80%. For further details, see Mastercard (2020), '*Transforming dispute resolution through merchant-issuer collaboration'.*

[114] AVV was introduced in 2004 and enhanced in 2018 and 2019—an important element of Strong Customer Authentication that was pioneered by the industry through EMVCo and later adopted as a requirement into PSD2. AAV validation is a check by the issuer on the token created by the acquirer through SCA.

[115] MDES was introduced in 2014 to support Apple Pay. It has since then undergone continuous improvements. As a result of these continued improvements, MDES has helped to reduce declined transactions by 58% in 2022. For further detail, see Mastercard's response to PSR working paper MR22/1.4 (17 April 2023).

[116] Including through multiple versions of Mastercard's authentication guide. Mastercard (2019), 'Authentication guide for Europe', V1.1, April. For further detail, see 'Mastercard's scheme and switch activities and changes over time' submission dated May 2022, page 17.

[117] For further detail, see Mastercard's response to PSR working paper MR22/1.4 (17 April 2023).

[118] NatWest's acquiring business Tyl launched in 2019.

[119] Ayden entered the market as a payment facilitator but has since expanded into the acquiring space.

(iii) *Maintaining security and stability in the payments ecosystem*

Innovation plays a key role in the payments' ecosystem, but it is high-risk for individual players to conduct and often requires collective engagement. The Mastercard scheme acts as an enabler that incentivises the take-up of desirable innovations, reducing the need for other firms to make long-term risky investments, while protecting and growing the UK payments ecosystem for all. To that end, Mastercard has made important innovations in the form of product developments aimed at improving the security and convenience of its payment services.

For example, Mastercard invested considerably in its fraud prevention and detection systems and engagement with issuers, enabling the increases in the contactless payment threshold to be successful. Without such investment from Mastercard, it would have not been possible safely to increase the threshold without increasing the risk of fraud. Mastercard's ability to bring about this change at speed is testament to the trust that issuers, acquirers, cardholders and merchants place in its scheme and in its success at enabling important innovation.

Security and cyber threats are growing in the risk they pose as fraudsters are using technology in more innovative and sophisticated ways. Mastercard must therefore invest in cutting edge technology to combat this threat. For example, Mastercard improved its *Mastercard Cyber Secure*[120] in order to allow issuers and acquirers to review, detect and act on cyber vulnerabilities. It also enhanced its *Safetynet* services so as to enable issuers to monitor the transactional traffic of Mastercard's network and avoid large-scale fraud events. It has recently integrated artificial intelligence into its fraud-prediction technology to control and mitigate against fraudulent activity.[121] To address the landscape of ever-evolving threats, Mastercard has also recently announced the opening of its *European Cyber Resilience Centre*.[122] This investment will further bolster Mastercard's ability to protect, detect, and respond to cyber risks, and will facilitate others in the ecosystem and public sector organisations to remain on the front foot against innovative and emerging cybercrime.

Mastercard must also manage the risks to the payment ecosystem which smaller new entrants may create. Mastercard does this in several ways. One example is the introduction of the *Payment Facilitator Review*[123] process, which examines the risks facing specific payment facilitators and shares these assessments with them, thereby enabling them to improve their systems and the

[120] Mastercard Cyber Secure provides a suite of cyber security and risk management capabilities to issuers and acquirers.

[121] https://apnews.com/article/mastercard-visa-ai-credit-card-fraud-detection-0c348818087a57b13bfac66c761e03b4?trk=public_post_comment-text

[122] https://www.mastercard.com/news/europe/en/newsroom/press-releases/en/2024/mastercard-opens-european-cyber-resilience-centre-in-belgium/

[123] The PFR was introduced in 2010 and expanded in 2015 to enable the growth of payment facilitators.

safety of the entire ecosystem. This dual approach (increasing the security, efficiency and convenience of the payment ecosystem, while encouraging new entry) is only possible due to Mastercard's investment in continual innovation and enhancement of its services.

As a result of Mastercard's innovations in relation to fraud, cybersecurity and financial crime, the overall fraud cost per value of transaction has reduced over recent years, even as risks have been increasing.[124] This reduction in fraud in the Mastercard scheme has clear benefits for all parties involved. The Interim Report does not appear to take into account the evidence regarding this important market outcome.

(iv) *Driving innovation*

Mastercard drives innovation at every level in the ecosystem, including to the direct benefit of merchants, which it recognises as critical stakeholders. For example, *Click to Pay* (previously also known as *Secure Remote Commerce*) revolutionises card acceptance for online merchants. Rather than manually entering card details, *Click to Pay* enables 'one click' password-free, purchasing once an account has been created. It makes it much easier for merchants to complete an online sale, whilst also significantly improving the experience for the cardholder. It works across different card schemes and also ensures card details are tokenised, which both increases the security and convenience.

Tokenisation is itself a hugely important innovation in card payments, which Mastercard has been critical in delivering. The storage of tokens by merchants (in place of card details) helps increase merchants' resilience to cyber attack (as tokens have no value to a fraudster). They also allow underlying card details easily to be updated in the event of card loss or expiry, making it easier for the consumer to continue to shop and for the merchant to continue to make the sale.

Mastercard also works to increase the options (and reduce the costs) of the hardware associated with accepting card payments, particularly for small merchants. *PIN on Glass* removes the need for a separate point of sale (POS) terminal by enabling any compatible device (i.e. a tablet or smartphone) to be used to enter PIN details. It is essentially a software-based solution that links the device to a secure card reader, so a separate PIN terminal is not needed. Similarly, *Tap on Phone* goes a step further and does not even require an associated card reader. It simply allows contactless transactions to be made directly via the mobile device, either through cards or other devices.

[124] As previously submitted, fraud per value of transaction within the Mastercard system in the UK declined by 72% between 2018 and 2022. See Scheme Activities report, page 30-31.

Through its *Ethoca* business, Mastercard is helping merchants to reduce chargebacks and associated operational costs. Through real-time access to purchase details, it provides much clearer merchant information to the cardholder, increasing the merchant's brand awareness and value, whilst reducing the need for the cardholder to challenge transactions which they may not immediately recognise. At the same time, the *Merchant Transaction API* enables merchants to address the issue of first-party fraud.

Mastercard is also helping merchants through the introduction of 'fast refunds' delivered through its Mastercard Send product. Efficient refunds are an increasingly critical element of any online business, particularly clothing which relies on consumers knowing that they can get their money back quickly for unwanted items. Fast refunds enable refunds to made in minutes (rather than waiting a couple of days for settlement), which hugely enhances the value to merchants and the likelihood of consumers make repeated and larger purchases.

At the same time, Mastercard is also working to reduce the time taken for card settlement to occur, which helps improve merchants' cash flow and the overall efficiency of their business. This innovation in particular is a direct response to competitive pressure and the need for Mastercard to provide added value to merchants in order to persuade them to continue to accept or prefer cards, when weighed against other options.

All of this innovation requires constant investment and development within Mastercard's own business. The continued relevance and acceptance of cards as a payment method amongst many others does not happen automatically and is not guaranteed in the future. It depends on Mastercard continuing to invest and innovate in order to demonstrate to merchants that card payments provide value which far exceeds the price. Mastercard described in detail the innovations and improvements it has made to its payments system in its submission 'Mastercard's scheme and switch activities and changes over time' dated May 2022.

Mastercard's internal documents point to the value of the service being a key rationale for fee changes

Mastercard faces competitive constraints on several dimensions of competition – including on quality and innovation. This is evident across Mastercard's internal documents which highlight that the two key rationales most frequently cited for the relevant fee changes are: 'reflecting value of the service' and 'responding to customer need/creating value'.[125]

Other than a small number of fee changes resulting from a restructuring of fees, most of the recent fee changes which the PSR has considered as part of its market review are related to service

[125] PSR Interim Report, Annex 8, figure 5. See also PSR Interim Report, Annex 2, table 2.

enhancements. The Interim Report finds that in addition to new services,[126] these include new versions of services for cyber security and fraud detection[127] (incentivising transition from a legacy service to an enhanced version[128]) and examples of investments in service enhancement[129]. As evidenced by its internal documents, those changes were driven by Mastercard's effort to create a safe, secure, efficient ecosystem whilst trying to make its offering more attractive and competitive. New or enhanced services are often rolled out over a period of time, and as a result, any associated fee increases may happen some time after service launch. Nonetheless, these fee changes reflect a fair share of the user benefits that arise from the new and improved services.

Furthermore, the internal documents include discussions of how the new service would benefit customers. Some documents point to the presence of competing providers of similar services to indicate customer need, whilst others explicitly discuss the value the improved services provide to customers.

The Interim Report acknowledges that its assessment of Mastercard's internal documents (in particular the pricing proposals) was limited, as it focused on documents prepared for final decision-makers and the process leading to the implementation of a fee change is typically more complex, involving several teams within Mastercard. Nevertheless, the Interim Report dismisses this evidence on the basis that these documents do not include a quantitative estimate of this value or because the documents do not typically include data on the costs associated with the scheme and processing services affected by fee changes.[130]

Mastercard disagrees with the Interim Report's approach and conclusions. The documents on which it focused were presented to the European decision-making body.[131] These documents do not capture all significant parts of the discussions during the pricing process.[132] By not taking account of the process through which the documents for decision-makers were created, the PSR's review of evidence is incomplete and consequently "*the absence of references to a particular issue in the documents does not*

[126] E.g., the Mastercard Instalment Payment Services, Mastercard Working Capital Control, New Mastercard Linked Payment Loyalty Platform, Transaction Investigator and Portfolio Analytics, Acquirer authentication exemption, Mastercom Acquirer Collaboration and AI Account Intelligence.

[127] For example, Safetynet enhancement, and Mastercard Cyber Secure. See also PSR Interim Report, Annex 8 para. 8.66.

[128] These include for example the Non-EMV non-contactless fee, 3DS1-only fees, Mastercom Claim Manager pricing – full activation. See also PSR Interim Report, Annex 8 para. 8.69.

[129] For instance, the Interim Report refers to examples of Mastercard stating that investments were required in order to enhance services (e.g. Annex 8 paras. 8.84-8.85). Some examples of where the service offering was enhanced in advance of or alongside a fee change include: 'MasterCard Dispute Resolution – Claims Manager', 'Revised Authentication Pricing', and 'Introducing a new Acquiring Dynamic Currency Matching Fee (DCMF) and decreasing Multi-Currency Settlement Fee (MCSF)'.

[130] PSR Interim Report, Annex 8, para 8.128.

[131] PSR Interim Report, Annex 8, para 8.34.

[132] Mastercard response to the Fee changes working paper, page 3.

necessarily imply that it was ignored in the decision to implement a fee change". This is discussed further at 4.3 below.

In any case, the Interim Report fails to explain why the qualitative metrics discussed in these documents are not sufficient to establish a link between the improvements undertaken and the related fee increases. In the absence of evidence to the contrary, the Interim Report cannot draw the conclusion that there is 'little or no link'. Indeed, this documentary evidence frequently refers to a rationale for the fee changes centred around customer service quality and meeting their needs.

Positive feedback from issuers, acquirers and merchants on rationale for fee changes

The PSR's conclusions are drawn from a severely limited sample of merchants (see below). Nevertheless, the Interim Report has not taken a balanced approach to assessing the customer evidence that has been collected and has given insufficient weight to the feedback which it received from issuers, acquirers and merchants. In many instances, they noted the existence of a link between the fee changes and the enhancement of services and/or the introduction of new and innovative services, which the PSR does not sufficiently acknowledge.

For example, one of the issuers responding to the PSR's information request explicitly mentioned the improvements introduced in cyber security and fraud detection services which are included among the mandatory fees considered by the Interim Report, as examples of services that have been beneficial to itself and its customers.[133] Another issuer told the PSR that scheme fees are just one of the revenue streams which allow Mastercard (and Visa) to re-invest and improve the service for customers: "*it is uncommon and potentially misleading for a scheme to announce specific service improvements on the back of individual fee changes.*"[134]

There is also evidence that acquirers recognise the positive outcomes of Mastercard's innovation in scheme services. For example, one acquirer indicated that such "*scheme-level innovative services often enhance the quality and security of payments*".[135]

Three of the five merchants (out of nine in total) that commented on whether there had been innovation which could have benefited them, pointed to specific examples.[136] One merchant told the PSR that there have been new fees charged over the last few years following updated SCA rules, which

[133] PSR Interim Report, Annex 8, para 8.141.

[134] PSR Interim Report, Annex 8, para 8.141.

[135] PSR Interim Report, Annex 8, para 8.142.

[136] PSR Interim Report, Annex 2, para 2.110. The PSR reports that five merchants commented on whether there had been innovation which could have benefitted them, however Mastercard has not seen the underlying evidence or questions asked by the PSR (see below).

could explain some of the increase in scheme and processing fees. Another example cited is the E-Commerce Authentication fee which is charged on 3D Secure payments.[137]

Some merchants mentioned specific fees. One said that *AVS* fees for excessive authorisation attempts could explain an increase.[138] Another said a small increase in fees could be attributed to the introduction of new fees such as the *Mastercard Transaction Processing Excellence (TPE) Programme* and the *Visa Enhanced Authorisation Fees* (introduced in 2022/2023).[139]

Most of the examples cited above form part of the mandatory and optional services which the PSR considered. Yet, the Interim Report seems to dismiss this corroborative evidence which establishes a link between Mastercard's continuous improvements in service quality and investments in innovation and its decision to change related fees. Despite these various examples of positive feedback, the Interim Report appears to have selectively relied on a small number of negative statements in forming its conclusions, based on a limited and flawed evidence base (see below).

Feedback from customers also shows that they see Mastercard as delivering innovation

Mastercard seeks to provide an excellent experience for its customers, including ensuring that customers' views on innovation and service quality are heard throughout the business. Mastercard conducts an annual survey of its customers known as the VOC survey, as part of gathering this important feedback. The survey provides customers an opportunity to give formal feedback on their experience with Mastercard. It covers a range of topics, including innovation, ease of doing business and performance. The survey asks the same key questions over time so that trends and changes can be tracked. The results are communicated to the highest levels of Mastercard's senior management and are critical in directing how it seeks to respond better to customer expectations.

The VOC survey includes a specific question focused on innovation, asking customers to rate Mastercard's innovativeness on a scale from 1 to 10, where 10 represents the highest level of innovation. [140] Following this quantitative rating, the survey also invites respondents to provide qualitative feedback by detailing the reason behind their rating. This includes discussing any strengths and areas where there is potential for improvement.

[137] PSR Interim Report, Annex 2, para 2.111. Another merchant also noted the introduction of 3D Secure (footnote 244).

[138] *Ibid.*

[139] *Ibid.*

[140] The wording of the innovation question is as follows. 'For this next question, please think specifically about innovation. Using the same scale where a 10 is the best rating and a 1 is the worst rating, how would you rate Mastercard with respect to being an innovative company?'

In 2022, ✂ issuer and acquirer UK and Ireland ('UK&I') customers participated in the VOC with ✂ respondents answering the question on innovation.[141] Recent VOC survey results show that innovation is seen as an area of strength for Mastercard, by both issuers and acquirers. The average innovation rating from acquirers in 2022 was ✂increasing nearly ✂since 2020. The rating from acquirers was similar to the average rating from issuers ✂—see the figure below.[142]

Figure 1 Voice of the Customer innovation scores

✂

Through this survey, customers suggest that Mastercard is innovative, highlighting several positive aspects of Mastercard's innovation. Customers appreciate Mastercard's active role in bringing new technical solutions to market, such as the development of *Mastercard Connect ('MC Connect')* for better user experience and self-service tools. One customer noted that [Mastercard] "*are active and bring new technical solutions to market across a wide range of products and services*".

The introduction of partners like Ethoca, Mastercard Transaction Processing and Osper is seen as beneficial, particularly for smaller companies. Additionally, Mastercard's work in tokenisation, integrations with Google Pay and Apple Pay and efforts in cryptocurrency were praised for being 'cutting-edge'. Moreover, customers have noted that Mastercard has significantly improved on innovation, especially since the pandemic, with initiatives like Fintech Express, Digital First and digital wallets. One customer noted that "*[Mastercard] proactively bring us innovation*".

Overall, customer feedback underscores Mastercard's commitment to innovation through successful initiatives, partnerships and technological advancements, positioning it as a leader in the payments ecosystem.

Evidence that some of the increased fees are in part due to increase in optional services purchased by acquirers, suggesting that merchants do value service enhancement / innovation

As noted by the PSR, its analysis of increases in average fees between 2017 and 2021 includes fees for optional services offered by Mastercard. Hence a part of the '30%' increase will reflect an increase in the take up and use of optional services.[143] Merchants and customers (i.e. acquirers) value the

---

[141] For 2021, there were 83 respondents, all of whom answered the innovation question, and in 2020, there were 84 respondents, with all respondents answering the innovation question.

[142] Mastercard internal data from the Voice of the Customer survey.

[143] For example, PSR Interim Report, para 6.124. Note that we disagree that this is an accurate estimate of the overall unit fee increases in any case.

innovation and service enhancement of Mastercard's optional services. Optional services account for an increasing proportion of the revenue Mastercard receives from acquirers (see table below). This is further evidence that merchants and customers value the continual enhancement in service quality and innovation, as customers are increasingly taking up and using these value-adding optional services.

Table 2 Proportion of acquirer revenues from optional services

	2017	2018	2019	2020	2021	Change (2017 - 2021)
✂	✂	✂	✂	✂	✂	✂

While the proportion of revenues from optional services has been increasing since 2017, it varies across acquirers and for individual acquirers over time (see the figure below). The chart shows the increase in this proportion for the revenue from the 15 largest acquirers (the solid line) and also plots the distribution of this proportion for individual acquires (i.e. where each dot represents the proportion of revenues from optional services for individual acquirers).

Figure 2 Proportion of acquirer revenues from optional services

✂

The data shows that customers' usage patterns differ by customer and by year and that certain acquirers make extensive use of Mastercard's portfolio of optional services while others do not.[144] The use of optional services also varies among different merchants, and within merchant categories. Thus, even where merchants may face a similar business need, the data shows that merchants find different ways to address the need beyond purchasing optional services (see section optional services (section 2E)).

[144] For example, in 2021 the account status inquiry service accounted for [redacted] of all optional fee revenues for one large acquirer. At the same time, its median share of optional fee revenues for large acquirers was [redacted]. Likewise, fees for Mastercard's reports represented up to [redacted] of all optional fee revenues for one large acquirer in 2021, while their median share of optional fee revenues for large acquirers is [redacted]

The Interim Report's merchant evidence on service enhancement and innovation is not robust

The merchant sample selected by the PSR is simply too small to be representative of the views of merchants in the UK on the Mastercard payment system. The Mastercard network serves over 8 million different merchants in the UK,[145] of which the PSR appears to have engaged with only eleven merchants and one merchant association[146], although it is likely that the PSR attempted to engage and elicit views from many more. Even from this limited potential sample, only nine responded to the PSR's merchant questionnaire.[147] Given the negligible share of merchants represented, the PSR cannot possibly rely on these views to reach any reliable conclusion on the link between fee changes and innovation or service improvements. Indeed, assuming that the PSR sent information requests to a much larger number of merchants and since so few replied, the PSR's sample is not only too small to be representative but it is also self-selecting. It is probable that the merchants which responded were more likely to have negative views than those which did not, as there is a limited incentive for those with positive views to take the time to engage in the process.[148] This evidence is therefore inherently biased and unreliable.

Even so, based on the limited evidence of merchant views that the PSR has collected, the Interim Report's finding is not a fair reflection of the feedback, as very limited weight is placed on the positive feedback on innovation received from over half of the few merchants that did respond. Out of nine merchants, five commented on whether there had been innovation which could have benefited them and three out of these five noted the introduction of useful innovations.[149] This positive feedback constitutes more than half of the feedback collected by the PSR.

Yet the Interim Report concludes (based on its assessment of Mastercard's internal documents and on the view of a very few merchants) that it sees "*limited evidence of these customers expressing a view that fee increases have reflected the increased value they have received from scheme and processing services in recent years*"[150]. If 'limited evidence' refers solely to the fact that so few merchants responded to the PSR's questionnaire, that is evidence of a failure in the PSR's evidence gathering process, not of a failure in the level of Mastercard's innovation. The Interim Report cannot reach such a conclusion, given the contrary evidence expressed by more than half the merchants that responded to its survey.

[145] See Mastercard response to PSR RFI, Table 17.

[146] PSR Interim Report, para 2.22.

[147] PSR Interim Report, Annex 2, para 2.103.

[148] The merchants that did respond had no reason or incentive to provide expansive responses to how they had benefited from Mastercard's innovation.

[149] PSR Interim Report, Annex 2 para 2.110. See also, Interim Report, Annex 2, footnote 224.

[150] PSR Interim Report, Annex 2, para 6.41.

Furthermore, whilst some merchants are able to observe the benefits of the innovation and the enhanced quality of service Mastercard has provided, the Interim Report does not acknowledge that many merchants may not be able to observe the changes (particularly improvements which are gradual and which take place 'behind the scenes') and how such changes benefit them directly. The Interim Report's analysis also does not take into account the lack of incentives of the few merchants that did reply to put sufficient time aside to respond to a voluntary information request in order to provide meaningful and substantive evidence of scheme innovation.

We also note that the PSR has refused to provide Mastercard with an opportunity to review the wording of the merchant questions at any stage (unlike in the case of the questions it asked acquirers in respect of optional services). Mastercard is therefore not able to provide an assessment as to whether merchants were directly asked to provide examples of innovation and improvements in service quality, the context in which any question regarding innovation and service quality was asked and the extent to which questions were posed in a neutral framing. Mastercard considers that this is not in line with regulatory best practice.[151]

The limitations of the PSR's analysis of recent fee changes

Fee changes sample not representative.

At paragraph 6.105, the Interim Report caveats the analysis of recent fee changes as follows:

> *"Moreover, by selecting the fee changes with the largest revenue impact in the UK, we have implicitly highlighted those cases where competitive constraints may have been less pressing. It is plausible that, in the presence of competitive constraints, Mastercard and Visa may have decided against large increases of certain fees. Our selection would tend to exclude those cases, as those fee changes would tend to have a smaller revenue impact. For this reason, the analysis should not be interpreted as a characterisation of Mastercard's or Visa's decision-making process for all fee changes, but simply as an assessment of the features and underlying rationales of the largest fee changes implemented in the period 2017-21."*

By design, therefore, the PSR's method for selecting fee changes (focusing on those with the largest revenue impact) necessarily biases the selection towards fee changes where constraints may have been less pressing and excludes those where competitive constraints may have led Mastercard to reduce or drop altogether the proposed fee changes. Therefore, the fee change analysis is being used

[151] For example see CMA guidelines on the use of surveys in its merger investigations, https://assets.publishing.service.gov.uk/media/5afd962340f0b6301d5dada4/Survey_good_practice.pdf, para. 1.17.

to conclude about Mastercard's competitive constraints and the market outcomes, while the analysis' sample selection potentially depends on the competitive constraints faced by Mastercard for each fee change. As such, any conclusions from this analysis are flawed and should not be presented in the Interim Report.

The PSR has not recognised these limitations in its assessment. For example, paragraph 6.120 sets out the Interim Report's provisional finding regarding the drivers of fee changes, which states that "*(...) we find little evidence in the schemes' internal document of competition playing a role in constraining decisions on fees and fee changes on the acquiring side (...)*"[152]. The limitation described above is simply ignored.

Any quantitative conclusions not robust.

The quantitative conclusions based on the PSR's analysis of recent changes are not robust. For example, the Interim Report concludes that the increase in expected revenue from the selected fee changes comes mainly from acquirers and mandatory services. However, these conclusions are undermined by the sensitivity of the results to one or two data points. For instance, the larger revenue impact of mandatory fee changes compared with optional fees would be reversed if a single fee change to the acquiring volume fee is excluded. The Interim Report has rejected this criticism on the basis that "*it simply shows that most of the revenue impact was the result of a small number of fee changes*". This ignores the fact that the sample chosen cannot therefore be used to draw general conclusions as to the extent to which competition constrains Mastercard's decision-making in the past or is likely to do so in the future.

This is most evident when taking the example of the acquiring volume fee. The Interim Report concludes that "*competition does not appear to have been an impediment to implementing material increases in mandatory fees*". However, while the size of this fee change distorts the overall revenue impact of mandatory fee changes within the sample (leading to the PSR's view as to the lack of competitive constraints for mandatory fees), the fee is generally lower in the UK than in the rest of Europe and therefore provides no evidence that competition is particularly weak in the UK. This example only serves to demonstrate the risks of relying on quantitative results which are very sensitive to a single data point.

Sample of internal documents not representative.

The Interim Report does not appear to recognise the role of the European Pricing Committee ('EPC') papers which it has reviewed. The purpose of those papers is specifically and only to present a pricing

[152] See also ''*competition does not appear to have been an impediment to implementing material increases to mandatory fees – which comprised the majority of the fee changes we considered*' PSR Interim Report para 6.120; see also 6.125.

proposal to the decision-makers. There is a limit to what can be included and so the papers do not attempt to summarise all of the work and input which has led to the creation of that proposal or indeed to provide an overview of the competitive landscape or service value of the product.

To some extent those factors are more relevant to the initial decision to create the product/service to which the pricing relates (which is not a matter for the EPC). The role of the EPC is limited to pricing and it is taken as read that they will be broadly familiar with the nature of the product/service which has already been designed by another team. Of course, the EPC papers are also not created for the purpose of subsequent regulatory review or justification, but rather they are intended to be very practical and limited to the specifics of the pricing proposal being discussed.

By not taking account of the earlier process through which the documents for decision-makers were created, the PSR's analysis excludes all prior discussions leading to the final decision. The PSR explicitly acknowledges this limitation to its analysis:

> *"We focused on documents prepared for final decision-makers. However, the process leading to the implementation of a fee change is typically more complex, involving several teams within Mastercard or Visa."*[153]

As a result, the PSR concedes "*This means that the absence of references to a particular issue in the documents does not necessarily imply that it was ignored in the decision to implement a fee change.*"[154] As previously explained,[155] earlier deliberations include internal discussions conducted by the European Pricing Group ('EPG'), an influential group that discusses and develops relevant price changes. Customer account managers also play an important role in these earlier stages of the process, where their knowledge of customer views and the competitive environment in which they operate is a critical input to the process by which pricing proposals are developed.

As explained, this type of input is not included in documents submitted to final decision-makers. Therefore, as the Interim Report itself acknowledges, not only is the sample of recent fee changes not representative, but its review of internal documents relating to each fee change within its sample is by its very nature incomplete. Accordingly, the absence of references to e.g. competitive constraints, customer views or enhancements to service quality, does not mean that competitive constraints, customer views or enhancements to service quality did not play a role in Mastercard's creation of the pricing proposal and subsequent decision-making process.

[153] PSR Interim Report para 6.104 and Annex 8, para 8.130.

[154] PSR Interim Report, Annex 8, para 8.130.

[155] For further detail, see Mastercard's response to PSR working paper MR22/1.4 (17 April 2023).

Notwithstanding the above, the Interim Report says at para 6.150 "*Evidence from our analysis of recent material fee increases and from merchant submissions pointing towards fees increasing with little evidence of direct links to any changes in relevant costs or service quality*".

As discussed above, the reason for 'little evidence' from the PSR's analysis of recent material fee increases of direct links to any changes in service quality may well be that (by reviewing documents submitted to final decision-makers) the PSR has not taken account of the end-to-end process by which pricing proposals are developed. Consequently, the absence of references to changes in service quality in the documents does not mean that it was ignored in the process to develop the pricing proposal. No conclusion can therefore safely be drawn from finding little evidence in Mastercard's internal documents of direct links to any changes in service quality. In any event, the Interim Report appears to give insufficient weight to the references to service quality and value contained in the documents which it did review.

The Interim Report takes a selective approach and fails to take into account the relevant evidence that Mastercard submitted regarding fee changes.

The Interim Report's selective approach to evidence is demonstrated by its assessment of two recent fee changes.

Introduction of CNP fees in Europe

When discussing the introduction of CNP fees in Europe, the Interim Report makes two key points. First, CNP fees were set higher in the UK than in the rest of Europe and second, CNP would be an example of the lack of competition and its impact on scheme fees. The treatment of these two points shows how unreliable the analysis and conclusions are.

Regarding fees set at a higher level than in Europe, Mastercard previously explained that there was extensive internal discussion and that ✂

This rationale is explained in the documents reviewed by the PSR. For example, the internal pricing document states ✂[156] The same document, when describing the pricing proposal for the UK, states that ✂The rationale was also explained to the PSR in previous Mastercard submissions.[157]

None of these points were considered in the Interim Report when attempting to understand the mentioned fee change. The Report simply presents the factual difference between the UK and the rest of Europe and links this to a supposed lack of competition in the UK: '*Internal documents also suggest*

[156] MASTERCARD_2022_PSR_0001942.pptx, slide 5.

[157] Mastercard response to PSR Working paper 'Market review of scheme and processing fees: Recent changes to scheme and processing fees MR22/1.6', page 14.

to us that competition (or the lack thereof) may have an impact on the level of mandatory scheme fees. The clearest example among the fee changes we analysed is the 2018 introduction of CNP fees in Europe.'. However, the Interim Report does not present any analysis to support this claim. The PSR concludes that the fee increase was impacted by an alleged lack of competition but does not propose any alternative scenario. The only one that is implied is one in which the UK would have priced the same way as the rest of Europe, but this is not a credible counterfactual because of the reasons explained above.

It is notable that a fee change for which the PSR presents practically no evidence on competitive impact is treated as "*the clearest example among the fee changes we analysed*". In summary, the Interim Report has poorly interpreted the evidence regarding the CNP fee change and more broadly the impact of competitive constraints on fee changes.

Mastercard's new connectivity fee

Box 2 of Annex 8 discusses the introduction of Mastercard's New Connectivity fee.[158] This box is drawn from the fee changes working paper published by the PSR in June 2023.[159]

After the publication of the PSR's working paper, Mastercard noted ✂[redacted] This was explained to the PSR in Mastercard's response to the working paper.[160]

Moreover, a simple inspection of the pricing document for this fee change shows additional details. For example, ✂:

- ✂
- ✂
- ✂
- ✂
- ✂
- ✂

Similarly, slide 5 sets out several factors that drove the fee change, concluding that ✂

The PSR ignored this in both its working paper and subsequently the Interim Report, even though in response to the PSR's working paper, Mastercard clearly explained this key omission. This omission is important. The PSR is assessing an internal Mastercard decision, by presenting its 'pros and cons'. If even tentative conclusions are to be drawn from an exercise of this type, the assessment must include

---

158 PSR Interim Report, Annex 8, Box 2.

159 PSR (2023), 'Recent changes to scheme and processing fees', p. 37, para 5.3.

160 Mastercard response to PSR Working paper 'Market review of scheme and processing fees: Recent changes to scheme and processing fees MR22/1.6', page 20.

all the relevant issues that were taken into account during the discussion. The PSR made a selection of 'pros and cons' and then presented them as evidence to make inferences about the underlying competitive constraints faced by Mastercard. As a result, the conclusions that the Interim Report reaches based on this exercise cannot be relied upon.

The Interim Report's selective approach and its failure to take into account Mastercard's response in assessing the evidence relating to these two fee changes demonstrates why the conclusions reached are ultimately unreliable.

B. Price increases – econometrics

This section sets out Mastercard's review of the analysis of the PSR's econometric analysis in the Interim Report. Annex 1 provides a detailed review of the econometric analysis contained in Annex 7 of the Interim Report

The PSR points out that Mastercard's revenues have increased in recent years, which is correct but is also a direct consequence of the enduring and increasing popularity of card payments with consumers. As the PSR notes, the net fees received by Mastercard (not adjusted for any changes in the underlying product or transaction characteristics) only increased by ✂ over the five years between 2017-21.

The PSR places little weight on this figure and instead conducts an econometric analysis. Mastercard has engaged Oxera to review the PSR's updated analysis to assess its accuracy, reliability and robustness. Oxera's analysis and conclusions are provided as a confidential annex to this response. Oxera has previously also reviewed the PSR's confidential working paper and the PSR's analysis in the context of its card-acquiring market review ('CAMR').

In response to the December working paper, Oxera made several reasoned improvements to the PSR's econometric model. The PSR has treated these as 'sensitivities' rather than including them as improvements to its core model. Ignoring appropriate improvements is not warranted. Hence the PSR's conclusion that unit revenues have risen by 'around 30%' over the period is not robust. With these improvements included, unit revenues across mandatory and optional fees have risen by no more than ✂ over the five year period from 2017 to 2021. As the PSR acknowledges, even this lower figure reflects the increase in optional services purchased by acquirers in the period and hence will overstate that for mandatory services only.

Results estimated by the PSR for mandatory fees on the sample of the 15 largest acquirers (accounting for ✂ of UK transactions by volume in 2021) found only a ✂increase in unit revenue. This confirms that the ✂increase can be seen as very much an upper bound of the actual increase and is driven in large part by the increased uptake in optional services.

The Interim Report therefore materially overestimates the percentage increase in Mastercard's fees during the relevant period. Beyond these observations, the PSR has still not addressed several of Oxera's concerns which were outlined in response to the December working paper.

C. *Revenue Generation*

The Interim Report discusses the PSR's view of Mastercard's revenue generation after analysing Mastercard's internal documents. The analysis is discussed in more detail in Annex 9, which covers Mastercard's performance in the UK compared to other countries, changes to Mastercard's past and future revenues in the UK and the composition of Mastercard's revenues in the UK. Mastercard is concerned about the methodology used in this Annex and therefore the robustness of the conclusions. The analysis contained in the Interim Report and Annex 9 is largely based on internal Mastercard documents.

As Mastercard has stated several times, reliance on selected data taken from selected documents is not a robust basis for the type of analysis presented in the Interim Report. Annex 9 should have instead conducted its analysis using the detailed revenue data which the PSR requested Mastercard to submit. Mastercard considers that conclusions drawn on the basis of very limited excerpts from internal Mastercard documents are not robust, may be misleading and should not be relied upon. That is particularly the case when more reliable revenue data is available, having been compiled to clear definitions and the PSR's specifications.

Mastercard has highlighted the challenges and weaknesses of the PSR's approach and how it has used these documents.[161] We do not repeat these concerns here in full, but to summarise:

- Internal documents are partial views from particular staff members at specific points in time. Moreover, most documents are PowerPoint slides with limited text and detail, which can easily be misinterpreted.
- The PSR selected quotes from these documents and presented them as 'Mastercard views'. This is incorrect, as documents may reflect the views of individuals or groups of individuals at the time they are produced. Like many organisations, Mastercard owes part of its success to the range of views that its staff bring to discussions. Therefore, a conclusion or view expressed in an internal document cannot reliably be considered to be Mastercard's corporate view, position or forecast.

[161] See, for example, section 2 of 'Mastercard response to PSR Revenue generation disclosure paper 22.12.23'

- Thirdly, to extract evidence from a documentary review and reach robust conclusions, it is important to have a clear method for selecting, analysing and evaluating the information included in the documents. The PSR has not set out its method for its review in the Interim Report.

In addition, the Annex also suffers from two additional methodological shortcomings which are addressed in more detail elsewhere in this response. In particular:

- Internal documents with market outlooks should not be considered objective forecasts and the PSR should place no evidentiary weight on them (see Annex 2)
- The Interim Report uses an incorrect definition of the issuer incentive ratio (IIR) (see Section competitive constraints, issuers (section 2C))

D. Profitability

This section sets out Mastercard's review of the analysis of profitability in the Interim Report. This section first provides a review of the analysis presented in the Interim Report in relation to the operating margins for Mastercard in the UK before providing a review of the comparator benchmark analysis. Annex 2 and Annex 3 provide a detailed review of the analysis contained in Annex 10 of the Interim Report on profitability.

Review of the Interim Report's analysis of the margins for Mastercard in the UK

The Interim Report concludes that '*[t]he evidence [the PSR has] gathered is consistent with a finding that Mastercard's margins are higher than would be expected in competitive markets. However, there is insufficient data available to [the PSR] in order to reach a firm conclusion on the existence of unduly high prices or excessive profits (and the level of harm arising from it), noting the wide range of possible margins*'.[162]

The Interim Report also states that '*[w]hile [the PSR] recognise[s] the limitations of [their] analysis on profitability and understanding of pricing, which prevents [them] from reaching a firm conclusion on the existence of unduly high prices or excessive profits (and to the level of any harm arising from it), [the PSR] consider[s] that [their] provisional findings [...] would be consistent with a finding of a lack of competitive constraints, with harm to customers on the acquiring side of both schemes*'.[163]

[162] PSR Interim Report, para 1.4.

[163] PSR Interim Report, para 6.152.

It is not clear on what basis the Interim Report concludes that "*Mastercard's margins are higher than would be expected in competitive markets*'. Mastercard's margins in the UK fully-loaded profit and loss account (P&L) show a downward trend and even compared with the PSR's own set of comparators (which is not reliable and significantly underestimates the benchmark margins), Mastercard's margins are not high.

As the CMA market investigation guidelines explain, [164] the trend in profits is an important consideration. The CMA guidelines emphasise that a situation where a firm '*has earned profits that have been persistently above the competitive level may indicate significant market power*' [emphasis added].[165] The Interim Report's approach is not consistent with this good practice. It focuses on the average Mastercard margin over the period considered and does not seem to consider the (downwards) trend of Mastercard's margin over time.

Our review shows that the analysis undertaken is not robust and therefore its conclusions are not reliable. It is based on assertions which are not supported by evidence and its findings are based on views which are inconsistent with an analysis of actual data.

- First, our review indicates that the Interim Report's concerns about the preparation of the UK fully-loaded P&L and with regards to the allocation of costs to the UK are not valid.
- Second, the Interim Report argues that rebates and incentives costs incurred by Mastercard are overstated in the UK fully-loaded P&L and are temporary in nature. The Interim Report argues that the costs in the fully-loaded P&L should have been calculated based on incremental rather than fully-allocated costs. These arguments are not valid, as we explain below.
- Finally, the Interim Report argues that the accounts for Mastercard Inc. and Mastercard Europe can be used to inform the profitability of Mastercard in the UK. Such an approach is inaccurate and overlooks important differences between the UK and European markets for Mastercard.

Concerns about the fully-loaded P&L put forward in the Interim Report are not valid

The Interim Report (supported by Annex 10) raises two main concerns about the fully-loaded P&L prepared by Mastercard.

First, it argues that the PSR did not have enough information to assess whether the fully-loaded P&L prepared and submitted by Mastercard contains the revenues and costs relevant to Mastercard's UK

[164] Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', para 124.

[165] Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies', para 119.

scheme and processing services and to assess the appropriateness of the keys used to allocate costs to the UK.

Mastercard disagrees with this assessment. Mastercard submitted the spreadsheet with the fully-allocated P&L with the relevant calculations and data sources and an accompanying methodology note[166] and also took the PSR through the analysis in a number of meetings. The spreadsheet also shows which global costs were removed before allocating the remaining global costs to the UK and the allocation keys were explained to the PSR. Mastercard has also complied with the PSR's request to provide the fully-loaded P&L for the two additional years of 2022 and 2023.

Second, the Interim Report argues that the fully-loaded P&L margin is sensitive to the way costs have been allocated to the UK. The Interim Report states that '*different cost allocation choices can result in significantly different margins in the fully loaded UK P&L accounts, and we are currently not persuaded that the cost allocation choices by Mastercard best reflect the economic benefits that Mastercard receives from its UK operations*'.[167] This statement is supported by a sensitivity analysis presented in Annex 10, which assesses the impact on the operating margin when changing a number of cost allocation keys.

By definition, the margin will change if one were to change the allocation keys. However, the sensitivity scenarios with alternative cost allocations presented in Annex 10 appear to have a limited impact on the fully-loaded P&L's margin. Moreover, the sensitivity analysis in Annex 10 applies a number of allocation keys that do not make sense and which are not in line with activity-based costing principles. Despite this oversight, the impact of using these alternative allocation keys is limited and if these allocation keys are replaced by allocation keys that are more appropriate, the impact on the margin is smaller still.

In sum, the fully-loaded P&L has been prepared in line with good practice and the approach agreed upon with the PSR late 2022.

The Interim Report's main arguments against relying on the UK fully-loaded P&L are of a different nature and are not valid

The PSR's main arguments for not relying upon Mastercard's fully-loaded P&L have little to do with the way Mastercard has allocated its global costs and are of a different nature. The arguments relate to (i) the temporary nature of rebates and incentives (ii) the fact that these rebates and incentives were

[166] The accompanying note was submitted in February 2023, along with a summarized version of the UK P&L for 2019-2021.

[167] PSR Interim Report, para 6.134.

overstated in the UK P&L and (iii) the fact that the allocation of costs in the UK fully-loaded P&L should reflect the low incremental costs of the UK market. We examine each argument in turn.

Contrary to what the Interim Report states, rebates and incentives are not temporary, and were not overstated in the UK fully-loaded P&L

The Interim Report argues that the treatment of rebates and incentives in relation to debit cards may have been overstated (in early years of specific contracts) in the UK fully-loaded P&L and may be temporary (suggesting that the actual underlying profitability is much higher than the fully-loaded P&L indicates). It states that '*Mastercard's internal documents indicate that the margins in the fully loaded UK P&L accounts have been ✂. We consider that these costs could be considered temporary (e.g. they may reduce again as a proportion of revenues ✂'*.[168] The Interim Report also states that '*the way the ✂reflected in the fully loaded UK P&L accounts may overstate the related economic costs associated with them. This is because some of the rebates and incentives may be more appropriately allocated to later time periods or to products that are out of scope of our market review'*.[169] These conclusions are not accurate and contradicted by empirical analysis prepared by Mastercard.

Rebates and incentives are not overstated in the UK fully-loaded P&L

First, rebates account for a large proportion of the total amount of rebates and incentives granted to issuers and in Mastercard's accounting systems, rebates and certain types of incentives are recorded as a proportion of revenues. This means that, in practice, a large proportion of the rebates and incentives granted to issuers are accounted for in proportion with revenues.

Second, certain incentive payments are not accounted for in proportion with revenues but linearly over time, consistent with relevant accounting standards. Mastercard has assessed the impact of allocating these incentives based on revenues (rather than linearly over time) for the debit card contracts signed in 2018 – 2022. This analysis shows ✂[redacted]. We emphasise that, if this adjustment were to be applied, it would have to be applied to all existing contracts (i.e. including contracts signed before 2018). Making a similar adjustment to these contracts would ✂the period considered. Annex 2 provides more details on the analysis undertaken by Mastercard.

Rebates and incentives are not temporary

To substantiate its claim on the temporary nature of rebates and incentives, the Interim Report states that '*Mastercard's internal documents [...] show that* ✂.[170] This statement is inaccurate.

[168] Ibid.

[169] Ibid.

[170] Ibid.

First, there is no evidence to support that Mastercard expects "✂This statement is made on the basis of a single slide ✂, but this increase is irrelevant in the context of the broader trend and other documents cited in Annex 10. Annex 2 discusses this in more detail.

Second, it is incorrect to assume that Mastercard could ✂. This statement is made on the basis of one particular Mastercard slide,[171] which describes ✂which is a forward-looking statement and uncertain by nature. In addition, ✂

Third, evidence prepared by Mastercard indicates that the proportion of rebates and incentives offered to issuers for debit card contracts is ✂. Mastercard's portfolio of credit card contracts is more mature and consists of a mix of new and renewed contracts. Importantly, this demonstrates that the rebates and incentives for debit cards are not temporary but will be maintained even if the portfolio for debit cards matures. Annex 2 discusses this in more detail and provides additional evidence showing that rebates and incentives cannot be considered temporary.

The Interim Report does not provide any justification for using an incremental rather than a fully-loaded approach for the allocation of costs in the UK fully-loaded P&L

The Interim Report argues that the costs in the fully-loaded P&L should have been calculated based on incremental rather than fully-allocated costs. The Interim Report states that '*it is likely that the incremental revenues generated from ✂may attract less costs than implied in the fully loaded UK P&L accounts, given additional ✂*[172]

The Interim Report does not provide any valid reason for calculating Mastercard's margin on the basis of incremental costs rather than fully-allocated costs. The fully-loaded P&L was prepared on the basis of the principles agreed with the PSR. It is well-established that a profitability analysis that is undertaken to inform an assessment of market power or the degree of competition in the market should be based on measuring margins using a fully-allocated cost (or stand-alone cost) approach.[173] Although an incremental cost approach may be informative when assessing allegations of predatory pricing or margin squeeze, such an approach would not be appropriate or informative in this market review. Besides, measuring the margin based on incremental costs would imply no allowance for the recovery of the majority of joint and common costs from the UK business.

[171] PSR Interim Report, Annex 10, para. 3.19, Figure 6.

[172] PSR Interim Report, para. 6.134.

[173] Office of Fair Trading (2003), Assessing profitability in competition policy analysis, Economic Discussion Paper 6, prepared by Oxera para 1.36.

We note that the PSR has clearly set out in Annex 10 that the fully-allocated costs approach is the most appropriate cost concept in the context of the market review.[174] This is in line with good practice and this has been delivered by Mastercard.

In sum, the arguments against relying on the fully-loaded P&L put forward in the Interim Report are not valid and these arguments do not amount to a critique of the fully-loaded P&L analysis.

Mastercard's margins in the UK cannot be proxied by European or global margins

The Interim Report states that '*the economic benefits Mastercard and Visa derive from their relevant UK operations could also plausibly be estimated by reference to the margins in the global accounts*'.[175] Annex 10 makes a similar statement in relation to the margins observed for Mastercard Europe.[176] This approach is inaccurate and overlooks the structural differences between the European and global markets for Mastercard.

European and global margins differ due to differences in unit revenues, unit rebates and incentives and unit costs between the UK, Europe and global business. The differences in these parameters are driven by differences in market conditions, fee levels as well as the mix of services provided. We note that some of these differences have been acknowledged by the PSR in Annex 9 on revenue generation.

The UK margin (based on the fully-loaded P&L) is consistent with the margin that has been calculated in Annex 10 for Mastercard at European level if differences in fee levels, rebates and incentives and the mix in services are taken into account. If Europe had similar levels of fees as in the UK, a similar mix of services and a similar level of rebates and incentives, the European margin would be similar to the UK margin. Without making adjustments for these differences, the European margin cannot be informative in understanding the margin in the UK.

Review of the Interim Report's comparators benchmark analysis

It is well established that a profitability assessment can be used in conjunction with other indicators, to inform an assessment of market power or the degree of competition in the market.[177] This requires a careful analysis since profitability can vary significantly across companies, independently of whether profits are excessive.

[174] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 2.44.

[175] PSR Interim Report, para. 6.136.

[176] PSR Interim Report, Annex 10, para. 3.59.

[177] Office of Fair Trading (2003), 'Assessing Profitability in Competition Policy Analysis', prepared by Oxera, July.

Extra care is required when using operating margins, rather than metrics such as the return on capital employed ('ROCE') or the internal rate of return (IRR). For example, unlike a cost of capital benchmark, comparing margins across firms does not encapsulate the risk–reward balance. Margins may be higher because investors need to be rewarded for bearing greater risks. For the comparison to be meaningful, comparators should therefore face similar business and financial risk characteristics to the firm being studied.

The concern is that if unsuitable comparators are used, the assessment could result in a finding that the profitability is excessive, whereas in practice the level of profits may be a reflection of the level of risk, the level of capital employed (including tangible and intangible assets) and/or the success of the company in improving its service proposition (rather than market power).

In order to ensure a robust analysis and assessment, it is good practice to consider a broad sample of comparators covering both companies in similar industries as well as companies in industries that are different but have similar market characteristics and/or business models.[178] The Interim Report identifies only three comparators (eftpos, OFX and PayPal) for benchmarking the margins of Mastercard and finds that the margins for these comparators are in a range of 12-18% on average over the period of 2018-2022.

Oxera's review concludes that this analysis is not robust and reliable. First, the number of comparators is unnecessarily small in the context of this profitability assessment which opens the possibility of material distortion by a single comparator. Second, two of the three comparators are not suitable (eftpos and OFX). The Interim Report has revised its estimate of PayPal's margin (in response to comments from Oxera) and now presents margins of 25% and 28% , rather than 15% and 17%. The Oxera submission explains that this still underestimates the margin of PayPal for the purpose of a comparison with Mastercard.

Oxera's empirical analysis of a larger sample of relevant comparators results in the following estimates:

- the margin for PayPal is higher than 30%;
- for the payment services segment of Discover, the margin is between 38% and 44%;
- and for other relevant companies in the payment services sector margins lie between 25% and 44%.

In other relevant sectors, we find a wide range of margins. Companies that operate a franchise business have margins between 13% and 62% and companies providing software systems and

[178] Ibid. Office of Fair Trading (2003) refers to both comparators in similar industries as well as companies in other industries.

applications information have margins between -25% and 43%. Within this latter group, between 19% and 29% of the companies had a five-year average margin of above 30% and the 90th percentile margin in this group is 33%. This analysis clearly demonstrates that the Interim Report has significantly underestimated the margins of relevant comparators.

4. Transparency and complexity

A. Introduction

In section 7, the PSR considers acquirers' experience when accessing, assessing and acting on information from the schemes. The Interim Report acknowledges the support offered by the schemes to acquirers, but nonetheless concludes that acquirers experience issues relating to information from the schemes.[179] The PSR suggests that these issues are sufficiently material to create poor outcomes for acquirers and merchants, raising acquirers' costs and distorting their ability to respond to the schemes' pricing signals.[180]

In particular, the Interim Report places significant focus on behavioural fees. It notes that schemes do carefully consider how best to use behavioural fees to incentivise desired behaviour.[181] It also acknowledges positive feedback on the schemes from acquirers such as complimentary reporting tools or waivers.[182] However, the Interim Report concludes that acquirers experience difficulty in understanding behavioural fees and preparing for new behavioural fees, which may limit the efficacy of these fees.[183]

The Interim Report also finds that acquirers struggle to understand mandatory and optional fees and the difference between them, as well as clarifying information from the schemes; while some acquirers have difficulty accessing information through the schemes' portals.[184] According to the PSR, this falls short of the standard expected in a well-functioning market.[185]

Mastercard understands the importance of acquirer feedback and continually works to enhance how information is accessed. For example, in recent years it has made various improvements including: the creation of the technology account manager (TAM);[186] the extension of notice periods before scheme changes; upgrades to the tools available on *Mastercard Connect* ('*MC Connect*') (such as the *Pricing and Billing Resource Centre* (*PBRC*)); and the de-tiering of the UK volume fee. In addition, Mastercard

---

[179] PSR Interim Report, paras. 7.66 and 7.93

[180] PSR Interim Report, para. 7.138

[181] PSR Interim Report, para. 7.66

[182] PSR Interim Report, para. 7.76

[183] PSR Interim Report, para. 7.139

[184] PSR Interim Report, para. 7.139

[185] PSR Interim Report, para. 7.140

[186] PSR Interim Report, para. 7.118

actively seeks feedback from its customers on how to improve their offering, for example through the annual VOC survey.

The Interim Report fails to acknowledge all of the improvements Mastercard has already made to its offering to acquirers. Instead, it relies on anecdotal comments and limited case study evidence provided by individuals within a small sample of acquirers which is not representative of the acquirer market. In particular, it generalises points made by a subset of acquirers to the whole acquiring market.

In the sections on behavioural fees, mandatory and optional fees and clarifying information from the schemes, the Interim Report groups all acquirers who have concerns with access to information (regardless of the nature or degree of the concern) to conclude that around 90% of the acquiring market is affected by these issues. This approach disregards the variety in the degree and nature of issues reported by acquirers and (in the case of the conclusions on mandatory and optional fees and clarifying information from the schemes) is not supported by the evidence cited by the PSR.

We first discuss the PSR's evidence base and our concerns with the approach, highlighting in particular why the evidence base is not robust, before providing further and more robust sources of evidence that the Interim Report has not fully considered. Finally, we respond to the issues raised by acquirers, related to their ability to access, assess and act on the information they receive from Mastercard.

B. The PSR's evidence base

The Interim Report notes that it has gathered a range of qualitative and quantitative evidence from acquirers and lists a number of factors taken into account when evaluating that evidence:[187]

- The type of impact of the identified issue
- The proportion of the total acquiring market affected by the issue
- Acquirers' own estimate of the financial cost of the issue
- Acquirers' qualitative descriptions of the impact on their businesses
- Acquirers' decision to escalate issues with the schemes or within their businesses
- Acquirers' descriptions of the impact on their merchant customers

The Interim Report does not describe how acquirer evidence was collected, such as the questions asked. Nor does it present an explicit methodology for how the evidence has been weighted to inform the PSR's conclusions.

[187] PSR Interim Report, para. 7.37.

In discussing the quality of information regarding behavioural, mandatory and optional fees, as well as the section on clarifying information, the PSR states that the '*scale of impact*' of the issues described by acquirers is '*significant*'. The PSR justifies this statement on the basis that acquirers representing around 90% of the acquiring market face issues with access to information in these areas.[188] Yet, there is no evidence presented as to the extent to which the individual issues have been raised by acquirers. The Interim Report does not aggregate evidence on each point to calculate a share of acquirers affected by each issue. Instead, it seems to combine all acquirers who reported any issue with access to information, regardless of the degree or nature of the issue.

In the sections relating to quality of information on optional and mandatory services as well as clarifying information, the evidence from acquirers covers [[redacted]] and [[redacted]] of Mastercard's acquirer customer base respectively.[189] Therefore, the evidence does not adequately support the PSR's claim that around 90% of the acquiring market has issues with the quality of information on optional and mandatory services, as well as with clarifying information from the schemes.

By positioning testimonials from individual acquirers before concluding on the share of the acquiring market affected by the given issue, the Interim Report gives the impression that the issues raised are representative of acquirers generally, without providing any evidence. This is problematic given the large differences in acquirer experiences that the PSR acknowledges.

The Interim Report further acknowledges the limitations of acquirers' own estimates of financial costs that result from issues of access to information, such as cost of additional staff time, purchasing additional services and absorbing fees they cannot pass on.[190] It noted for example that acquirers were unable to submit UK-specific cost estimates.[191] This caveat creates doubt as to the relevance of these estimates in considering the significance of the issues in the UK. Indeed, the estimates appear to be unreliable, given the wide range of financial impacts reported by acquirers in response to informal and imprecise requests.

Mastercard regularly measures the satisfaction of its acquirer (and issuer) customers through the annual VOC survey. This survey is administered by a third party and all respondents remain anonymous. Mastercard uses its VOC survey to understand its customers' needs and gather feedback. In 2022, ✂ acquirers responded to the VOC, (comparable to 17 acquirers which responded to the PSR).[192] [193] In

[188] PSR Interim Report, paras. 7.71, 7.97 and 7.120

[189] Shares calculated on the basis of total Mastercard 2021 UK transaction value

[190] PSR Interim Report, paras. 7.43, 7.44, 7.47

[191] PSR Interim Report, para. 7.37

[192] Based on the 2022 VOC survey results for acquirers.

[193] PSR Interim Report, para. 2.22

contrast to the Interim Report's qualitative evidence, the VOC provides evidence from all of the responding acquirers on their satisfaction with broad categories of Mastercard's customer relations, as well as with specific behaviours.

These results show that Mastercard's acquirer account management teams received an average rating of ✂between 2020 and 2022[194], while acquirers also rated account teams at ✂ as regards overall knowledge and expertise and ✂as regards keeping customers updated.[195] The scores indicate that, contrary to the anecdotal concerns voiced by the acquirers to the PSR, acquirers largely have a positive experience accessing information through Mastercard's account managers. We also note that issuers report very similar levels of satisfaction with their account management teams, giving an average rating of ✂between 2020 and 2022[196], as well as ratings of ✂and ✂regarding overall knowledge and keeping customers updated respectively.[197]

Mastercard included the relevant scores pertaining to acquirers in its response to the PSR's letter on customer relationships.[198] The PSR raised concerns that the results of the VOC survey would be biased towards issuers and so not representative of the views of acquirers. That concern is not valid for the account management ratings as results were presented separately for acquirers.[199] While the overall 2021 VOC results previously shared with the PSR included both issuers and acquirers, results for issuers and acquirers are available separately and therefore separate conclusions can be drawn.[200] In any event, issuer and acquirer account management teams received similar satisfaction scores.

C. *Acquirers' experiences*

The majority of the Interim Report's discussion on transparency and complexity focuses on acquirers, which the PSR asserts, report experiencing more difficulties accessing, assessing and acting on information they receive from the schemes than do issuers. The Interim Report discusses individual acquirer testimonials regarding the issues they experience with behavioural, mandatory and optional fees, as well as clarifying information from the schemes, and using the scheme portals.

[194] Mastercard (2023), 'Mastercard's response to the PSR's letter on customer relationships', 25 August, p. 8.

[195] Mastercard (2023), 'Mastercard's response to the PSR's letter on customer relationships', 25 August, p. 8.

[196] Based on the 2020-2022 VOC survey results for issuers.

[197] Based on the 2020-2022 VOC survey results for issuers.

[198] Mastercard (2023), 'Mastercard's response to the PSR's letter on customer relationships', 25 August, p. 8.

[199] PSR Interim Report, para. 7.19.

[200] Referred to in the PSR Interim Report, para. 7.18 footnote 508

Quality of information received: behavioural fees

The Interim Report highlights issues reported by acquirers related to three main points: difficulty understanding triggers and drivers of behavioural fees; the need to purchase optional services to understand behavioural fees; and difficulty preparing for new behavioural fees.

Difficulty understanding behavioural fees

The Interim Report quotes two acquirers struggling to understand the triggers for Mastercard's behavioural fees, as well as two noting that the information shared by Mastercard is not sufficient to attribute behavioural fees to the correct merchant.[201]

Mastercard aims to ensure that behavioural fees are clear in order to improve the performance of the payment ecosystem. To that end Mastercard works with acquirers to ensure that the criteria for incurring behavioural fees are well understood. Mastercard has made various improvements, including a new and simplified invoice structure and the introduction of TAMs. TAMs are intended to act as a bridge between account managers and Mastercard's technology teams, in order to provide enhanced technical expertise.

Behavioural fees aim to ensure that acquirers (and issuers) invest in and adopt measures that keep pace with the evolving risks in the payment ecosystem and are designed to promote the adoption of new technologies and product features which meet changing consumer preferences (such as contactless payments).[202]

Behavioural fees are always avoidable by acquirers, which adopt good practice and behaviour. In some instances, behavioural fees relate to acquirer behaviour rather than merchant behaviour, which means acquirers which take action to avoid the fee have no need to identify which merchant triggered the fee. Whilst improving the functioning of the overall ecosystem sometimes requires attributing behaviour to specific merchants this is not the purpose of behavioural fees. Mastercard will always provide support to acquirers unable to identify the relevant merchant(s) which has triggered a particular behavioural fee. In addition to the account management teams, Mastercard provides free of charge reports and a set of tools available on *MC Connect* to help acquirers understanding of behavioural fees. Mastercard is always willing to talk to acquirers experiencing difficulty in adhering to the best practices required to avoid triggering behavioural fees.

[201] PSR Interim Report, paras. 7.43 and 7.44

[202] Mastercard (2023), 'Mastercard's response to the PSR's letter on customer relationships', 25 August, p. 14.

The purchase of optional services to understand behavioural fees

The Interim Report notes that several acquirers suggested they had to purchase optional services in order to understand or correctly attribute behavioural fees.[203] The vast majority of Mastercard's consultancy services are not aimed at understanding fees. Mastercard provides a range of free of charge services to help acquirers (and issuers) understand fees, including behavioural fees. These services include engagement with account managers, the tools available on *MC Connect* such as the *PBRC* and the submission of remaining queries through the *MC Connect* helpdesk and customer support. In addition to these services, Mastercard also provides training for customers that want an even deeper understanding of fees through *Mastercard Academy* ('*MC Academy*').

Mastercard continually works, through training and other initiatives, to improve acquirer awareness of the range of available free services designed to aid fee understanding.

Difficulty preparing for new behavioural fees

The Interim Report states that several acquirers have difficulty preparing for new behavioural fees and some say notice periods for new fees are too short to enable them to implement the required changes.[204]

However, Mastercard typically provides a nine month notice period for pricing changes, which was increased from six months in response to acquirer representations. When acquirers request more time to implement changes, Mastercard works with them to provide waivers or extensions where appropriate.

Without further details on the specific occurrences raised by acquirers, it is difficult to respond to the qualitative evidence provided. Mastercard may occasionally give six months' (rather than nine months') notice, where fee changes relate to the implementation of a new service, as this aligns to the standard service releases in other geographical markets. No transaction fees related to the new service are incurred before it is launched.

Review of the PSR's assessment

The Interim Report concludes that difficulties in understanding behavioural fees have significant impact as they affect 90% of the acquiring market.[205] Yet the qualitative evidence indicates that many of these issues affect a much smaller share of acquirers or have limited consequences. For example, acquirers representing only [[redacted]] of Mastercard's customer base describe concerns having a duration of

[203] PSR Interim Report, paras. 7.45 and 7.47

[204] PSR Interim Report, para. 7.49

[205] PSR Interim Report, para. 7.71

several months or longer.[206] While only [redacted] of Mastercard's acquirer customer base are cited as describing issues having adverse consequences for merchants. Some acquirers pointed out that the financial cost of the issues related to behavioural fees were negligible or non-existent.[207]

Quality of information received: mandatory and optional fees

The Interim Report notes that acquirers experience various issues related to understanding optional and mandatory scheme and processing fees. The issues reported include pricing bulletins being too complex (such that it is unclear whether fees are mandatory or optional) and acquirers needing to purchase additional services because scheme information is insufficiently detailed.[208] According to the Interim Report, acquirers assert that the consequences include: increased costs, both internal resources and for the purchase of optional services; an inability to pass on fees to merchants; and planning difficulties.[209]

As noted above, the Interim Report only references evidence of transparency issues for acquirers accounting for [redacted] of Mastercard's customer base, despite claiming that 90% of the acquiring market is affected.[210] Some acquirers report that they find the schemes' pricing bulletins too complex.[211] Whilst the range of fees is a natural consequence of the wide range of services which Mastercard offers, it works continuously to simplify its fee structure where appropriate, such as the de-tiering of the UK volume fee in 2021.

The Interim Report further quotes some acquirers as struggling to distinguish between optional and mandatory services, leading to some acquirers unintentionally paying for optional services.[212] The fact that take up of optional services varies greatly between acquirers is a sign that acquirers are in fact able to distinguish between these services and choose those services they find add value to their business.

In its response to Annex 4 on optional services, Mastercard presents evidence demonstrating the variation in optional service take-up between acquirers and for each acquirer across time. Acquirers' spend on optional services varies considerably and over time, as some acquirers develop capabilities in-house or use alternative third-party providers. An example of this can be seen in the case of

[206] Market shares calculated on the basis of total Mastercard 2021 UK transaction value

[207] PSR Interim Report, para. 7.73

[208] PSR Interim Report, paras. 7.77, 7.80, and 7.83

[209] PSR Interim Report, paras. 7.78 and 7.79

[210] Shares calculated on the basis of total Mastercard 2021 UK transaction value

[211] PSR Interim Report, para. 7.80

[212] PSR Interim Report, para. 7.84

Mastercard's optional reports. The median take-up of Mastercard reports among UK acquirers was ✂, while some acquirers opted to receive up to ✂ different reports.[213]

Clarifying information

The Interim Report notes that acquirers sometimes struggle with clarifying information from the schemes. Specifically, it mentions long waiting times for answers to fee queries.[214] Some acquirers also highlight that the subsequent responses can be unclear.

However, the Interim Report's evidence base does not support the conclusion that 90% of the acquiring market have problems with clarifying information. We further note that only [[redacted]] of Mastercard's customer base is cited as actually experiencing adverse consequences of these issues.[215] In fact, acquirers representing [[redacted]] of Mastercard's customer base commented on recent improvements made by the schemes, such as assigning technical support staff to their accounts.[216] Indeed, as highlighted above, Mastercard's VOC survey indicates acquirers' satisfaction with their engagement with account teams, giving them a score of ✂between 2020 and 2022.[217] Mastercard routes fee queries to the team that is best placed to address them, which may be customer support, the account manager or the relevant product/service team. Mastercard aims to resolve these queries in four days.

Using the schemes' portals

The Interim Report refers to challenges relating to access to historical data and confusion around fee codes accessed via scheme portals.[218] The PSR concludes that these issues have similar effects as other issues highlighted, namely increasing acquirer costs and potentially distorting responses to pricing signals.

While the Interim Report finds that '*roughly half*' the acquiring market is affected by these issues, the acquirers mentioned represent only [[redacted]] of Mastercard's customer base.[219] [220] We also note that

[213] Mastercard (2023), 'Market review of card scheme and processing fees Draft notice requiring MASTERCARD EUROPE SA and MASTERCARD EUROPE SERVICES LIMITED to provide information and documents under section 81 Financial Services (Banking Reform) Act 2013 'FSBRA'', October, p.26.

[214] PSR Interim Report, paras. 7.102-7.104

[215] Shares calculated on the basis of total Mastercard 2021 UK transaction value

[216] Shares calculated on the basis of total Mastercard 2021 UK transaction value

[217] Mastercard (2023), 'Mastercard's response to the PSR's letter on customer relationships', 25 August, p. 8.

[218] PSR Interim Report, para. 7.127

[219] PSR Interim Report, para. 7.131

[220] Shares calculated on the basis of total Mastercard 2021 UK transaction value

acquirers representing [redacted] of Mastercard's customer base reported issues related to the schemes' portals had no impact on their ability to make decisions.[221]

Mastercard supports customers' access to the information that they need in order to manage their business with Mastercard in multiple ways and *MC Connect* is one of the key means of doing so. It provides a wide range of tools, resources and strategic insights to which all acquirers have access. These include the *PBRC* and the technical resource centre amongst others. Changes to prices are communicated to acquirers (and issuers) through the technical resource centre within *MC Connect*. *MC Connect* is a self-service portal that gives quick and simple answers and is intended to be accessible and easy to use. There are multiple other channels acquirers can access for further billing/fee information including Mastercard's customer support team (CST), which has access to subject matter experts. In addition, there are dedicated mailboxes for specific products and services through which acquirers can ask questions, raise queries and receive information.

[221] Shares calculated on the basis of total Mastercard 2021 UK transaction value

5. Potential remedies

The Interim Report proposes a number of remedies. These are not described in detail and so a detailed response is not possible at this stage, but Mastercard looks forward to working with the PSR in the to explore how we may be able to address some of the concerns identified in the Interim Report. Nevertheless, we highlight below where Mastercard believes the need for remedies has not been justified by the evidence or findings made in the Interim Report. We also highlight where the Interim Report proposals are unlikely to be workable or to meet the PSR's competition and innovation objectives. In some cases, depending on what the PSR ultimately proposes, it is not clear that the PSR would have the necessary powers to take the actions proposed.

In light of the uncertain nature of some of the PSR's proposals, and lack of detail at this stage, the absence of any comment in this response should not be regarded as acceptance of the relevant proposal.

A. Regulatory Financial Reporting

Mastercard operates as an integrated global business, which is managed at the country, regional and global level. Mastercard does not produce UK accounts which match the scope of this review. The Interim Report states that such a remedy is proposed in order to enable the PSR potentially to pursue remedies such as price caps in the future. There is no evidence, even on an indicative basis (given the limitations of the work that the PSR has been able to perform to date) to conclude that Mastercard's prices or margins are above what would be expected in competitive markets. Indeed, the PSR has not even attempted to understand the improvements in quality and innovation that Mastercard has introduced during the relevant period which underlie Mastercard's pricing changes. These points are discussed more fully in section market outcomes, price increases – econometrics (section 3B) of this Response.

Although the PSR has stated that it is not currently considering a price cap, its rationale for a financial reporting remedy appears to be rooted in nothing other than the unavailability of suitable data.[222] There are principled reasons why a price cap would not be appropriate in any case and the PSR has not made any case for such an intervention in the market.

[222] PSR Interim Report, para. 8.46

Price caps are not commonly considered where: investment and innovation are important to the ongoing functioning of the market; where barriers to entry are not so large as to prevent competition; and where entry has taken place, as is the case with payments. Mastercard has achieved its success through efficiency and innovation in a competitive process, investing in its products, customer relationships and ecosystem.

The PSR recognises a price cap would have harmful effects on competition and would disincentivise market entry and growth of competing payment methods. As the PSR also recognises, Mastercard and Visa are already cheaper and higher quality than most entrants or existing alternative providers. To the extent that a financial reporting remedy is only necessary to facilitate such an intervention, there would be no basis for its introduction.

Furthermore, as the PSR acknowledges at paragraph 8.36 of the Report, there is already a:[223]

> *"work programme underway in the PSR to unlock the potential of account-to-account payments, including through Open Banking, could introduce more competition over time, leading to innovation, payment services that better meet the needs of end users and competitive [or efficient or more cost-reflective] prices."*

A price control remedy would thus likely render the investments of competitors and new entrants worthless, would dampen emerging and existing competitors' incentives to continue to expand and would seriously undermine incentives to innovate (and respond to customer needs) across the entire payments sector.

Mastercard's pricing is sophisticated, and seeks to balance both sides of the market, encourage behaviours which benefit users and encourage uptake of new innovative products. Regardless of the level of the price cap, any requirements imposed on Mastercard, which by design or effect, restrict Mastercard's ability to use pricing structures to the overall benefit of the system could have unintended consequences and be detrimental to some or all users.

The PSR has not investigated the likely outcome and has not even attempted to demonstrate that a price cap, if implemented, would achieve a sustainable balance between the objective of reducing pricing for current merchants and the dynamic effects on entry, distortion of incentives and resulting reduction in innovation. Indeed, the Interim Report does not even consider the effect on current users of the payment system other than merchants. Even if a price cap limited pricing for some current

[223] PSR Interim Report, para. 8.36

customers in the short term, those same users would otherwise stand to benefit from innovation in the longer term, which might be reduced by a price cap.

Accordingly, price control remedies are not compatible with the PSR's competition and innovation objectives. In any event, as previously raised in detail with the PSR in its response to the Cross-Border Interchange Market Review Interim Report, Mastercard believes that the PSR does not have the power to impose a price cap remedy under FSBRA.

As regards the practicalities of the proposed financial reporting remedy, Mastercard does not currently produce separate, fully articulated accounts for its UK business, which forms part of a broader European business. Currently, Mastercard produces monthly management accounts which include revenues, rebates, and locally incurred costs for UK and Ireland. It is disproportionate to require highly burdensome UK reporting without any clear idea of the purpose that it would meaningfully serve other than to support the spectre of unjustified price regulation. It is also unclear how this approach aligns with the PSR's statutory objectives.

In particular, the Interim Report suggests that this remedy would require Mastercard to prepare reports comprising not only profit and loss but also balance sheet information in relation to their UK activities. As the PSR is aware, Mastercard does not utilise balance sheet reporting in the UK to manage its business. Only P&L reporting is used to manage those aspects of the business that are within local control. The balance sheet by contrast is managed at a corporate level by the parent company for the global business.

Therefore, a separate balance sheet would have no influence on how decisions are taken and how the business is managed within the UK. Again, the PSR does not explain the purpose balance sheet information would serve, despite the significant burden it would place on Mastercard to produce it. In these circumstances, it would be disproportionate for the PSR to require preparation of a separate UK balance sheet.

B. Pricing methodology and governance

The Interim Report states that "*[t]he aims of a remedy in this area would be to ensure that decisions were taken in a suitable way, both procedurally and substantively. Procedurally, this might mean that decisions are taken with a clear role for a UK-led committee or sub-committee. Substantively, it might mean that decisions need to be based on, or have regard to, specified considerations and that price increases are linked to underlying cost increases*".

Mastercard agrees with the importance of taking pricing decisions in a suitable way, but there is no evidence presented that pricing decisions have not been made in this way. Although the Interim Report argues that price increases are not linked to value or improvements in service quality, it does not refer to any robust evidence to reach that conclusion. Indeed, all evidence points to the contrary and section 3A of this response sets out the many innovations and service enhancements that have occurred. Mastercard has enhanced its services over time and as the PSR acknowledges, any observed price rises are at least partly due to increased uptake of optional services (see section 3 of this response). As analysis undertaken by the PSR confirms, the mandatory fee increase may be as low as ✂ i.e. less than ✂per year, not taking into account any changes in service quality.

Furthermore, depending on its design, this remedy could amount to an unjustified interference with Mastercard's commercial freedom and internal decision-making processes. As Mastercard has explained, Mastercard operates in the UK as part of a broader European business. Mastercard processes for fee changes give due weight to local market considerations and input from UK-based teams before deciding on a fee proposal. The PSR's own evidence is that fees changes have been adapted to local market conditions where required.

At several points in the Interim Report, the PSR suggests an approach whereby "*price increases are linked to underlying cost increases*" and "*all decisions relating to core scheme and processing services should be based on cost*". As discussed above, mandating a specific approach to pricing is not justified, if it amounts to a PSR direction as to how Mastercard must set prices. Practically, it may well also be unworkable with the obvious risk that it could will lead to wide ranging adverse consequences in the competitive process, as individual card schemes must be able to set prices competitively in their own way, rather than in the same way, determined by the PSR.

The Interim Report ignores the continuous improvements in service quality and investments in innovation that characterise all aspects of Mastercard's services. A cost-based pricing methodology would restrict Mastercard's incentives to improve existing services, introduce new services and to price them reasonably in order to reward its innovation and risks. A cost-based pricing methodology also does not allow for a range of considerations such as balancing the interests of ecosystem participants, encouraging behaviours which benefit users and to encourage uptake of innovative products.

Furthermore, a cost-based pricing methodology would likely strand the investments of competitors and new entrants, would dampen emerging or existing competitors' incentives to continue to expand and would seriously undermine incentives to innovate (and respond to customer needs) across the entire payments sector.

For these reasons, we believe that the specifics of the currently proposed pricing methodology and governance remedies may incompatible with the PSR's competition and innovation objectives and should therefore be reassessed. Any pricing methodology must allow for commercial freedom and not risk interfering in or distorting the competitive process.

C. *Mandatory consultation and timely notification requirements*

It is not clear that the proposed remedies are supported by the evidence included in the Interim Report. It quotes acquirers as saying (as a matter of fact) that Mastercard typically engages with customers after pricing decisions have been made, but there is no evidence that acquirers regard this as a matter of concern which would require a remedy.

As the PSR acknowledges elsewhere, the process leading to the implementation of a fee change is typically complex, involving several teams within Mastercard. These teams are able to reflect customer views based on the feedback from account managers. Therefore, while formal engagement with customers on specific price changes may typically only take place after approval of a fee change, this does not mean that the likely impact on customers is not taken into account during the internal approval process or that customers' views do not impact Mastercard's decision making. These teams can and do reflect likely customer views based on feedback from account managers during the process of considering a fee change. As discussed in the response in section 4, Mastercard continuously engages with its customers through both formal and informal channels.

Although the report cites acquirers that have expressed concerns around sufficient time to implement fee changes, such concerns appear to come from just seven acquirers of the 17 consulted by the PSR and over 100 acquirers operating in the UK. Given the sophistication of acquirers and their willingness to provide views on other matters, it can be assumed that a majority of acquirers therefore have no concerns. In addition, with just one exception, the concerns expressed relate exclusively to behavioural fees,[224] which account for only a very small proportion of scheme and processing fee revenues. In these circumstances, it is disproportionate to propose notification requirements across all fees.

We understand from paragraph 8.23 that the remedy proposal is partly motivated by the fact that schemes keep insufficient records of consideration for price changes and substantially revise proposals up to five weeks before implementation. Of course, that would not be addressed by any obligation for acquirer consultation. It is therefore unclear on what basis the PSR proposes to impose a mandatory consultation remedy.

[224] See also PSR Interim Report, para. 1.19, which refers only to 'insufficient notice periods to implement changes required to avoid *behavioral fees*' (emphasis added)

As the PSR is aware, other than in very exceptional circumstances, acquirers are already given nine months' notice before implementing approved fee changes. This has been increased from six months following feedback from acquirers.

In addition, the PSR's remedy proposals raise other concerns. First, there is a clear risk that sharing and consulting on potential price changes to which Mastercard is not formally committed, raises competition law concerns relating to the exchange of sensitive commercial information and possible price signalling to competitors. This relates not just to competitor schemes, but also to other competing providers of products/services which (as the PSR acknowledges) could include acquirers themselves or other close partners.

Secondly, consultation with acquirers on specific pricing proposals may not improve pricing outcomes overall. Acquirers' incentives are not necessarily aligned with those of other ecosystem participants, e.g. merchants, issuers or cardholders. As the PSR itself notes,[225] consulting with merchants is likely to be highly impractical with the potential to bring about change in the dynamics underlying the four-party card scheme. It may be more beneficial for the PSR to think about consultation with acquirers related to a broader approach to future pricing, rather than to specific price proposals.

D. Complexity and transparency

It is not clear whether the proposed remedies are proportionate to the scope of the issue identified and so much will depend on the detail. Many of the concerns expressed again relate to behavioural fees which account for a very small proportion of revenues. Even where concerns have been expressed more widely as to the complexity and transparency of Mastercard's pricing, Mastercard is already taking steps to improve practice in these areas as part of its interest in meeting its customers' needs. Mastercard looks forward to discussing with the PSR whether its proposed remedies are the best, most effective and rapid means of making further improvements.

Moreover, as the PSR is aware, the range of Mastercard fees seeks to link costs to users and the services they use. The range of fees and services is the result of innovation in response to customer need and the evolving nature of the payments landscape. The PSR's proposal to reduce the number of services offered by card schemes directly contradicts its objectives to promote competition and innovation. Any reduction in the number of separate services and fees by way of bundling may create concerns that doing so raises barriers to entry and expansion. It is therefore difficult to see how any such proposal would meet the PSR's competition and innovation objectives.

---

[225] PSR Interim Report, para. 8.26

Review of the PSR econometric analysis – **Non Confidential**

—

Response to Annex 7 of the PSR's Interim Report
12 July 2024

1 Introduction

1.1 The Payment Systems Regulator ('PSR') has provided Mastercard with its Interim Report, including an annex on 'Econometric analysis of scheme and processing fees' ('Annex 7').[1]

1.2 Annex 7 contains econometric analysis of acquirer fees over time, which the PSR has updated since sharing it as a working paper with Mastercard in December 2023.[2]

1.3 Oxera has reviewed the updated analysis contained in the Interim Report to assess its accuracy, reliability and robustness. The PSR's updated analysis has also been reviewed by ✂,[3] and this annex includes ✂ input. We focus here on the PSR's treatment of three valid model refinements suggested by Oxera in response to the PSR's December working papers. These are:

[1] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May.
[2] PSR (2023), 'Econometric analysis of scheme and processing fees', Disclosure paper, 13 December.
[3] ✂

- using ✂to avoid the issue of multicollinearity[4] between transaction volume and value;
- using ✂of transaction value to control for extreme observations with respect to high unit revenues (e.g. ✂
- using a balanced sample.

1.4 We also reiterate the following concerns that were previously raised in response to the PSR's December working papers:

- the PSR ignoring results from the analysis of mandatory fees, which suggest that some of the estimated growth in unit revenues is a result of optional services take-up;
- the PSR misinterpreting acquirer fixed effects as a control for acquirer characteristics. [5]

1.5 Many of the other observations made in response to that working paper remain insufficiently addressed or completely unaddressed.[6] These observations include:

- the PSR insufficiently explaining its variable selection process;
- the PSR ignoring product and service changes over time, which should be accounted for when constructing a price index;
- the PSR not addressing that a large proportion of its models' explanatory power is provided by the acquirer fixed effects.

1.6 We do not restate all of these concerns in this annex; however, they still stand and should be addressed by the PSR for the modelling process to be robust. They are likely to have a significant impact on the output of the model.

1.7 However, even just based on the analysis included in this annex, the conclusion contained in the Interim Report that unit revenues have risen by 'around ✂%'[7] over the period is not

[4] Multicollinearity occurs when two or more control variables are highly correlated with each other. This makes it more difficult to isolate the separate effects of collinear variables on the outcome variable.
[5] These characteristics vary over time while fixed effects are, by definition, constant and hence cannot control for these features. If these features are not correctly controlled for, the models reported in the Interim Report would be mis-specified and might suffer from omitted variable bias. Available evidence suggests that these features change over time, which means that the acquirer fixed effects capture different effects than what the Interim Report claims. As we show in Section 4, this biases the time fixed effects, which the Interim Report uses to estimate changes in unit revenues over time.
✂
[7] PSR (2024), 'Market review of card scheme and processing fees', Interim report, 22 May, para. 6.88.

robust. Using the methodology employed in the Interim Report (which we do not endorse), but including the improvements to model specification and additional information as set out here, the conclusions should be changed as follows.

- Unit revenues across mandatory and optional fees have risen by ✂% over the five year period from 2017 to 2021 rather than the range of ✂% indicated in the Interim Report.[8] Some part of that increase will be due to the increase in optional services purchased by acquirers in this period.
- If results are restricted to just mandatory fees on the sample of the ✂largest acquirers (accounting for ✂% of UK transactions by volume in 2021) we estimate only a ✂% increase in unit revenue over that five year period, which is statistically insignificant—i.e. it cannot be concluded that the estimate is statistically different from zero. This confirms that the ✂% increase can be seen as an upper bound of the actual increase, and may be driven in large part by the increased uptake in optional services.

1.8 The Interim Report therefore materially overestimates the percentage increase in Mastercard's fees during the relevant period.

2 Improvements to the PSR's baseline model

2.1 The Interim Report states that the preferred models (M4 and M5) contain all explanatory variables that they consider relevant.[9] We consider that the specification can be improved by the addition of ✂ control variables; as well as the removal of ✂ data due to missing values in two out of five years. This improved specification is more robust in principle and in practice, since the additional control variables are both individually and jointly significant.

2.2 The Interim Report gives no valid justification for not improving its model. The only reason given is an alleged small impact on its coefficient of interest. However, an improved model should not

[8] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.78.
[9] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.49.

be dismissed only because the results are relatively similar to the original result. It is best practice to make adjustments to the model based on their merit (in this case, the understanding of the underlying process), not the effect on a specific variable. Furthermore, the effect is not small. With the improved specification, the estimate of the price change between 2017 and 2022 is ✂% rather than a range of ✂% resulting from the PSR's modelling choices.

2.2 Average transaction value

2.3 The only difference between M4 and M5 is that the former includes 'logged value of transactions' and the latter includes 'logged volume of transactions' as a control variable. The PSR also acknowledged that 'both "logged volume of transactions" and "logged value of transactions" variables may each individually be relevant in explaining the trend in fees',[10] but decided against including both of these variables at the same time due to concerns about potential multicollinearity.[11]

2.4 Oxera had therefore suggested including ✂, which corresponds to ✂for a given acquirer.[12] This would solve any concerns regarding the multicollinearity of the variables, while at the same time controlling for variation in both the variables that the Interim Report considers to be relevant.

2.5 The PSR has decided not to update its baseline models with the ✂ control and instead only included it as a sensitivity. Given that the Interim Report contains no arguments against including ✂ together with 'logged value of transactions' other than its effect on the outcome, there are no valid reasons not to use the improved specification.

2.3 Adjustment for non-transactional fees

2.6 The Interim Report states that 'acquirer's low volume or value of transactions or its high proportion of total fees attributed to non-transaction fees' is not sufficient to consider a given observation as an outlier.[13]

[10] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.46.
[11] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.49.
[12] ✂
[13] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.15.

2.7 As explained in our previous submission, non-transactional fees (e.g. ✂) are charged irrespective of the number/value of acquired transactions (these fees are akin to fixed costs).[14] As a result, acquirers with small transaction volumes show up with ✂, since these are defined as the ratio of total value of fees paid to total value of acquired transactions multiplied by a 100. This issue is especially severe when an acquirer's ✂, because it creates the illusion that unit revenues (the working definition for prices in the Interim Report) have drastically changed. Given the specification of the PSR's baseline model, this variation would be incorrectly attributed to price changes even if there was no underlying price change.

2.8 Figure 1 below shows the distribution of unit revenues in the estimation sample by year. There are ✂, since their unit revenues are very different from other acquirers in the sample. We note that for some acquirers, ✂ (unit revenues can be interpreted as the value of fees, expressed in pence, per £1 transacted or the value of fees as a percentage of total transaction value). This means that ✂in that year. We note that there are ✂such extreme observations—

[14] ✂

Figure 1 Distribution of acquirer unit revenues by year

Note: Please note that the X-axis is not linear to accommodate extreme values of unit revenue. Vertical lines indicate weighted average unit revenue.
Source: Oxera analysis based on Mastercard data submitted to the PSR.

2.9 To minimise the adverse impact of extreme observations (as a result of a large share of ✂.on the PSR's baseline model, such observations should either be removed from the estimation sample or a relevant control variable should be introduced.

2.10 The Interim report states that it was reluctant to remove these extreme observations from the estimation sample, as it believed it would 'risk estimating our models over a sample that is unrepresentative of the acquirer population'.[15]

2.11 Oxera did not suggest removing observations, but instead suggested controlling for their unusual nature by using a ✂.[16] It is common practice in econometric modelling to introduce a ✂to account for nonlinear relationships, making the functional form more flexible and less sensitive to extreme observations.[17] As explained above, it is acquirers with low transaction volumes that are disproportionately affected by the inclusion of non-

[15] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.15.
[16] ✂
[17] Wooldridge, J.M. (2005), 'Introductory Econometrics: A Modern Approach', Third edition.

transactional fees, and therefore the relationship between acquirer size (in terms of transacted volumes) and proportion of unit revenues attributed to non-transactional fees is nonlinear.

2.12 However, the PSR ignored this suggestion and relegated it to its sensitivity analysis.[18] The baseline model should be augmented with the ✂to reduce the influence of acquirers with disproportionately large non-transactional fees and improve the model's robustness. Otherwise, the Interim Report risks repeating mistakes made in the Card Acquiring Market Review ('CAMR'), where the published findings were based on models suffering from numerous issues, some of which were acknowledged by the Interim Report itself in this review.[19]

2.4 Unbalanced sample

2.13 The Interim Report states that it 'excluded any acquirers that acquired transactions (greater than £1 in annual transaction value) in fewer than four out of the five years for which we received data from Mastercard and Visa'.[20] In the estimation sample used in the Interim Report, ✂unit revenues are negative in two out of five years.[21] As a result of log transformation these two years of data are discarded by the statistical software and the econometric model is estimated on just three ✂observations.[22] ✂should thus be completely removed from the estimation sample to be consistent with its stated approach of excluding acquirers with less than four years of data.

2.5 Results from the improved PSR baseline model

2.14 The Interim Report has not provided a reason, other than the small impact on estimated unit revenue growth, to not include the two improvements discussed in Section 2.2 and Section 2.3 despite this directly addressing shortcomings of the baseline PSR model. This approach is inconsistent with the claim in the Interim Report that it is following 'a coherent process which appropriately balances statistical inference with limitations in

[18] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, paras 7.15, 7.50.
[19] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, paras 7.15, 7.22, 7.38, 7.49.
[20] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.12.
[21] The PSR performs log transformation on multiple variables, including unit revenues. Statistical software will usually return missing values if log transformation is applied to negative numbers as mathematically this operation is not possible. Furthermore, statistical software will usually drop observations with missing data from the estimation sample.
[22] We note that ✂is discarded in the same manner, however, ✂ unit revenues are ✂, hence the statistical software discards all ✂observations, which is equivalent to removing ✂from the sample altogether.

degrees of freedom due to relatively small sample size'.[23] The models that underpin the main results in the Interim Report (M3–M6) have only 1–3 degrees of freedom more than the improved model we are suggesting here; this is a minimal difference given the size of the estimation sample.

2.15 In Table 1 below, we show results of the PSR's baseline model extended with the '✂and '✂control variables as discussed in Section 2.2 and Section 2.3, applied to the correct estimation sample as discussed in Section 2.4. The two additional controls are both individually significant at the 5% level, as well as jointly significant at the 1% level. We therefore find that the unit revenue increase that the PSR should have estimated is ✂percentage points lower than the lower end of the range of its initial results.

[23] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.49.

Table 1 Results from the improved PSR's baseline model

Variable	S1
2018	✂
	✂
2019	✂
	✂
2020	✂
	✂
2021	✂
	✂
Log Value	✂
	✂
✂	✂
	✂
✂	✂
	✂
Share of CNP	✂
	✂
Share of EEA cross-border	✂
	✂
Share of ROW cross-border	✂
	✂
Acquirer fixed effects	✂
N	✂
Adjusted R-squared	✂

Note: Standard errors in parentheses: *** p<0.001, ** p<0.01, * p<0.05
Source: Oxera analysis based on Mastercard data submitted to the PSR.

3 Separating mandatory and optional fees

3.1 Estimating mandatory unit revenues for the largest acquirers

3.1 The Interim Report concedes that 'services described by Mastercard as optional account for ✂% of Mastercard's total annual acquirer gross fee revenues and this share has been rising over time, we note that some of the increase in

Mastercard acquirer gross fee revenues (as a share of transaction value) found in this analysis may in part be due to the increase in the take-up and use of optional services purchased by acquirers'.[24] Indeed, given that none of the PSR's models control for the take-up of optional services, the estimated unit revenue increase is likely biased upwards.

3.2 The Interim Report is not able to model only mandatory fees for all acquirers, but it can model these fees for the ✂largest acquirers (accounting for ✂% of UK transactions by volume in 2021). As part of Mastercard's response in January, Oxera submitted results of its analysis based on the sample of mandatory fees only for the ✂largest acquirers.[25] In that submission we found that when estimating the PSR's baseline models on mandatory fees only, the unit revenues decreased over time, albeit the effect was not statistically significant. This further supported the view that the Interim Report overestimated the total unit revenue increase.

3.3 The Interim Report dismisses estimating its models on mandatory fees only on the basis of small sample size. While the interpretation of regression results in small samples is a valid concern, we note that during the CAMR,[26] the PSR drew conclusions from models with ✂observations compared with ✂observations in the mandatory-fees-only model. To account for the different number of control variables in each model, we can look at the degrees of freedom. The PSR's model at the CAMR has ✂degrees of freedom, whereas the mandatory-fees-only model has ✂degrees of freedom.

3.4 The PSR has previously stated that it started this market review on the basis of its CAMR findings.[27] It is highly inconsistent for the PSR to consider results derived on the basis of ✂degrees of freedom sufficient to launch a two-year market review, while also considering ✂degrees of freedom so low that it dismisses the result entirely and does not even include the result as a caveat to its main results.

[24] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.5.
[25] ✂
[26] PSR (2021), 'Market review into the supply of card-acquiring services: Final report—Annex 4 Scheme fees', November.
[27] PSR (2022), 'Market review of card scheme and processing fees Final terms of reference'

3.5 Since the January response, the PSR has slightly amended its estimation sample. We also found that the Interim Report is unintentionally using an unbalanced sample as discussed in Section 2.4. We therefore include updated results of our suggested model (S1) in Table 2 below. We continue to find no statistically significant increase in mandatory unit revenues for the ✂largest acquirers (accounting for ✂% of UK transactions by volume in 2021).[28] In light of this analysis, it appears that the Interim Report's estimates of unit revenue increase should be interpreted as the upper bound of the actual increase.

[28] ✂

Table 2 Results from the improved PSR's baseline model for mandatory fees

Variable	S1
2018	✂
	✂
2019	✂
	✂
2020	✂
	✂
2021	✂
	✂
Log Value	✂
	✂
✂	✂
	✂
✂	✂
	✂
Share of CNP	✂
	✂
Share of EEA cross-border	✂
	✂
Share of ROW cross-border	✂
	✂
Acquirer fixed effects	✂
N	✂
Adjusted R-squared	✂

Note: Standard errors in parentheses: *** p<0.001, ** p<0.01, * p<0.05
Source: Oxera analysis based on Mastercard data submitted to the PSR.

4 Correct interpretation of acquirer fixed effects

4.1 The Interim Report argues that including acquirer fixed effects controls for 'acquirer-specific differences in fees, which could be due to the profile of the acquirer in terms of their merchant base, or the type and amount of optional services they purchase'.[29] These acquirer fixed effects are jointly significant in all of the reported models. The Interim Report further states that 'the acquirer-specific dummy variables capture these factors to the extent that they **are constant over time**' [emphasis added].[30]

4.2 The Interim Report relies on year dummies (time fixed effects) to capture changes in unit revenues over time. To isolate the effect of changes in fee structure on unit revenues, which is what the Interim Report is interested in, the model must control for all other factors that impact unit revenues. This includes factors such as ✂or their ✂. The Interim Report claims that these factors are controlled for by the acquirer fixed effects.[31] This is a valid approach only if these factors are constant over time.

4.3 It is however unlikely that acquirers have seen no changes to their merchant base in the period of 2017–2021, especially since this period includes the COVID-19 pandemic which resulted in major changes in spending patterns. There are also significant changes over time in the ✂for many acquirers, as demonstrated in ✂.[32] The Interim Report thus contradicts the available evidence by assuming that these factors are constant over time. This leads to the acquirer fixed effects not capturing the effects that the Interim Report speculates they do.[33]

4.4 The models included in the Interim Report are therefore mis-specified due to the omission of important fee drivers. If such omitted drivers are not constant across time, their intertemporal evolution would be captured by the time fixed effects (the variable of interest). This means that the analysis contained in the Interim Report cannot determine whether the apparent increase in unit revenues is due to changes in the behaviour of acquirers (e.g. ✂and transaction characteristics within a given fee structure or due to intertemporal changes in the fee structure. The current regression models cannot be meaningfully interpreted as a change in fee levels.

[29] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.37.
[30] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.37.
[31] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.37.
✂
[33] PSR (2024), 'Annex 7: Econometric analysis', Interim report, 22 May, para. 7.37.

4.5 While this issue is illustrated by the inclusion of fixed effects, it cannot be remedied by removing fixed effects from the specification (which may introduce additional omitted variable bias). Rather, the Interim Report should instead control for relevant fee drivers, which appropriately capture changes over time.

Annex 2 to Mastercard response to PSR "*Market review of card scheme and processing fees Interim Report*" MR22/1.9 - Annex 10 (Profitability)

30 JULY 2024

Contents

Figures

Tables

1. Main findings of Mastercard's review of Annex 10 of the Interim Report

1.1 Introduction

This response sets out Mastercard's review of the analysis of profitability in the Interim Report and in Annex 10.

The Interim Report concludes that '[t]*he evidence [the PSR has] gathered is consistent with a finding that Mastercard's margins are higher than would be expected in competitive markets. However, there is insufficient data available to [the PSR] in order to reach a firm conclusion on the existence of unduly high prices or excessive profits (and the level of harm arising from it), noting the wide range of possible margins'*.[1]

The Interim Report also states that '*[w]hile [the PSR] recognise[s] the limitations of [their] analysis on profitability and understanding of pricing, which prevents [them] from reaching a firm conclusion on the existence of unduly high prices or excessive profits (and to the level of any harm arising from it), [the PSR] consider[s] that [their] provisional findings [...] would be consistent with a finding of a lack of competitive constraints, with harm to customers on the acquiring side of both schemes*'.[2]

It is not clear how the Interim Report comes to the conclusion that '*Mastercard's margins are higher than would be expected in competitive markets*'. Mastercard's margins in the UK fully-loaded profit and loss (P&L) account show a downward trend, and even compared with the PSR's own set of comparators (which is not reliable, and significantly underestimates the benchmark margins), Mastercard's margins are not high.

As the CMA market investigation guidelines explain,[3] the trend in profits is an important consideration. The CMA guidelines emphasise that a situation where a firm '*has earned profits that have been <u>persistently</u> above the competitive level may indicate significant market power*' [emphasis added].[4] The Interim Report's approach is not consistent with this good practice; the Report focuses on the average Mastercard margin over the period considered and does not seem to consider the (downwards) trend of Mastercard's margin over time.

---

[1] PSR (2024), Market review of scheme and processing fees, Interim report, para. 1.4.

[2] PSR (2024), Market review of scheme and processing fees, Interim report, para. 6.152.

[3] Competition Commission (2013), 'Guidelines for market investigations: Their role, procedures, assessment and remedies' para. 124.

[4] See para. 119, CMA Guidelines.

1.2 Mastercard's review of the analysis in Annex 10

Our review shows that the analysis undertaken in Annex 10 is not robust, and therefore the conclusions are not reliable. It is based on assertions which are not supported by evidence and its findings are based on views which are inconsistent with an analysis of actual data.

1.2.1 PSR's concerns about the fully-loaded P&L are not valid

Annex 10 raises two main concerns about the fully-loaded P&L prepared by Mastercard.

First, it argues that the PSR did not have enough information to assess whether the fully-loaded P&L prepared and submitted by Mastercard contains the revenues and costs relevant to Mastercard's UK scheme and processing services, and to assess the appropriateness of the keys used to allocate costs to the UK. For example, the it argues that the information received does not allow them to assess '*whether all costs for these services have been removed from global costs before global costs are allocated to the UK*'.[5]

We disagree with this assessment. As we explain in detail in section 2, Mastercard submitted the spreadsheet with the fully-allocated P&L with the relevant calculations and data sources and an accompanying methodology note,[6] and also took the PSR through the analysis in a number of meetings. The spreadsheet also shows which global costs were removed before allocating the remaining global costs to the UK and the allocation keys were explained to the PSR. Mastercard has also complied with the PSR's request to provide the fully-loaded P&L for 2022. The PSR has now requested the fully-loaded P&L for 2023, which is currently being prepared by Mastercard.

Second, Annex 10 makes the point that the fully-loaded P&L margin is sensitive to the way costs have been allocated to the UK. By definition, the margin will change if one were to change the allocation keys. However, the sensitivity scenarios with alternative cost allocations presented in Annex 10 appear to have a limited impact on the fully-loaded P&L's margin. Moreover, the sensitivity analysis in Annex 10 applies a number of allocation keys that do not make sense and which are not in line with activity-based costing. Despite this, the impact of using these alternative allocation keys is limited, and if these allocation keys are replaced by allocation keys that are more appropriate, then impact on the margin is smaller still.

In sum, the fully-loaded P&L has been prepared in line with good practice and the approach agreed upon with the PSR late 2022.

---

[5] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.9.

[6] The accompanying note was submitted in February 2023, along with a summarized version of the UK P&L for 2019-2021.

1.2.2 *The PSR's main arguments against relying on the fully-loaded P&L are of a different nature; these are not valid either*

The main arguments that the PSR has put forward against relying on the fully-loaded P&L prepared by Mastercard have in fact little to do with the way Mastercard has allocated its global costs in the fully-loaded P&L and are of a different nature.

First, Annex 10 argues that the treatment of rebates and incentives in relation to debit cards may have been overstated (in early years of specific contracts) and may be temporary (suggesting that the actual underlying profitability is much higher than the fully-loaded P&L indicates). Second, Annex 10 argues that the costs in the fully-loaded P&L should have been calculated based on incremental rather than fully-allocated costs. These two points are not valid.

First, the conclusions reached by in Annex 10 on rebates and incentives are inaccurate and contradicted by empirical analysis prepared by Mastercard. In section 3, our analysis shows that the rebates and incentives in relation to debit cards have not been overstated and that they are not temporary.

Second, Annex 10 does not provide any valid reason as to why it would be appropriate to calculate Mastercard's margin on the basis of incremental costs rather than fully-allocated costs. The fully-loaded P&L was prepared on the basis of the principles discussed and agreed with the PSR. It is well-established in the economic literature that a profitability analysis that is undertaken to inform an assessment of market power or the degree of competition in the market should be based on measuring margins using a fully-allocated cost (or stand-alone cost) approach.[7] Although an incremental cost approach may be informative, for example when assessing allegations of predatory pricing or margin squeeze, such an approach would not be appropriate or informative in this market review. Measuring the margin based on incremental costs would not allow for the recovery of common costs and fixed costs. We note that the PSR has clearly set out in Annex 10 that the fully-allocated costs approach is the most appropriate cost concept in the context of the market review ;[8] which is in line with good practice and this has been provided by Mastercard.

In sum, these two arguments (against relying on the fully-loaded P&L) are not valid, and as explained above, these two arguments do not amount to a critique of the fully-loaded P&L analysis.

[7] Office of Fair Trading (2003), Assessing profitability in competition policy analysis, Economic Discussion Paper 6, prepared by Oxera para. 1.36.

[8] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 2.44.

1.2.3 Mastercard's margins in the UK cannot be proxied by European or global margins

Annex 10 provides an analysis of Mastercard's margins at European and global levels and concludes that Mastercard's '*European margins [...] can be informative in understanding the margins in the relevant UK operations*',[9] and that '*Mastercard's margins in the UK can be proxied by the global margins*'.[10]

As we explain in section 4, European and global margins are different due to differences in unit revenues, unit rebates and incentives and unit costs between the UK, Europe and global business. The differences in these parameters are driven by differences in market conditions, fee levels, as well as the mix of services provided. Some of these differences have been acknowledged in the PSR analysis in Annex 9 on revenue generation (but are ignored in Annex 10).[11]

The UK margin (based on the fully-loaded P&L) is consistent with the margin that has been calculated in Annex 10 for Mastercard at the European level if we take into account the differences in fee levels, rebates and incentives and the mix in services. If Europe had similar levels of fees, a similar mix of services and a similar level of rebates and incentives as in the UK, then the margin for Europe would be similar to the UK margin. Without making adjustments for these differences, the European margin cannot be informative in relation to understanding the margin in the UK.

We explain these points in detail in sections 2–4. We also address some of the misinterpretations of Mastercard internal documents and other factual inaccuracies in the analysis in Annex 10. For example, Annex 10 argues that '*the* ✂,[12] and that this would suggest that '*costs on a per transaction basis in the UK may not be the same as for a market with a smaller overall size and/or where Mastercard has a smaller market share, given the low incremental unit costs of an additional transaction*'.[13] These statements are inaccurate. Annex 10 attempts to give the impression that the UK is a large market and accounts for a large proportion of Mastercard's total transactions. The data on reported and processed transactions and net revenues shows that it is not: the UK represents only approximately ✂of Mastercard's globally processed transactions and ✂of reported transactions, and ✂in terms of net revenues.

[9] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.59.

[10] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.80.

[11] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 9, paras. 2.4. and 2.5.

[12] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.12.

[13]Ibid.

2. Mastercard's review of Annex 10 analysis of the UK fully-loaded P&L

Annex 10 states that '*the fully loaded UK P&L accounts may be understating the economic benefits Mastercard receives from its relevant UK operations*'.[14] This statement is motivated by the following arguments.

- The PSR did not have enough information to assess the appropriateness of keys used in the fully-loaded P&L for the allocation of costs to the UK. In particular, the PSR claims are that the incremental costs for additional transactions are low, which may result in an over-allocation of costs to the UK when using transaction numbers as allocation keys.
- The PSR did not have enough information to assess whether the revenues and costs base used in the UK fully-loaded P&L are reflective of Mastercard's cards activities in the UK.
- Mastercard provided the fully-loaded P&L on an annual basis for four years from 2019 to 2022 and according to the PSR, some of these years may be impacted by the COVID-19 pandemic.
- The rebate and incentive costs incurred by Mastercard in the context of the expansion into debit cards may be temporary, and/or overstated in the UK fully-loaded P&L.

Mastercard's review indicates that these arguments are incorrect and therefore so is the overall Interim Report conclusion that the margin is understated.

First, the PSR and Mastercard discussed and agreed on the approach for preparing the UK fully-loaded P&L and in particular for allocating costs to the UK. The PSR requested Mastercard to prepare the UK P&L based on a Fully Allocated Costs (FAC) approach.[15] This is inconsistent with the argument presented in Annex 10 that the fully-loaded P&L cannot be relied upon because it is not based on estimating incremental costs. It is well-established in the economic literature that when analysing profitability to inform an assessment of whether a market is working well, a stand-alone or fully-allocated (rather than incremental) cost approach is appropriate.[16]

In addition, Annex 10 also argues that the UK represents a large market for Mastercard and that the UK benefits from economies of scale; therefore a fully-allocated cost approach would not be appropriate. As we explain in section 2.1 below, this conclusion is also incorrect and is contradicted by evidence that Mastercard previously shared with the PSR.

[14] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.10.

[15] PSR (2022), Section 81 notice, 21 November.

[16] Office of Fair Trading (2003), Assessing profitability in competition policy analysis, Economic Discussion Paper 6, prepared by Oxera para. 1.36.

Second, the process for preparing the UK fully-loaded P&L is transparent and documented within the P&L spreadsheet and accompanying methodology note. The PSR was provided with several submissions outlining the approach for determining the relevant revenues and costs base and the approach applied for allocating costs to the UK.

Third, as we explain in section 2.4 below, the impact of the COVID-19 pandemic on Mastercard's profitability in the UK is misinterpreted in Annex 10.

Fourth, the conclusions made in Annex 10 in relation to rebates and incentives being temporary or overstated in the UK fully-loaded P&L are inaccurate. Section 3 provides a review of the statements in Annex 10 on rebates and incentives.

Fifth, Annex 10 presents an assessment of the acquirer-side operating margin of Mastercard. Our review shows that such an assessment does not make sense from an economic or business perspective and is inconsistent with the characteristics of the two-sided nature of the market in which Mastercard operates.

2.1 Mastercard and PSR engagement in the context of the preparation of the UK fully-loaded P&L

The PSR and Mastercard initiated discussions regarding the preparation of the UK P&L in the summer of 2022. These discussions informed the approach for preparing the UK P&L, where Mastercard and the PSR agreed that:

- the profitability would take the form of an operating margin analysis for the UK card business;
- the period of analysis would cover each of the three years from 2019 to 2021;
- revenues would consist of all scheme and switch fees charged to issuers and acquirers, along with associated costs, taking into account rebates and incentives;
- global costs would be allocated to the UK on a fully-allocated cost basis (using activity-based costing);
- the UK P&L would be provided with a breakdown for scheme and switch, with the main focus on the allocation of costs to the UK.

Annex 10 states that:

- the 2019-2021 period was impacted by Covid-19; as a result, the operating margin in the UK fully-loaded P&L may have been underestimated;
- because the UK is a large market for Mastercard, incremental costs for additional transactions are low; as a result, allocating costs to the UK using keys based on the number of transactions may result in an over-allocation of costs to the UK.

It is surprising that Annex 10 seems to be deviating from the previously agreed approach (as set out in the PSR's information requests and its February 2023 Working Paper) regarding both the time period and the costs allocation methodology applied for the preparation of the UK fully-loaded P&L.

2.1.1 The PSR and Mastercard agreed on a time period for the preparation of the UK fully-loaded P&L

Annex 10 states that '*Mastercard **only** provided [...] fully loaded UK P&L accounts for the period of 2019–2022. This includes two years that were impacted by COVID-19 (2020 and 2021), which may as a result understate the underlying profitability of Mastercard's UK operations when calculated as an average over the 2018–2022 period*'[emphasis added].[17]

However, the PSR *requested* Mastercard to prepare the UK P&L for the period 2019–2021 only and that Mastercard complied with a follow-up request from the PSR to provide data for 2022 as well during the course of 2023. The PSR has now also requested the UK fully-loaded P&L to be prepared for 2023. We note that the ✂.

We explain in section 2.4 why Annex 10 misrepresents the impact of COVID-19 on the margins in the UK fully-loaded P&L.

2.1.2 The PSR and Mastercard agreed on an approach for allocating costs to the UK

Annex 10 states that '*the way Mastercard allocates common costs is to a significant extent based on transaction numbers with each transaction receiving an allocation of the full costs of providing scheme and processing services*'.[18] Annex 10 also states that '*[i]t is plausible that costs on a per transaction basis in the UK may not be the same as for a market with a smaller overall size and/or where Mastercard has a smaller market share, given the low incremental unit costs of an additional transaction*'.[19]

The PSR is aware that the approach for preparing the fully-loaded P&L and allocating costs to the UK was discussed and agreed upon in 2022. As agreed between Mastercard and the PSR, the fully-loaded P&L was prepared on the basis of a fully-allocated cost (FAC) methodology and activity-based costing approach. The PSR's disclosure paper published in 2023 states that '*[the PSR] therefore asked Mastercard to submit revenues and costs for the relevant UK operations to [the PSR] in fully allocated UK P&L accounts*'.[20] It is well-established in the literature that when analysing profitability to inform an assessment of whether the

---

[17] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.16.

[18] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.12.

[19] Ibid.

[20] PSR (2023), 'Scheme and processing fees market review. Disclosure paper – Profitability (margins analysis)', 1 December, para. 4.9.

market is working well, costs should be measured based on a stand-alone or fully-allocated costs basis (rather than incremental costs).[21]

As explained in Annex 10, the purpose of the fully-loaded approach is to allocate all relevant costs to the UK, starting from the global cost base. Annex 10 states that '*for the purpose of the profitability analysis […] fully allocated costs is the most appropriate cost concept. This is, for example, because it allocates costs most meaningfully not only to the relevant UK operations, but also to the remaining non-UK operations of Mastercard and Visa and reconciles those costs to the total costs of all services provided by Mastercard and Visa*'[emphasis added].[22]

It is inconsistent to calculate incremental costs in this context; incremental costs focus only on the additional costs directly tied to increased production or service levels, ignoring the allocation of fixed costs. Therefore, measuring the margin based on incremental costs would not allow for the recovery of the majority of joint and common costs.

Although incremental cost approach may be informative for example when assessing allegations of predatory pricing or margin squeeze, it is not clear why such an approach would be appropriate in this market review. Annex 10 does not provide any justification for the use of this approach, other than the fact that the UK is a large country for Mastercard (which is inaccurate, see below).

2.1.3 The UK is not a large market for Mastercard

Annex 10 argues that because of Mastercard's '*relatively ✂ (e.g. compared to its European share)*',[23] and because '*the UK market is the ✂*,[24] this would suggest that '*costs on a per transaction basis in the UK may not be the same as for a market with a smaller overall size and/or where Mastercard has a smaller market share, given the low incremental unit costs of an additional transaction*'.[25]

These statements are inaccurate and it appears that Mastercard data was not interpreted correctly. By referring to the UK as the ✂, Annex 10 attempts to give the impression that the UK is a large market and accounts for a significant portion of Mastercard's total transactions. The data on reported and processed transactions and net revenues shows that this is not the case. The UK represents only approximately ✂of

[21] Office of Fair Trading (2003), Assessing profitability in competition policy analysis, prepared by Oxera, para. 1.36.

[22] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 2.44.

[23] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.12.

[24] Ibid.

[25] Ibid.

Mastercard's processed transactions and ✂of reported transactions (see Figure 1 and Figure 2 below) and ✂in terms of net revenues.

Figure 1 - Share of total Mastercard processed transactions across the ten largest markets, 2019–21

Source: Analysis based on Mastercard data.

Figure 2 - Share of total Mastercard reported transactions across the ten largest markets, 2019–21

Source: Analysis based on Mastercard data.

We also note that Annex 10 overlooks the fact that the UK market differs from other markets. For example, in terms of transaction mix, the UK has a relatively high proportion of CNP transactions, which require certain Mastercard activities and services that may differ from other types of transactions.

2.2 The approach applied for preparing the UK fully-loaded P&L was transparently documented

This section provides an overview of the undertaken approach for the preparation of the UK fully-loaded P&L and addresses and responds to a number of points made in Annex 10 regarding the UK fully-loaded P&L.

2.2.1 Determination of the revenue base

Annex 10 states that '*[w]hilst Mastercard has provided [the PSR] with details of scheme and processing revenues in the fully loaded P&L accounts [the PSR has] not received a detailed reconciliation of these revenues to the revenues in the European and global accounts in a format that would allow [...] to assess whether there are other revenues that are also related to scheme and processing services, but are not included in the fully loaded UK P&L*'.[26]

This statement is inaccurate as it fails to consider the extensive documentation that Mastercard prepared and submitted to the PSR. These documents provide explanatory elements relating to the preparation of the revenue base for the UK fully-loaded P&L.

The principles and methodology used for the preparation of the fully-loaded P&L were set out in a note ('Methodology used for preparing the UK fully-loaded P&L (part iii)')[27] submitted to the PSR in February 2023. This note provided a detailed explanation of the methodology and calculations used to determine the revenues included in the UK P&L. The note explained that UK revenues consist of all the fee income which stems from contracts with UK-based issuers and acquirers. This means that the revenue figures capture fees paid by UK issuers when their customers' cards are used both in the UK and abroad. In the case of UK acquirers, this will cover instances when both UK and foreign cardholders use their cards to purchase a good or service from a UK-based merchant.

The PSR was then also provided with a detailed note setting out a reconciliation of revenues contained in the UK P&L with revenues reported in Mastercard's Europe statutory accounts.[28] In the note, Mastercard explained that the fully-loaded P&L includes the UK revenues reported in the Mastercard Europe Statutory Accounts as well as UK revenues included in other statutory accounts (such as in relation to gateway services and prepaid services). Mastercard also explained that the revenues reported in the Mastercard Europe statutory accounts, together with the revenues for other Mastercard regions and other entities

[26] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para.3.13.

[27] Mastercard (2023), Methodology used for preparing the UK fully-loaded P&L (Part iii), PSR Request for Information on Scheme Fees 2017-2021.

[28] Mastercard (2024), Response to PSR questions from meeting on 21 February 2024.

such as Vocalink, Payment Gateway services and Prepaid Management Services, are consolidated in the Statutory Accounts for the ultimate parent company, Mastercard Inc.

Annex 10 states that the PSR '*identified a number of factors that indicated that the fully loaded UK P&L accounts do not include all relevant revenues*.'[29] It also states that '*the fully loaded UK P&L accounts do not include the financial benefits that Mastercard derives from foreign exchange conversion (FX) services where a UK cardholder undertakes a card transaction in a different currency. […] FX conversion revenues are relevant to [the PSR's] market review as they are an inherent part of a card transaction where currency conversion is required, i.e. they would not arise without a card transaction and form part of the economic benefits Mastercard derive from the UK card scheme operations. [The PSR's] terms of reference states that [the PSR] would examine scheme and processing fees as well as 'other fees and payments relating to Mastercard and Visa's scheme and processing activities'*.[30]

The PSR has misunderstood the nature of Mastercard's role in relation to FX. The PSR's points in relation to FX are incorrect and not supported by evidence. ✂This was explained in a meeting with the PSR on 31 July 2023 and in a follow-up email on 1 August 2023✂.[31]

The note provided to the PSR ('Methodology used for preparing the UK fully-loaded P&L (part iii)') contains the definition of revenues relating to the UK: '*[t]he revenue figures capture the fees that are paid by UK issuers when their customers' cards are used both in the UK and abroad and that in the case of UK acquirers, this will cover instances when both UK and foreign cardholders use their cards to purchase a good or service from a UK-based merchant*'.[32] This means that fees listed in the Mastercard fee schedule, charged to issuers and acquirers, were used as a basis to determine the relevant revenue base for the UK fully-loaded P&L. When Mastercard discussed the preparation of a fully-loaded P&L for Mastercard's card business with the PSR in 2022, it was agreed that revenues from fees charged to issuers and acquirers would be included; as previously explained, FX revenues were therefore not included as FX conversion does not result in a fee being charged to issuers.

FX costs consist of operating expenses, the costs of hedging positions, losses, risks taken and the use of capital. Mastercard takes an additional risk by guaranteeing an exchange rate at the time of authorisation while the actual settlement takes place later. These costs have not been quantified and are not included in the UK P&L. Quantifying the costs and allocating these to the UK would require substantial work, including agreeing a framework for estimating the appropriate level of capital, risk and then estimating returns

[29] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.11.

[30] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.14.

[31] Issuers may also choose to apply a different FX rate to the rate set by Mastercard.

[32] Mastercard (2023), Methodology used for preparing the UK fully-loaded P&L (Part iii), PSR Request for Information on Scheme Fees 2017-2021.

commensurate with that risk. The exchange rates that Mastercard applies are wholesale foreign exchange market rates (or where applicable, government-mandated rates) and are guaranteed for 24 hours. The rates are publicly available on Mastercard's website,[33] and reflective of the conditions on foreign exchange wholesale markets. It is important to note that these rates are *wholesale* rates rather than retail rates. Issuers may in principle apply their own charges–some do indeed apply such charges,[34] while others do not.[35]

Rather than undertaking a profitability analysis, the level of the FX rates offered by Mastercard can be assessed by comparing these with those offered by other providers.

Table 1 below compares the Mastercard bid-ask spreads with those offered by other providers of FX services (Wise, Xe and Remitly). The rates offered by these providers are considered competitive (and for example better than those offered by traditional retail banks). The comparison shows that Mastercard's rates are in line with competitive rates and are even more attractive than the rates offered by other providers of FX in the market. For example, Mastercard's revenues as a result of converting 100 GBP into euros are ✂lower than those of the next most competitive provider and ✂lower than the average revenues across the three providers considered. We also note that Mastercard delivers more service than other market participants since Mastercard guarantees the exchange rate for 24 hours, and therefore takes a risk.

Table 1 Comparison of Mastercard bid-ask spreads with those offered by other providers of FX services

Transaction amount (GBP)	Metric	GBP - EUR spread	GBP - USD spread
✂	✂	✂	✂
✂	✂	✂	✂
✂	✂	✂	✂
✂	✂	✂	✂
✂	✂	✂	✂
✂	✂	✂	✂

[33] See https://www.mastercard.us/en-us/personal/get-support/convert-currency.html (last accessed 19 December 2023).

[34] Some issuers may apply an additional fee specifically for currency conversion. For example, Lloyds' website states: 'If you use your debit card to make a purchase in a currency other than pounds, the amount is converted to pounds on the day it is processed by Visa using the Visa Payment Scheme exchange rate. We will charge you a foreign currency transaction fee of 2.99% of the amount of the transaction, this is a fee for currency conversion.' See https://www.lloydsbank.com/travel/debit-card-abroad.html (last accessed 19 December 2023). Barclays adopts a similar policy, see https://www.barclays.co.uk/travel/using-debit-card-abroad/ (last accessed 19 December 2023).

[35] For example, Monzo's website states: 'Pay anywhere, in any currency, with no foreign transaction fees using your debit or credit card. We pass Mastercard's exchange rate directly onto you, without sneaky fees or extra charges.' See https://monzo.com/features/travel/ (last accessed 19 December 2023).

Source: Mastercard analysis. Note: The table is based on 4 March 2024 exchange rates data from the websites of Mastercard and Wise. Wise's website contains current rates of competitors and is the source of Wise, Xe and Remitly's exchange rates. The websites were accessed on 4 March 2024. Remitly and Xe charge a bid-ask spread for foreign exchange and a separate fee for money transfer; only the bid-ask spread is taken into account in our comparison. Wise charges the mid-point for foreign exchange and recovers its costs through the fee for the money transfer. In our analysis, we have split Wise's fee into a money transfer fee by assuming that it's money transfer fee is equivalent to the average of the money transfer fee charged by Xe and Remitly and that the remainder would constitute Wise's fee for foreign exchange.

Finally, we note that if the operating margin of Mastercard for FX activities is lower than, or similar to, the operating margin for its UK card business, then the weighted average margin (covering both Mastercard's card business and FX activities in the UK) would not be higher than the operating margin calculated for Mastercard's card business in the UK (i.e✂). Even if the operating margin for Mastercard's FX activities in the UK were much higher, the impact on the weighted average operating margin would be minimal, since the FX revenues are small compared with the revenues from fees charged to issuers and acquirers.

As a sensitivity, Annex 10 presents the impact on the margins in the UK fully-loaded P&L of including FX revenues and costs.[36] For the purposes of the sensitivity analysis, the PSR assumes that '*FX revenues attract operating costs of 20% of FX revenues*'.[37] In other words, the PSR implicitly assumes that Mastercard derives an operating margin of 80% for FX activities. Given the competitive nature of the rates offered by Mastercard, this is clearly unrealistically high.

2.2.2 Determination of the cost base

Annex 10 states that '*[t]he calculations provided limited information on how costs that were not related to scheme and processing services were removed from the common cost pool before they were allocated to the UK activities*'.[38]

Annex 10 also states that '*[the PSR] would require more detailed information to assess whether the global cost base that is allocated to UK scheme and processing fees is free from costs that are unrelated to scheme and processing services (e.g. account-to-account payment services)*'.[39]

These statements are not accurate and overlook the various documents submitted to the PSR. In the context of the preparation of the UK fully-loaded P&L, Mastercard excluded costs irrelevant to UK cards activities from the global cost base. Excluded costs notably included the following:

- ✂
- ✂
- ✂

---

[36] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.26.

[37] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.25.

[38] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.9.

[39] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.11.

For each cost type, the UK fully-loaded P&L shows which costs were removed from the full costs base. As explained to the PSR, costs are flagged as excluded in the relevant costs spreadsheets of the UK fully-loaded P&L. Although relevant, litigation costs were also excluded from the UK fully-loaded P&L (as explained in the methodology note).[40] Litigation costs (such as costs for legal and expert advice and for settling claims) affect Mastercard's operations in the UK and have a negative impact on its profitability. Litigation costs are therefore relevant and could have been included in the UK fully-loaded P&L. Table 3 shows the impact on the UK operating margin of including litigation costs.

In relation to litigation costs, Annex 10 mentions that Mastercard European statutory accounts include significant litigation–related costs and argues that '*it may be appropriate to exclude these costs when assessing profitability for the purpose of [the] market review*'.[41] Annex 10 cites a number of reasons for excluding such costs, notably that such costs may relate to past activities, may result of Mastercard benefitting for lack of competitive constraint, may be related to the level of interchange fees, may be recoverable from third parties or not be part of the ordinary course of operation of the business.

The costs associated with legal and expert advice (as well as the potential costs of settling claims) affect Mastercard's operations in the UK and have a negative impact on its profitability. Various of these litigations are still ongoing and therefore Annex 10 is incorrect to describe litigation costs as 'one-off'. Mastercard incurred litigation costs in the UK of ✂in 2020, ✂in 2021 and ✂in 2022. Looking ahead, the provisions included in Mastercard Inc.'s balance sheet for future settlement liabilities in the UK are ✂ as at the end of 2022, which indicates that Mastercard still expects to pay out significant sums in the coming years. As such, litigation costs cannot be accurately described as 'one-off'.[42]

Annex 10 is also incorrect to claim that the litigation cases are a result of Mastercard exercising market power. These cases are in relation to a wide range of topics, including interchange fees (assessed as a horizontal agreement) which benefitted the issuers. These settlement costs do not reflect a finding of wrongdoing or an exercise of excessive market power on Mastercard's part, as they are not fines based on decisions taken by a Court or a regulatory authority, but rather settlements where Mastercard voluntarily agrees to pay claimants in advance of a judgement. This is a commercial decision and cannot be taken as evidence of wrongdoing.

Annex 10 notes that Mastercard removes litigation costs provisions when reporting its adjusted performance to its shareholders. This is indeed the case, but it does not follow that litigation costs needs to be excluded in order to measure economic profitability. Moreover, litigation costs are included as part of

[40] Mastercard (2023), Methodology used for preparing the UK fully-loaded P&L (Part iii), PSR Request for Information on Scheme Fees 2017-2021.

[41] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.48.

[42] The total amount that is included in the 2022 annual report is $1,094m, of which the UK represents ✂

Mastercard's operating profitability (i.e. earnings before interest and taxes, or 'EBIT'), the metric favoured by the PSR to assess profitability.

It is important to note that the CMA did not follow the PSR's suggested approach of ignoring litigation costs in its analysis of the profitability of Alphabet and Meta as part of its market investigation into digital advertising.[43] In Alphabet's case, the CMA deducted from Alphabet's EBIT the costs associated with three very large European Commission fines of $2.7bn in 2017, $5.1bn in 2018 and $1.7bn in 2019,[44] but it did not exclude other settlement costs captured as part of 'General and Administrative' expenses.[45] Similarly, in Facebook's case, the CMA did not adjust EBIT for a $5.0bn settlement cost which was also part of Facebook's 'General and Administrative' expenses.[46]

2.2.3 Allocation of costs to the UK

Annex 10 states that '*Mastercard [...] allocates a significant proportion of its common costs on the basis of the number of processed transactions*'.[47] This statement is not accurate.

Table 2 below shows that, in 2021, approximately ✂of costs allocated to the UK were direct (i.e. geo-coded) to the UK or dedicated to the UK market. In other words, approximately ✂of costs did not require the application of an allocation key to determine the portion attributed to the UK.

Table 2 below also shows that, in 2019, only ✂of the costs allocated to the UK were allocated on the basis of ✂It is therefore inaccurate to state that a significant proportion of common costs were allocated on the basis of ✂

[43] CMA (2020), 'Online platforms and digital advertising – Appendix D: profitability of Google and Facebook', 1 July.

[44] The figures quoted in the CMA's decision–£2.1m in 2017, £3.8m in 2018, £1.3m in 2019–are equivalent to the USD-denominated figures reported in Alphabet's annual accounts. See CMA (2020), 'Online platforms and digital advertising – Appendix D: profitability of Google and Facebook', 1 July, Table D.1; and Alphabet, '2019 Annual Report', p. 51.

[45] Alphabet describes 'General and Administrative' expenses as including, among other items, 'Legal-related expenses', and states that 'General and administrative expenses increased $2,628 million from 2018 to 2019. The increase was primarily due to an increase in legal-related expenses of $1,157 million, including a charge of $554 million from a legal settlement in 2019 and the effect of a legal settlement gain recorded in 2018'. It is apparent that the CMA did not attempt to remove these expenses from EBIT, as the adjusted EBIT margin reported by the CMA in Table D.1–26% in 2017, 23% in 2018, 22% in 2019–is identical to the EBIT margin obtained when excluding European Commission fines from Alphabet's EBIT while leaving all other items unchanged. See CMA (2020), 'Online platforms and digital advertising – Appendix D: profitability of Google and Facebook', 1 July, Table D.1; and Alphabet, '2019 Annual Report', pp. 36–37.

[46] The EBIT margins that the CMA reports for Facebook–50% in 2017, 45% in 2018, 34% in 2019–are consistent with the EBIT margins reported in Facebook's accounts. This implies that no adjustment has been made to remove an expense of $5.0bn in 2019 described as 'Legal accrual related to FTC settlement' from 'General and Administrative' expenses. See CMA (2020), 'Online platforms and digital advertising – Appendix D: profitability of Google and Facebook', 1 July, Figure D.8; and Facebook, '2019 Annual Report', p. 58.

[47] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.12.

Table 2 Breakdown of costs by type of allocation key used

	2019	2020	2021
Direct, general expenses and dedicated costs – no allocation required	✂	✂	✂
Costs for which an allocation is required – allocation key used			
Global technology	✂	✂	✂
- revenues related to each programme	✂	✂	✂
- UK share in global transactions	✂	✂	✂
o/w UK share in reported transactions	✂	✂	✂
o/w UK share in processed transactions	✂	✂	✂
o/w UK share in CNP transactions	✂	✂	✂
o/w UK share in premium card transactions	✂	✂	✂
- other	✂	✂	✂
Global P&S (revenues related to each product)	✂	✂	✂
Global P&S overheads (EPMU)	✂	✂	✂

Source: UK fully-loaded P&L data.

Annex 10 states that '*[i]n most cases the information Mastercard provided in relation to cost allocations was not sufficiently granular to assess whether costs in the fully loaded UK P&L accounts are allocated taking into account activity based costing principles'*.[48] The PSR also writes that '*[they] also did not have sufficient information to assess the suitability of the allocation metrics chosen by Mastercard to allocate global costs to the UK for the purpose of this market review*'.[49]

These statements are misleading. Contrary to the statements made in Annex 10, the allocation metrics chosen by Mastercard were explained to the PSR, notably as part of a P&L walk-through session as well as in written documents.

The selection of allocation keys used in the UK fully-loaded P&L has been carefully assessed and examined.

- ✂were allocated based on ✂
- ✂were allocated based on the ✂We explain below the choice of allocation keys for a number of ✂
  - ✂costs were allocated based on the number of ✂. Although ✂ is used for an increasing number of ✂), it was decided to apply a conservative assumption and not to allocate ✂costs based on ✂ (since ✂is used for both ✂). We note that allocating ✂ costs using the number of ✂would have resulted in a ✂
  - ✂were allocated to the UK using ✂, as these services are mostly used for ✂

---

[48] Ibid.

[49] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.9.

- ✂were allocated using ✂. As explained in the OFT 2003 methodology paper on assessing profitability,[50] ✂should be used with caution when allocating costs, as a circularity problem may arise. In this particular case, such a circularity problem would not arise, since✂are not used to allocate costs to different products but to allocate costs to different countries.
  ✂can be used as a proxy for ✂. We note that, ✂, using ✂as the allocation key would then result in an ✂For example, since the market for ✂is highly competitive in the UK and more so than in other countries and regions, the allocation of ✂

2.3 Review of the sensitivity analysis in Annex 10

Annex 10 provides a sensitivity analysis showing the impact on the margins in the UK fully-loaded P&L of changing a number of allocation keys.

Annex 10 indicates that '*this analysis is not intended to identify the 'correct' margins for Mastercard's relevant UK operations, but rather to identify the sensitivity of the margins in the fully loaded UK P&L accounts to the assumptions made*'.[51] The sensitivity analysis takes the form of three changes in allocation keys assumptions:

- ✂
- ✂
- ✂

It is not clear how the alternative allocation keys proposed would be justified. We understand that this exercise is just meant as a sensitivity analysis rather than to propose 'better' allocation keys. However, it is good practice to ensure that a sensitivity analysis is based on allocation keys that have clear underlying logic.

Our review results in the following observations.

- First, the impact on the operating margin in the UK fully-loaded P&L of these alternative allocation keys is relatively limited (between ✂).
- Second, the sensitivity analysis undertaken by the PSR does not consider other elements that could potentially result in ✂. For instance, ✂ In addition, when preparing the UK fully-loaded P&L, Mastercard also excluded litigation costs (which are relevant when measuring profitability on an operating margin basis, see section 2.2.2).
- Third, we have reviewed the alternative cost allocation keys used by the PSR; some of these do not make sense. In the UK fully-loaded P&L, ✂ are allocated using ✂ were allocated using a ✂were allocated using ✂.

[50] Office of Fair Trading (2003), Assessing profitability in competition policy analysis, Economic Discussion Paper 6; prepared by Oxera, para. 1.37.

[51] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.29.

In the sensitivity analysis, Annex 10 now allocates ✂ based on the ✂. We do not see the logic of this change. As explained in the note outlining the methodology applied for the preparation of the UK fully-loaded P&L, certain ✂Therefore, it is incorrect to allocate all costs based on ✂is an appropriate allocation key for ✂

As explained, ✂were allocated based on ✂.[52] Since ✂ could be allocated based on the weighted average allocation of ✂as a sensitivity scenario. We have estimated the impact of that on the UK operating margin in Table 3 below. The impact is ✂, and ranges ✂ (with some years for which the sensitivity results in an ✂). Table 3 also shows the impact of including litigation costs in the UK fully-loaded P&L (see section 2.2.2).

Table 3 Sensitivity analysis on Mastercard's EBIT margin[53]

Sensitivity description	2019	2020	2021	2022
Technology cost overheads allocated based on the weighted average allocation of technology costs	✂	✂	✂	✂
Inclusion of litigation costs	✂	✂	✂	✂

Source: Mastercard sensitivity analysis is based on UK fully-loaded P&L data.

In the fully-loaded P&L, ✂are allocated to the UK using a ✂

In its sensitivity analysis, the PSR allocates all ✂to the UK based on the weighted average of the ✂. We do not see the logic of this change. ✂were allocated based on ✂; it is unclear to us why the PSR would replace this allocation by an allocation of ✂

2.4 The impact of COVID-19 on operating margins in the UK fully-loaded P&L was not properly assessed

Annex 10 notes that '*Mastercard's EBIT margins in the European accounts for 2019 and 2022 are higher than for 2020-2021, indicating that COVID had a negative effect on margins in 2020–2021 in Europe*'.[54] It further states that '*[g]iven the observed downward trend in EBIT margins in the fully loaded UK P&L accounts and*

[52] Mastercard's response to questions received from the PSR on February 8h, 2024.

[53] The sensitivity analysis presented in Annex 10 also shows the impact on the operating margin of deducting all incentives and rebates costs from gross revenues. Mastercard's review indicates that the results shown in Annex 10 are inaccurate. Mastercard finds that deducting all incentives and rebates costs from gross revenues results in an ✂

[54] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.16.

given that Mastercard's internal documents show that ✂ […] it is likely that average margins over the five-year observation period would have been higher if Mastercard had included 2018 data in the fully loaded UK P&L accounts'.[55]

These statements are inaccurate and contradicted by evidence. The impact of the pandemic on total card transaction volumes was relatively small. Our analysis shows that ✂As Figure 3 below shows, transaction volumes ✂in 2020 and ✂in 2021 relative to 2020, and by ✂relative to 2019. Similarly, Figure 4 shows that the value of transactions (in euros) of UK-issued cards ✂in 2020 and ✂in 2021 relative to 2020, and ✂

Figure 3 - Volume of transactions conducted using UK-issued cards

Source: Table 1a of Section 82 notice November 2022

[55] Ibid.

Figure 4 - Value (in euros) of transactions conducted using UK-issued cards

Source: Table 1a of Section 82 notice November 2022

Evidence suggest that the pandemic had effects which both increased and decreased transaction volumes for different types of transactions. Overall, this indicates that the impact of the pandemic on total card transaction volume was relatively small. Moreover, despite decreases in gross revenues (due to lower transaction volumes), there was only a relatively small reduction in the operating margins of Mastercard Inc. and ✂in 2020 and 2021.

In addition, Annex 10 does not provide any evidence to substantiate the claim that average margins over the five-year period would have been higher if Mastercard included 2018 data in the UK fully-loaded P&L. Annex 10 assumes that higher revenue yields translate into higher operating margins, which may not be the case and would depend on Mastercard's management of its costs structure. Only a thorough analysis of the Mastercard UK P&L for 2018 (which the PSR has not requested) would enable the PSR to conclude whether average UK margins would have been higher had the 2018 margin for the UK be included in the analysis. In any case, Mastercard has now also prepared the fully-loaded P&L for 2022 and will prepare the P&L for 2023, which means that there are sufficient years post-COVID-19.

As the CMA guidelines emphasise,[56] the trend in profits (rather than just the average over time) is an important consideration. In that respect, we note that the operating margin in the UK fully-loaded P&L has declined between 2019 and 2022 (without this trend being attributable to COVID-19).

[56] Competition Commission (2013), Guidelines for market investigations: Their role, procedures, assessment and remedies, para. 124.

2.5 Assessing the acquirer-side operating margin of Mastercard is economically inaccurate

As part of a sensitivity analysis, Annex 10 assesses Mastercard's acquirer-side operating margin. In the context of this analysis, Annex 10 states that '*the acquiring side is run as a separate division from the issuing side with costs split equally between them*'.[57]

The approach suggested in Annex 10 fails to acknowledge the two-sided nature of Mastercard's payment platform and is therefore not economically meaningful. This approach is also wrong to claim that '*the acquiring side is run as a separate division*'; this is clearly not the case. As has been pointed out both in previous submissions, Mastercard's payment network acts as an intermediary between issuers and acquirers. Mastercard's success relies on both issuers and acquirers participating in the network. As the number of issuers and acquirers using Mastercard's network increases, the platform becomes more attractive to both sides.

The two-sided nature of payment platforms has been well-established in economics. In the literature for example, Rochet and Tirole (2003) write that '*[c]ardholders value credit or debit card only to the extent that these are accepted by the merchants they patronize; affiliated merchants benefit from a widespread diffusion of cards among consumers. More generally, many if not most markets with network externalities are characterized by the presence of two distinct sides whose ultimate benefit stems from interacting through a common platform*'.[58]

As Mastercard operates a two-sided network, where positive externalities arise from issuers and acquirers interacting through a common platform, it is not economically appropriate to assume that Mastercard could operate separate issuing and acquiring activities. Measuring the profitability of the acquiring side of Mastercard's business, as Annex 10 suggests, is not economically appropriate.

In addition, the approach suggested in Annex 10 does not reflect how Mastercard assesses the profitability of its activities. Profitability is not assessed separately for the acquiring or issuing sides of the business and the concept of acquirer-side profitability or issuer-side profitability is not considered appropriate in the practical management of the business.

[57] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.30.

[58] Rochet, Tirole (2003), Platform Competition in Two-Sided Markets, Journal of the European Economic Association, 1, issue 4, p. 990-1029.

3. Review of the statements in Annex 10 on rebates and incentives

Annex 10 explains that, because of their accounting treatment, rebates and incentives may be overstated in the UK fully-loaded P&L. Annex 10 also argues that the level of incentives and rebates paid during the period 2019–21 in relation to debit cards may be temporary. These conclusions are inaccurate and are contradicted by empirical analysis prepared by Mastercard.

3.1 Rebates and incentives have not been overstated in the UK fully-loaded P&L

Annex 10 states that '*[the PSR has] not been able to fully assess whether rebates and incentives related to the expansion into UK debit cards have been allocated in a way that best reflects the economic benefits associated with the incentive payments*'.[59] To support this claim, Annex 10 states that '*[i]t is possible that relatively higher rebate and incentive costs have been allocated in the early years of a new contract, when revenues are still relatively low, but relatively lower costs are allocated to later years, when revenues could more fully reflect the benefits of the expansion into debit cards*'.[60] Annex 10 also states that '*Mastercard said that it employed a straight-line depreciation approach to those incentive costs that it capitalises. This indicates that more costs are allocated (as a proportion of revenues) to the early years of a contract compared to later years, which may not reflect the economic utility of the rebates when assuming growing revenues from the contract*'.[61]

The conclusion reached in Annex 10 is inaccurate and contradicted by empirical analysis undertaken by Mastercard.

First, in Mastercard's accounting systems, all rebates and certain types of incentives are recorded as a proportion of revenues. This means that, in practice, a large proportion of the rebates and incentives granted to issuers ✂are accounted for in line with revenues and that the potential issue that the PSR has identified simply does not occur in relation to the rebates and incentives that are accounted for in line with revenues. We explained this to the PSR and provided them with examples.

Second, we have assessed the impact of allocating the incentives (that are currently accounted for linearly over time, consistent with accounting standards) based on revenues for the debit card contracts signed in 2018 – 2022. This analysis shows that ✂; when allocating incentives based on revenues, the downward trend in margins does not change. We emphasise that this analysis overestimates the impact as follows.

[59] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.20.

[60] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.21.

[61] Ibid.

- If this adjustment were to be applied, it would have to be applied to all existing contracts (i.e. including contracts signed before 2018); making a similar adjustment to these contracts would ✂in the period considered.
- The time value of money should also be taken in consideration. As most incentive payments are made at the start of the contract, if we were to 'back-end' the accounting treatment of incentives we should also increase the value (to take into account the time value of money) and thus ✂.

Table 4 Sensitivity analysis; reallocation of certain incentive costs in line with revenues: impact on the operating margins in the UK fully-loaded P&L[62]

	2019	2020	2021	2022
UK fully-loaded P&L operating margin – with no adjustment	✂	✂	✂	✂
UK fully-loaded P&L operating margin –adjusting for incentive costs	✂	✂	✂	✂

Source: Analysis prepared by Mastercard based on the four issuer support contracts that involved debit card transactions. For each contract, the adjusted yearly incentive costs were computed by multiplying annual revenue by the unadjusted incentive costs expressed as a proportion of revenues over each contract period.

3.2 Rebates and incentives are not temporary

Annex 10 states that '*Mastercard's market share in debit cards in the UK has been growing significantly over the period 2019–2022. This growth in market share was associated with upfront investment, for example in the form of incentives and rebates for issuers. There is a possibility that the use of incentives and rebates in this way (to support expansion into debit) is a temporary effect*'.[63] Annex 10 makes the following statements:

- Mastercard's EBIT in the UK P&L has decreased between 2019 and 2022, implying that the expansion into debit cards has incurred ✂
- Mastercard may have a ✂according to the PSR, Mastercard could ✂
- Mastercard reported an expected ✂. This decline is driven by ✂and Mastercard expects ✂

Our review demonstrates that the rebates and incentives in relation to debit cards are not temporary. The PSR statements are pure conjecture of what might happen in the future and are inconsistent with the evidence which clearly shows that incentives and rebates have increased.

First, Annex 10 refers to a decline in margins in 2019/2020. We note that all except one of the contracts in relation to debit cards started affecting the accounting a number of years later, and therefore by definition

[62] The analysis was conducted for the following contracts : ✂

[63] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.18.

the decline in margins in 2019/2020 cannot be explained by the growth in debit card contracts.[64] There were ✂

Second, Annex 10 argues that the rebates and incentives in relation to debit cards would be temporary since, according to the PSR, Mastercard could ✂. This statement (about Mastercard having a market share target) is made on the basis of one particular Mastercard slide.[65] The Mastercard slide referred to in Annex 10 has been misinterpreted. The slide describes a ✂which is a forward-looking statement and uncertain by nature and does not allude to a target market share.

But more importantly, even if Mastercard had a target market share of for example ✂in the UK, it would still be inaccurate to conclude that Mastercard would ✂This would implicitly assume that Mastercard would be successful in winning new contracts without losing existing contracts; this is not a realistic assumption. It would also assume that ✂

Market share targeting suggests that once Mastercard reaches a target market share it would no longer seek to win further contract. This is inconsistent with a rational, profit-maximising firm which would seek to expand as long as it is profitable to do so. The PSR has suggested in Annex 10 that the incremental costs of expansion are low, and if that is correct, it is likely that a profit-maximising firm will seek to continue to expand. Put another way, Mastercard will continue to offer rebates and incentives to win and retain contracts until it is no longer profitable to do so – that is effective competition.

Third, the proportion of rebates and incentives offered to issuers for ✂ Mastercard's portfolio of credit card contracts is more mature, and consists of a mix of new and renewed contracts. Importantly, this demonstrates that the rebates and incentives for debit cards are not temporary, but will be maintained even if the portfolio for debit cards matures.

Fourth, Annex 9 on revenue generation states the following: ✂. *[…] Based on Mastercard's description in the documents reviewed and our analysis of data included in Mastercard's internal documents,* ✂.'[66] In other words, Annex 9 already (correctly) explains why the margin has decreased over time. This decrease is the result of a number of different factors. One of these factors is the ✂

As part of the response to the November 2022 Section 81 Notice on transaction and financial data, submitted in February 2023, Mastercard provided the PSR with detailed data on Mastercard's UK revenues

[64] We note that an internal Mastercard slide was misinterpreted in Annex 10. Annex 10 (para. 3.56) states that '[t]he figure below shows that Mastercard's UK scheme yields were ✂. The reason given for the ✂ in the note accompanying the chart indicates that this is because of the expansion into debit cards.' This is not accurate, as the slide states that the '✂and does not link this specifically to debit cards. The reason for ✂

[65] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.19, Figure 6.

[66] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 9, para. 2.51.

broken down by fee and service type (Tables 16(a)–16(d)) and different fee rebates and incentives (Tables 12–14) for the periods 2017–2021. As shown in Figure 5 below, the data shows that ✂

Figure 5 Rebates and incentives paid to UK-based issuers and acquirers

Source: Tables 13 and 14 of November 2022 Section 81 notice for both Scheme and Processing services.

As Figure 6 shows, ✂.

Figure 6 Rebates and incentives as a percentage of total UK gross revenues

Source: Mastercard analysis based on data submitted as part of the UK P&L.

Finally, there is no evidence to support the view that Mastercard ✂.'[67] Annex 10 cites a single slide showing a ✂but this increase is irrelevant in the context of the broader trend discussed in the Interim Report. For example, para. 3.16 shows that revenue yields in the UK ✂. The figure presented in para. 3.19[68] shows that ✂After revenue yields ✂it is inaccurate to conclude that '*Mastercard expects a recovery*' because ✂Using this as evidence to argue that Mastercard expected a ✂is clearly not a fair assessment of the evidence cited by the PSR.

3.3 Additional comments on the accounting treatment of incentives

Annex 10 states that '*Mastercard has included a proportion of customer incentives as a cost item, rather than a reduction in revenues in its fully loaded UK P&L accounts. This has the effect of reducing the UK margins and is different to how Mastercard reports its incentives in its audited global accounts*'.[69] It makes a similar statement in relation to the statutory accounts for Mastercard Europe, where it states that '*Mastercard uses a different way to account for some of the customer incentives in the European accounts compared with the global accounts, which are prepared in line with accounting principles generally accepted in US accounting standards (US GAAP). In the European accounts Mastercard includes some incentive payments as costs, rather than offsetting them from revenues, which mathematically means that the same costs, revenues, incentives and rebates results in a higher margin under US GAAP*'.[70] Annex 10 then goes on to conclude that '*Mastercard's European accounts are likely to understate the EBIT margins in Europe that Mastercard derives on an economic basis*'.[71]

These statements are misleading. In the UK fully-loaded P&L, Mastercard has included certain costs incurred in providing support to customers (agreed upon in Customer Business Agreements ('CBAs')) such as ✂as a cost item rather than as contra-revenues. This approach is consistent with the approach that has been adopted for the Mastercard statutory accounts prepared under Belgian GAAP. This approach is also used for Mastercard UK's accounts as it is part of Mastercard Europe (which is incorporated in Belgium and therefore has to prepare its accounts using Belgian GAAP and not US GAAP accounting standards).

In its Working Paper on its approach to profitability analysis (published in February 2023), the PSR itself provided the following explanation for including support costs as an operating cost rather than contra-revenue: '*if however the card scheme issued a rebate or incentive that was connected to a service it provided (for example if the card scheme provided specific money to an issuer to spend on marketing the scheme brand)*

[67] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.19.

[68] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.19, Figure 4.

[69] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.23.

[70] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.49.

[71] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.50.

then the rebate provided to the issuer would be a cost to the card scheme'.[72] Annex 10 does not refer to this when concluding that Mastercard's approach '*is different to how Mastercard reports its incentives in its audited global accounts*'.[73]

Annex 10 then states that '*[the PSR] do[es] not think it is necessary for [them] to identify which of the accounting treatments is more appropriate for the purpose of our market review. Rather [the PSR] consider[s] that whatever accounting treatment is chosen should follow the approach adopted by the margin benchmark comparators. This is because [the PSR] derive[s] Mastercard's margins for the relevant UK operations primarily to compare them to similar companies operating in competitive markets*'.[74]

Annex 10 notes that the comparators it has identified report under Australian GAAP (for eftpos and OXF) and under US GAAP (for PayPal), where it states that:

- '*[u]nder US GAAP all incentive payments are netted off against revenues rather than shown as cost items*'.[75]
- Australian GAAP follow IFRS, where '*incentive payments that relate to a specific activity performed by the customer, on behalf of the supplier, should be reported as a cost – like any other goods or services purchased from other suppliers. It may therefore be possible that Australian GAAP is similar to Belgian GAAP (which is how Mastercard reports its fully loaded UK P&L and European accounts) in that it reports some incentive payments as costs*'.[76]

On this basis, Annex 10 presents a sensitivity analysis, where the PSR assesses the impact on the operating margin of eftpos and OFX of reclassifying certain costs items as contra-revenues. The sensitivity analysis undertaken by the PSR is not robust.

First, we note that Annex 10 itself explains that the accounting approach for reporting incentives is similar under Australian GAAP (which are the relevant accounting standards for eftpos and OFX) and for Belgian GAAP (which are the relevant accounting standards for the UK fully-loaded P&L). The rationale for the sensitivity analysis presented in Annex 10 is therefore unclear. It would be more appropriate to compare Mastercard's fully-loaded P&L margin (where certain incentive payment are treated as a costs) with the margins for eftpos and OFX without making any adjustments to these margins.

Second, we note that Annex 10 itself states that '*[n]either eftpos nor OFX report the level of incentive payments in their published accounts. [The PSR] therefore based [its] sensitivity analysis on re-classifying*

[72] PSR (2023), 'Market review of scheme and processing fees. Working paper – Approach to profitability analysis', 23 February, Annex 1, para. 1.4.

[73] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.23.

[74] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.110.

[75] Ibid.

[76] Ibid.

those costs items in their reported P&L accounts that are most likely to include incentive payments'.[77] As Annex 10 points out, the impact shown in the sensitivity analysis may therefore be overstated.

Finally and most importantly, the sensitivity analysis presented in Annex 10 fails to consider that the magnitude of incentives may vary significantly across companies. OFX is not a four-party system and its incentive payment may therefore be limited. eftpos is user-owned and the Reserve Bank of Australia has introduced a regulation that mandates any issuer with more than a 1% market share in the debit card market to issue dual-badged cards;[78] this may mean that eftpos's incentive payments are also limited.

For these reasons, to benchmark Mastercard's margin, it would be more appropriate to calculate the margins for the benchmarks on the same basis that the margins for Mastercard in the fully-loaded P&L have been calculated.

[77] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.111.

[78] Reserve Bank of Australia (2021), 'Review of Retail Payments Regulation – Conclusions Paper', October, p. 29.

4. Additional comments on Annex 10

4.1 Introduction

In this section we review the Annex 10 conclusions in relation to the margins for Mastercard Europe and Mastercard Inc., as well as Mastercard's margin in the UK in the future.

4.1.1 Review of Annex 10 findings in relation to European and global margins

Annex 10 argues that European and global margins can be used to inform the profitability of Mastercard in the UK. Annex 10 states that '*taking all evidence in the round, the European accounts (adjusted for MESL) can be relevant in understanding the profitability of Mastercard's relevant UK operations*',[79] and that '*global margins can be informative in understanding the margins in the relevant UK operations*'.[80]

This approach is not robust. European and global margins are different due to differences in unit revenues, unit rebates and incentives, and unit costs between the UK, Europe and global business. The differences in these parameters are driven by differences in market conditions, fee levels as well as the mix of services provided. Some of these differences have been acknowledged in the PSR analysis in Annex 9 on revenue generation but these are ignored or contradicted in Annex 10.

Annex 9 shows that Mastercard's fees are ✂and that rebates and incentive payments are ✂.[81] Annex 10 seems to ignore this and also seems to assume that ✂.[82] However, this overlooks ✂one of the factors that contributes to that is that the proportion of cross-border credit card transactions (compared with domestic transactions) is ✂This affects unit revenues since the fees applicable to domestic transactions are lower than the fees for cross-border transactions.

If Europe had similar levels of fees as in the UK, a similar mix of services, and a similar level of rebates and incentives, then the European margin would be similar to the UK margin. Without making adjustments for these differences, the European margin cannot be informative in understanding the margin in the UK.

[79] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.59.

[80] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.82.

[81] For instance, Annex 9 notably states that '[t]his presentation sets out scheme historical yields […] noting "share gains in the ✂[redacted]"'. (para. 2.5).

[82] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 3.57.

4.2 Review of the analysis on the future of UK margins contained in Annex 10

Annex 10 states that '*[the PSR has] not seen compelling evidence to suggest that Mastercard's margins in the relevant UK operations are going to decline significantly in the future'*.[83] In order to substantiate this claim, Annex 10 states that:

- ✂
- Mastercard should benefit from a ✂boosting revenue growth;
- Mastercard's global margins have continued to increase since 2022.

We examine each point in turn and conclude that there is no evidence to support these statements.

- First, Mastercard margins <u>have</u> declined over the period under review, and margins are consistent with outcomes from a competitive market. Therefore, there is no need to see '*compelling evidence to suggest that Mastercard's margins in the relevant UK operations are going to decline significantly in the future*'. We note that the PSR made similar observations when it had received the fully-loaded P&L for 2018-2021. The PSR has now received the fully-loaded P&L for 2022 and has requested it for 2023.

- Second, as explained in detail in section 3, it is inaccurate to ✂[redacted]after a phase of investment in debit cards - this is conjecture. As explained, there is no evidence to suggest that rebates and incentives in relation to debit cards are temporary.

- Third, Annex 10 states that global margins have continued to increase since 2022. As explained in this response, global margins cannot be used to proxy the margins of Mastercard in the UK, because of differences between the UK market and other markets in which Mastercard operates.

- Fourth, Annex 10 quotes one Mastercard internal slide stating that [redacted]✂ [84] The slide was misinterpreted in Annex 10. The slide presents a performance update for 2021 and a business plan for 2022 in relation to ✂The slide therefore does not provide any insights on expected margins beyond 2022 or on expected margins for ✂In addition, the slide is only partially quoted, as it also includes indications of ✂The slide explains that ✂

The misinterpretation of this slide exemplifies a broader misinterpretation by the PSR of Mastercard's internal documents relating to expected future performance and results, as reflected in other annexes. For instance, Annex 9 states that '*[a] deck titled "Europe Board / Financial Deck – February 2022" sets out "[k]ey*

[83] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 5.7.

[84] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para. 5.6.

assumptions" underlying Mastercard's 'net revenue outlook' which states that ✂[85] Using the cited document,[86] Annex 9 describes the assumptions that underpin Mastercard's growth outlook from 2021 to 2026. These include perspectives on macroeconomic variables (such as anticipated increases in personal consumption expenditure), the competitive payments landscape (such as Mastercard's projected market share in 2026), and the success of government-promoted payment initiatives in Europe.

Such an outlook should be treated with caution, as some of these assumptions relate to variables out of Mastercard's control. Some assumptions relate, for instance, to the macroeconomic environment or political landscape; some other assumptions depend on the competitive process in the market (for instance market share gains or pricing policy). For instance, in the case of the slide cited above, the market share gains rely on an assumption that Mastercard would be able to defend all its contracts and win portfolios currently served by other card schemes.

Such documents may also describe potential targets or ambitions for Mastercard and would then suggest an optimistic 'best case' view, rather than what is likely to have been considered readily achievable, let alone certain. For example, the cited document refers to this outlook as '*Europe Strategy Targets*'[87] and describes the market share gain as ✂.[88] Regarding services, the presentation details ✂[89] Moreover, the same presentation shows that the company ✂which further supports that these internal targets ✂[90]

This misinterpretation issue was also noted in relation to the Mastercard slide cited in Annex 10 describing a UK market share ✂[redacted][91] As described in this response, such statements should be interpreted with caution as these are forward-looking statements and are uncertain by nature.

[85] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 9, para. 2.32.

[86] MASTERCARD_2022_PSR_0021046, slide 8.

[87] MASTERCARD_2022_PSR_0021046, slide 5.

[88] MASTERCARD_2022_PSR_0021046, slide 19.

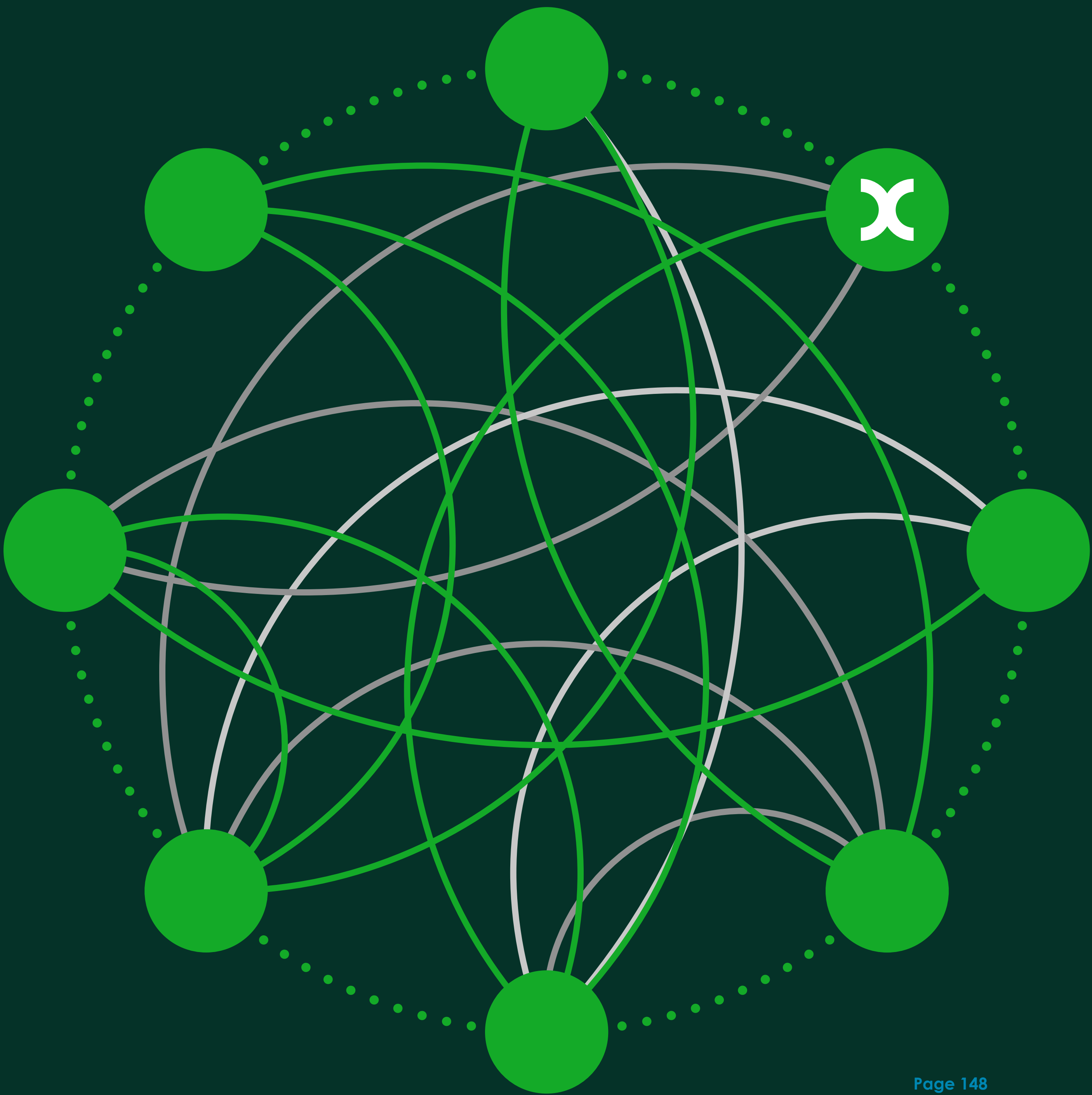
[89] MASTERCARD_2022_PSR_0021046, slide 27.

[90] MASTERCARD_2022_PSR_0021046, slide 4.

[91] PSR (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, Figure 6.

Response to PSR's Annex 10 to Interim Report

30 July 2024



Contents

Figures and Tables

1 Introduction and main findings of Oxera's review and empirical analysis

1.1 Introduction

It is well established that a profitability assessment, in conjunction with other indicators, can be used to inform an assessment of market power or the degree of competition in the market.[1] This requires careful analysis since profitability can vary significantly across companies, independently of whether profits are excessive.

When using operating margins rather than metrics such as ROCE or IRR, extra care is required. For example, unlike using a ROCE approach (which can be benchmarked against a weighted average cost of capital), comparing margins across firms does not necessarily encapsulate the risk–reward balance. Margins may simply be higher because investors need to be rewarded for bearing greater risks. For comparisons to be meaningful, comparators should face similar business and financial risk characteristics to the firm being studied.

The concern is that if unsuitable comparators are used, the assessment could result in a finding that profitability appears excessive, whereas in practice the level of profits may be a reflection of the level of risk, the level of capital employed (including tangible and intangible assets), and/or the success of the company in improving its service proposition, rather than the exercise of significant market power.

In addition, the comparators should be operating in a workably competitive environment. Again, this requires a careful assessment In order to ensure a robust analysis and assessment. It is good practice to consider a broad sample of comparators covering both companies in similar industries as well as companies in industries that are different but have similar market characteristics and/or business models.[2]

The approach set out in Annex 10 of the Interim Report is not consistent with this good practice; specifically, the Interim Report identifies a very small sample of comparators (two of which are not suitable) and rejects companies in other industries.

As the CMA market investigation guidelines emphasise,[3] the trend in profits is also an important consideration. Where the size of the gap between the level of profitability and the benchmark has grown over a period, the competitive situation may have worsened. Where that gap has narrowed, competitive conditions may have improved. The CMA guidelines emphasise that a situation where a firm *"has earned profits that have been persistently above the competitive level may indicate significant market power" [emphasis added]*.[4] Again, the Interim Report's approach is not consistent with this good practice; the Report focuses on the average Mastercard margin over the period

[1] Office of Fair Trading (2003), 'Assessing Profitability in Competition Policy Analysis', prepared by Oxera, July.
[2] Ibid. The OFT paper refers to both comparators in similar industries as well as companies in other industries.
[3] See CMA Guidelines, para. 124.
[4] See CMA Guidelines, para. 119.

considered and does not seem to consider the (downwards) trend of Mastercard's margin.

1.2 This response

We provide a detailed review of the analysis presented in Annex 10.

- We assess the robustness of the Annex 10 approach and empirical analysis and whether these are in line with good practice, existing methodologies, as well as the approach set out in the PSR Working Paper published in February 2023.[5] We also assess whether there are any factual inaccuracies in the analysis.

- From this, we conclude the analysis in Annex 10 is limited: it identifies only three comparators and provides a 'cross-check' against a narrow set of companies. We have therefore undertaken further empirical analysis to inform the comparator analysis, as follows.

  - We have estimated the margins for PayPal and Discover, and for other companies with characteristics that are similar to those of Mastercard. Our analysis enlarges and strengthens the sample of comparators.

  - We have also undertaken empirical analysis to identify a large sample of companies that can be used as a cross-check.

1.3 Main findings of our review of the analysis in Annex 10

1.3.1 Summary of the analysis in Annex 10

Annex 10 identifies (only) three relevant comparators: PayPal, eftpos and OFX.[6] The Interim Report uses the margins of these comparators to benchmark Mastercard's margins.

In its February 2023 Working Paper, the PSR had also identified Amex and Discover as possible comparators,[7] but then excludes these on the basis that they were not sufficiently similar to Mastercard's UK operations. The Interim Report justifies this on the basis that Amex's and Discover's business models incorporate a significant element of financial services (in particular lending) as well as payment services and as such are unlikely to have similar risk exposure. This results in the sample of only three comparators.

The Interim Report then estimates the average operating margins for each of the three companies during the period 2018–22, and cross-checks the results of this analysis by estimating the operating margins and capital employed intensity for FTSE 100 companies (excluding banks, asset managers and insurance companies).

[5] Payment Systems Regulator (2023), 'Market review of scheme and processing fees. Working paper - Approach to profitability analysis', February (Henceforth PSR, February 2023).
[6] Payment Systems Regulator (2024), 'Market review of scheme and processing fees Profitability', 24 May, Annex 10, para.6.66. (Henceforth Annex 10, May 2024).
[7] PSR, February 2023.

1.3.2 Main findings of our review

Our review of the analysis and the PSR's responses to Oxera's previous submissions reveals serious limitations in the PSR's approach. This means the analysis in Annex 10 is not robust, nor in line with good practice adopted in profitability assessments. Indeed, the approach in Annex 10 is also inconsistent with the approach as set out in the PSR's Working Paper in February 2023.[8]

Our review can be summarised as follows.

1 Our analysis shows that eftpos and OFX are not appropriate comparators for Mastercard and their inclusion in the sample of comparators causes the Interim Report to underestimate the benchmark operating margin for Mastercard's operations in the UK. For example, eftpos has a much more limited service offering than Mastercard and also has a different business model—it is user-owned. The risk profile of eftpos is therefore different from that of Mastercard. These differences mean that one would expect the margin for eftpos to be lower than the margin for Mastercard. We explain this in section 2.

2 Although PayPal is a relevant comparator, the Interim Report incorrectly estimates the operating margin for PayPal. In response to our comments and empirical analysis (submitted to the PSR in response to a confidential Working Paper from December 2023), the Interim Report has now presented estimates of PayPal's margin of 25% and 28% in addition to the original estimates of 15% and 17%. This still underestimates the margin of PayPal for the purpose of a comparison with Mastercard. Our analysis of PayPal's margin is presented in section 3.

3 The Interim Report seeks to identify relevant comparators for Mastercard. It concludes there are only three comparators and ignores various others. This is not in line with good practice. A sample of just three comparators opens the possibility of material distortion from the influence of any one data point. When identifying comparators, it is good practice to consider both other companies in the same industry as well as companies in other industries with similar characteristics This approach is aligned with the PSR's February 2023 Working Paper in which it considered a broader sample of companies[9] and identified various companies with margins higher than 20% and 30%. The Interim Report disregards the comparators identified in its February 2023 Working Paper without providing a valid justification.

4 We have undertaken empirical analysis and identified companies that have similar characteristics to Mastercard. The companies we have identified enlarge and strengthen the sample of comparators. This is presented in section 5.3.

[8] Ibid.
[9] The PSR, February 2023, paras 4.24 –4.28.

The Interim Report excludes Discover from its analysis since, according to Annex 10, there was not sufficient data to estimate the margin of the payment services segment of Discover. However, Discover's annual reports do allow for a separation of the credit and payment services segments, which means that Discover's margin for its payment services (excluding credit provision) can be calculated. Therefore, Discover does not need to be excluded from the set of comparators. The Interim Report has responded to our comments and analysis (which were submitted to the PSR in response to its confidential Working Paper from December 2023) but continues to take the view that it is not possible to estimate a margin separately for Discover’s payment services business. In section 4, we explain that such a margin can be estimated. Based on our analysis of data from Discover, we estimate the five-year averaged margin for the payment services segment of Discover at 34% and 38%.

5 The Interim Report cross-checks the results of its comparator benchmark margin analysis using FTSE 100 companies (excluding banks, asset managers and insurers). Our review shows that this analysis is not robust and that the Report has restricted its cross-check by considering only a small and biased sample of companies. This leads the Report to draw incorrect conclusions about the operating margins that are observed across different markets and sectors. We explain this in section 6. By ignoring companies listed overseas, the Report overlooks various companies with higher margins.

6 The Interim Report estimates the capital employed intensity for Mastercard as being very close to 1, based on Mastercard Inc.'s balance sheet and concludes, based on its analysis of FTSE 100 companies, that *“except for a small number of outliers, margins for businesses with a low capital employed intensity (i.e. businesses with a capital employed intensity of around 1 or less) are no higher than around 20%.”*[10]

The Interim Report considers the FTSE 100 index exclusively to reach this conclusion. In section 5, we present an analysis of a larger sample of indices, namely: the S&P 500, the NASDAQ 100, the STOXX Europe 600 and the STOXX Global 1800. We show that, in all four indices, there are considerably more examples of companies with relatively high margins and low capital employed intensity than there is in the FTSE 100 index.

Furthermore, ✂[redacted] which means that ✂. The PSR acknowledged this in its February 2023 Working Paper[11] but the Interim Report seems no longer to acknowledge it. We explain that the Report does not seem to consider the relevant economics literature (including a recent paper by the Bank of

[10] Annex 10, May 2024, para. 6.92.
[11] For example, the PSR February Working Paper notes that: *“Whilst a significant proportion of Mastercard Inc and Visa Inc's reported assets are in the form of intangible assets, the reported accounting value may not reflect the true economic value. The accounting values will exclude any internally generated goodwill relating to the brand, relationships with customers, etc. Generally accepted accounting principles (GAAP) do not allow recognition of these amounts due to the difficulty in measuring them”*. See: PSR, February 2023, para. 3.34.

England)[12] highlighting the important role of intangible assets and their relevance in explaining the rates of return of companies with a smaller tangible asset base.

7 The Interim Report does not seem to acknowledge the concerns and risks with selecting a small sample of comparators, nor with emphasising certain dimensions when selecting comparators and ignoring the implications of that for the sample. For example, when questioning which other companies it had considered but rejected as comparator, the Interim Report responds that "*We note that when selecting comparators we identified five possible comparators, but selected only three. As such, we have set out other comparators we have considered, but not selected. We do not think it would be proportionate for us to identify all possible comparators and then to set out why they were not chosen."*[13]

This is missing the point; a sample of three comparators is very small, which opens the possibility of material distortion by a single data point (and, as explained, in this case, two of the three comparators are not suitable). Although a cross-check is applied as part of the Annex 10 analysis, the cross-check is flawed and also far too narrow. In any case, a cross-check cannot be used as justification for compromising the quality of the primary means of examining the benchmark.

Another example is that when we suggested a number of additional comparators, the Interim Report simply states that *"[w]e note that Mastercard has not suggested that these companies are more suitable comparators than the comparators we have identified."*[14] *[emphasis added]*. This again misses the point. Annex 10 identifies a very limited number of comparators. We do not claim that our suggestions are more suitable as comparators but that the sample would be strengthened by being suitably widened.

We conclude that to deliver a robust analysis, the correct margins for PayPal's and Discover's businesses need to be included and a broader set of companies needs to be considered. Our empirical analysis shows that companies with relevant characteristics have margins of higher than 30% and 40%.

[12] Bailey, A. et al. (2022), 'Structural change, global R* and the missing-investment puzzle', Bank of England Staff Working Paper, No. 997, October.
[13] Ibid., para. 6.114.
[14] Ibid., para. 6.139.

2 Our analysis shows that eftpos and OFX are not appropriate comparators for Mastercard

2.1 Introduction

Annex 10 states that it seeks to identify *"companies that have operations that are as similar as possible to Mastercard's and Visa's relevant UK operations"*[15], but it does not properly and consistently implement this approach. In this section we explain why eftpos and OFX are not suitable comparators.

Annex 10 supports its conclusions as follows *"[w]e have set out in paragraph 6.16 that we do not think that we will be able to identify an ideal comparator set. We have therefore aimed to identify sufficiently similar comparators. This recognises that any comparators we do identify will have differences to Mastercard's relevant UK operations. We consider that the comparators we have identified are the best available comparators, i.e., they have the closest similarities with Mastercard's relevant UK operations. It therefore follows that a comparator should not be deemed inappropriate just because it does not offer the same services as Mastercard."*[16]

For avoidance of doubt, we clarify that we do *not* consider eftpos and OFX unsuitable *"just because they do not offer the same services as Mastercard"*[17]. We consider these companies unsuitable because they are significantly different in terms of service offering and business model. On the basis of the more limited scope of the service offering and the more limited risks we would expect the margins for eftpos and OFX to be substantially lower than that of Mastercard. We explain this for each of these two proposed comparators below, setting out the relevant evidence.

2.2 eftpos

In Annex 10 the PSR describes eftpos as an *"Australian domestic card-based payment system operator"*,[18] and concludes that *"eftpos is a sufficiently similar comparator to Mastercard and Visa's relevant UK operations."*[19] As explained in our previous submission, eftpos is not an appropriate comparator for Mastercard for various reasons. Annex 10 summarises some of these reasons but does not address them.[20]

First, in Annex 10 the PSR explains that *"[w]e consider that eftpos shares a number of key features with Mastercard and Visa's relevant UK operations. Key similarities of eftpos to Mastercard and Visa's relevant UK operations are that eftpos is also operating a card-based payment system. In Australia, eftpos is in direct competition with Mastercard and*

[15] Ibid., para 6.114.
[16] Ibid., para.6.122
[17] Ibid.
[18] Ibid., para. 6.51.
[19] Ibid.,, para. 6.58.
[20] Ibid., para.6.119 (a).

Visa (e.g. processing debit card payments in Australia). Its costs and risks should therefore be largely similar to Mastercard and Visa's relevant UK operations."[21]

This paragraph mentions only one similarity: the fact that eftpos operates a debit card scheme. Mastercard's and eftpos's activities are, however, different along several dimensions:

- geographical scope—Mastercard operates globally, and is therefore exposed to complex global risks, whereas eftpos only operates in Australia and does not offer cross-border transactions. Even on the UK basis, the difference in scope between eftpos' service offering and Mastercard's is significant and has implications for the activities that the scheme operator undertakes, and the risks it needs to manage. For example;
- the nature of the transactions processed—eftpos mainly focuses on *debit cards* for *in-store* transactions,[22] while Mastercard focuses on both credit and debit cards for both CP and CNP. It is well established that CNP transactions are exposed to higher fraud risk;
- Online transactions—the Mastercard scheme presents greater risks than the eftpos scheme, which need to be managed and rewarded through the returns (and therefore margins). To understand the range of activities required to be able to offer online transactions and the types of risk that need to be managed, it is useful to read the ✂

On the basis of the differences discussed above we would expect eftpos' margin to be substantially lower than that of Mastercard.

Second, in Annex 10 the PSR notes that *"eftpos is owned by its members, who are issuers and acquirers in Australia. This could imply that eftpos may set prices that are not risk reflective (i.e. higher or lower than in competitive markets). We note that its owners are a diverse set of organisations with differing incentives. We therefore consider that eftpos' margin is likely to incorporate a risk-reflective rate of return. This is because it is plausible that some owners would favour lower prices whilst others would favour higher prices. A risk-reflective margin is best placed to balance the interest of those who favour lower and those who favour higher prices."*[23] This statement contains factual inaccuracies.

First the Interim Report's statement with regard to eftpos owners being a diverse set of organisations with differing incentives is not correct. Although the ownership of eftpos has become more diverse since the recent merger, it is still 30%-owned by banks.[24] More importantly, prior to the recent merger, eftpos was co-owned by 19 members which were predominantly banks, and voting power was based on transaction volume, giving the banks

[21] Ibid., para. 6.52.
[22] Australian Competition and Consumer Commission (2021), 'Application for merger authorization lodged by Industry Committee in respect of the proposed amalgamation of ownership of BPAY Group Holding Pty Ltd, eftpos Payments Australia Limited and NPP Australia Limited', 9 September, para. 1.19.
[23] Annex 10, May 2024, para. 6.57.
[24] The Board of Australian Payments Plus has 13 Directors, composed of four independent Directors (including the Chair), four Directors representing each of the four major banks, two Directors representing other ADI shareholders and three Directors drawn from non-ADI shareholders.

more control.[25] The recent ownership structure changes are not relevant as the PSR has estimated eftpos's operating margins only for the period before the merger.[26]

Second, it is well established in the economics literature that being user-owned can have implications for how businesses are managed, notably in relation to their incentives and ability to innovate and enhance their services over time. User-owned companies may set lower profitability targets than companies that are not user-owned (and indeed the PSR refers to this when stating *"eftpos may set prices that are not risk reflective"*), and can be slower to innovate.

The PSR is familiar with the economics literature on this topic and it considered the impact of being user-owned on innovation in its 2016 market review into the ownership and competitiveness of infrastructure provision.[27,28] It is well known within the payments industry and among relevant authorities in Australia that eftpos has been slow to innovate and enhance its services. For example, eftpos was late with the introduction of CNP, contactless and tokenisation.

In addition, eftpos' online offering is weak. Annex 10 refers to the recent merger between eftpos, BPAY Group Holding Pty Ltd and NPP Australia Limited. In the context of the merger, relevant competition authorities in Australia have compiled a list of payment services to be implemented in order to support eftpos*, "some of which facilitate eftpos online payment services"*.[29] This suggests that, up to a few years ago, eftpos had not yet developed certain capabilities for processing online transactions. As of 2021, eftpos was still working on the adoption of certain functionalities in relation to online transactions.[30] eftpos is therefore not a fully functional card scheme like Mastercard or Visa—Annex 10 does not mention this.

The Reserve Bank of Australia has introduced a regulation that mandates any issuer with more than 1% market share in the debit card market (currently eight banks) must issue dual-badged cards.[31] This would not sharpen the incentives of the eftpos business to enhance its services over time since it is guaranteed to be displayed on all Australian-issued cards.

Although we made these points in a submission to the PSR in early 2024, Annex 10 does not address them.[32] The PSR hardly acknowledges that these comments were even made and only states that *"[w]e note Mastercard's points regarding possible inefficiencies but consider that this does not necessarily result in profit margins that are not risk*

[25] Australian Competition and Consumer Commission (2021), 'Application for merger authorization lodged by Industry Committee in respect of the proposed amalgamation of ownership of BPAY Group Holding Pty Ltd, eftpos Payments Australia Limited and NPP Australia Limited', 9 September, para. 7.77.
[26] Annex 10, May 2024, Table 36.
[27] Payment Systems Regulator (2016), 'Market review into the ownership and competitiveness of infrastructure provision. Final report', July.
[28] Oxera (2015), 'Governance and ownership of payments systems infrastructure', prepared for VocaLink, 27 December.
[29] Australian Competition and Consumer Commission (2021), 'Application for merger authorization lodged by Industry Committee in respect of the proposed amalgamation of ownership of BPAY Group Holding Pty Ltd, eftpos Payments Australia Limited and NPP Australia Limited', 9 September, para. 7.59.
[30] Reserve Bank of Australia (2021), 'Review of Retail Payments Regulation - Conclusions Paper', October, p. 25.
[31] Reserve Bank of Australia (2021), 'Review of Retail Payments Regulation – Conclusions Paper', October, p. 29.
[32] We submitted these points to the PSR in response to its confidential Working Paper from December 2023.

reflective".[33] The PSR does not provide any evidence as to why *"possible inefficiencies […] does not necessarily result in profit margins that are not risk reflective".*[34]

In sum, the evidence indicates that eftpos not only has a much more limited service offering and has not performed well in terms of innovation, but also has a different business model. The risk profile of eftpos is therefore different from that of Mastercard and hence the margin for eftpos is expected to be lower than the margin for Mastercard. As such, eftpos is not an appropriate comparator for Mastercard and should thus be removed from the sample of comparators selected by the PSR.

We also made a number of additional comments in our previous submission (which also have not been discussed by the PSR). For example, in Annex 10, the PSR notes that *"eftpos does not offer international payment services and does not offer credit cards and as such its risk exposure may most closely mirror Mastercard's and Visa's domestic payment services and less so Mastercard's and Visa's international payment services offered in the relevant UK operations."*[35] It is not clear why the fact that eftpos does not offer credit cards would mean that its *"risk exposure may most closely mirror Mastercard and Visa's domestic payment services".* The fact that eftpos does not offer credit cards is another example of its more limited offering.

It is also not clear that the fact that eftpos does not offer international payment services would mean that its *"risk exposure may most closely mirror Mastercard's and Visa's domestic payment operations".* Mastercard offers both domestic and cross-border transactions in the UK. We note that Annex 10 does not acknowledge these comments.

2.3 OFX

In Annex 10, the PSR describes OFX as a *"global provider of foreign exchange services",* offering *"online international payment services across 170 countries"*[36] and notes that *"OFX shares a number of key features with Mastercard and Visa's relevant UK operations. For example, OFX acts as a payment intermediary and provides settlement services for some of the transactions it processes".*[37] In Annex 10, the PSR also mentions, as an example of a similarity with Mastercard, that OFX does not operate physical branches and that *"it is likely that OFX has a level of capital intensity that is not too dissimilar from Mastercard and Visa's relevant UK operations, as OFX, like Mastercard and Visa, is investing in IT infrastructure, software and risk management."*[38]

Annex 10 argues that, in view of the existence of other large competitors and OFX's relatively small size, *"it is unlikely that OFX benefits from a lack of effective competitive constraints".*[39] Given that OFX does not offer domestic payment services, the PSR

[33] Annex 10, May 2024, para. 6.123.
[34] Ibid.
[35] Annex 10, May 2024, para. 6.54.
[36] Ibid., para. 6.60.
[37] Ibid., para. 6.61.
[38] Ibid., para. 6.62.
[39] Ibid., para. 6.64.

considers that OFX is likely to be a better proxy for Mastercard's international operations as opposed to Mastercard's domestic UK operations.[40]

We explained in our previous submission that we have reviewed the business model and service offering of OFX and concluded that it is not an appropriate comparator for Mastercard. Annex 10 provides a high-level summary of our comments but does not engage with them so we repeat the key points again here.[41] OFX is an international money transfer business.[42] It enables individuals to transfer money to family and friends overseas and enables businesses to send and receive money to and from other businesses. In terms of functionalities, it is similar to using a domestic credit transfer service offered by a bank, with the main difference being that OFX will transfer the money across the border and also provides a currency conversion service. There are many other international money transfer providers with similar offerings and business models, including Wise (formerly known as TransferWise).

OFX does not offer consumer protection and is not widely used for retail purchases. The OFX website suggests that some consumers may use the OFX service to pay for goods and services, but it then refers to "*importing luxury goods such as a boat, plane, and jewellery*".[43] In these cases, the contractual relationship between the consumer and business will already have been established and only a transfer of money would then be required to fulfil existing contractual obligations; in other words, OFX is simply providing a cross-border credit transfer service. In contrast, Mastercard enables riskier transactions between two parties that have either no, or a very limited, contractual relationship. As such Mastercard fulfils a greater role processing transactions and as explained provides protection for the cardholders.

Data from OFX also indicates that its transactions are very large in size and relatively infrequent, as OFX focuses mostly on B2B transactions. In 2022, its clients conducted an average of 9.2 transactions per year, with an average transaction value ('ATV') of AUD 29,100.[44] Corporate clients (primarily in the B2B segment) conducted on average 22.0 transactions per year for an ATV of AUD 36,500, while the consumer segment (i.e. P2P transactions) saw on average 4.4 transactions per client per year with an ATV of AUD 19,700.[45] In contrast, the ATV for a Mastercard transaction globally in 2022 was approximately AUD 72.2 (or USD 50.2),[46] and each Mastercard-branded card was used on average 60 times per year in 2022.[47]

As explained in previous Mastercard submissions, given the parts of a card transaction that are most visible to businesses and consumers, one might think that the core product Mastercard provides is the transfer of money—but this is not correct. Mastercard

---

[40] Ibid., para. 6.63.
[41] Ibid., para. 6.119 (b).
[42] Its legal entity in the UK, UKForex Limited, is regulated by the Financial Conduct Authority.
[43] OFX website, 'Importing luxury goods?', https://www.ofx.com/en-ie/personal/reasons-for-transfer/luxury-import/ (accessed 8 January 2024).
[44] OFX (2023), 'FY23 Financial Results', 23 May, slide 25.
[45] Ibid.
[46] Gross Dollar Volume ('GDV') in 2022 was USD 8,177bn, while the total number of transactions was 162,756m (150,016m purchase and 12,740m cash transactions). The ATV calculated in USD was converted into AUD using the average exchange rate for 2022. See Mastercard, 'Supplemental Operational Performance Data – 2022 Q4'.
[47] Dividing the total number of transactions in 2022 (i.e. 162,756m) by the total number of cards in 2022 (i.e. 2,731m).

engages in many pre- and post-payment activities as part of the scheme services it provides. It establishes many rules and develops many services that are essential to delivering a seamless transaction at the point of exchange.[48]

[48] ✂

3 Our analysis shows that Annex 10 has underestimated PayPal's operating margins

3.1 Introduction

The Interim Report considers PayPal a sufficiently similar comparator to Mastercard's relevant UK operations.[49] We agree that PayPal can be a suitable comparator. However, our review shows that the Interim Report underestimates PayPal's margin that can be used as a benchmark to Mastercard. As noted in our response to the PSR's confidential Working Paper from December 2023, when calculating PayPal's margin, transaction expenses should be excluded. The Interim Report broadly agrees with our concern and provides sensitised margin for PayPal that exclude transaction expenses.

In this section we explain that the Interim Report should not treat the adjusted margin for transaction expenses as merely a sensitivity. Furthermore, we explain that in addition to exclusion of transaction expenses from the calculation an additional adjustment is required for excluding the acquiring services.

If the recommend adjustments for the exclusion of transaction expenses and acquiring services are made PayPal margin is likely to be around 30%, rather than 25% as estimated in the Interim Report.[50]

3.2 Calculating the correct margin for PayPal

Annex 10 estimates PayPal's average operating margin at 15% and 17%[51] for the period 2018–22, and after receiving our analysis and comments on its calculation, the PSR has now also provided two additional estimates: 25% and 28%.[52]

Our review shows that although the PSR has now provided additional estimates (making relevant adjustments to its previous calculation) in response to our comments, it has still underestimated PayPal's operating margin. Furthermore, the PSR presents the 25% and 28% estimates as a sensitivity scenario rather than revising its central estimates of PayPal's margin. As we explain below, it is incorrect to present the new estimates as merely a sensitivity scenario.

Annex 10 notes that although *"like Mastercard and Visa, PayPal provides domestic and international payment services in the UK and offers a number of value-added services that are similar to those of Mastercard and Visa's relevant UK operations",*[53] *"PayPal also provides services in addition to those offered by Mastercard and Visa's relevant UK operations. We consider that the risk exposure and capital requirements for these additional services are likely to be relatively similar to those of Mastercard and Visa's*

[49] Annex 10, May 2024, para. 6.49.
[50] The Interim Report estimates the five-year averaged EBIT margin for PayPal after excluding transaction expenses at 25%, the margins are estimated for the period between FY2018 and FY2022 . See: Annex 10, May 2024, para. 6.125, Table 38.
[51] The Interim Report presents average, minimum and maximum EBIT margins for the FY2018–FY2022 period at 14%,15% and 17%, respectively. See: Ibid.
[52] The Interim Report presents the average, minimum and maximum EBIT margins after excluding transaction costs for the FY2018–FY2022 period at 22%,25% and 28%, respectively. See: Ibid.
[53] Ibid., para. 6.42.

relevant UK operations as many of these services are related to the wider payment ecosystem."[54]

PayPal offers acquiring services and the vast majority of large acquirers present their revenues net of interchange and network fees. This was also how the PSR had calculated the margins for these companies in its comparator analysis. We explained that focusing on gross revenues and including interchange and network fees as operating costs would distort a comparison of operating margins with other companies. We further discussed that, the PSR wants to use PayPal as a non-card-based payment method; this also means that interchange and network fees need to be excluded from the operating margin calculation.

Annex 10 acknowledges our comment on the adjustment for the interchange fees: *"Whilst we note that we have not identified acquirers as comparators for Mastercard and Visa, we do consider that there could potentially be a case for making adjustments to PayPal's financial statements to make them more comparable to Mastercard's and Visa's relevant UK operations. The clearest example are likely to be interchange fees as Mastercard and Visa do not show interchange fees in their revenues or costs (even though interchange fees are incurred as part of a card transaction). The inclusion of interchange fees in PayPal's revenues and costs could therefore potentially make PayPal's accounts less comparable to Mastercard's and Visa's accounts. We have therefore calculated a sensitised margin for PayPal, where we have removed transaction expenses, which includes interchange fees, but also other fees. As such this sensitivity overstates the effect of removing interchange fees."*[55]

However, Annex 10 further explains that *"[w]e consider that before we could place significant weight on a sensitised margin for PayPal, we would need to consider in more detail what other factors could be considered for adjustment, some of which may operate in opposite directions*".[56] This is not a valid argument—the PSR does not provide any evidence on *"other factors [that] could be considered for adjustment".* The PSR also argues that *"[w]e would also need to consider whether it would be appropriate to only adjust for a proportion of transaction expenses, rather than the full amount."*[57]

It is not clear why Annex 10 would need to make such considerations. First, this is not consistent with the PSR's approach in its market review into card-acquiring services, where both interchange and scheme fees were removed from acquirers' net revenue.[58] In addition, some acquirers exclude both interchange and network fees from their margin calculations in their own annual reports.[59]

[54] Ibid., para. 6.43.
[55] Ibid., para. 6.124.
[56] Ibid., para. 6.127.
[57] Ibid.
[58] PSR (2021), 'Market review into card-acquiring services: Final report', November, p. 20, para. 3.18.
[59] See, for example: Global Payments (2022), Annual report, p. 38; First Data (2015), 10-K annual reports, p. 35; *"Adyen's total revenue contains scheme fees, interchange and mark-up for which Adyen acts as a principal [However] [t]he Management Board monitors net revenue (net of interchange and scheme fees (costs incurred from financial institutions), and costs of goods sold) as a performance. Indicator."* See: Adyen (2022), Annual report, p. 93.

Annex 10 argues that it did not consider undertaking further analysis: *"This is because our analysis shows that there is only [✂] of the range of Mastercard's margins in the relevant UK operations and the sensitised PayPal margins. As such a higher benchmark margin as implied by the sensitised analysis for PayPal would not significantly change our assessment of Mastercard's profitability in this market review considering that ✂."*[60] It is not clear why a difference of at least 10 percentage points in the margin of a comparator *"would not significantly change [the PSR's] assessment of Mastercard's profitability in this market review".* ✂It is not clear why this is relevant. ✂[redacted] but as explained in section 2, these comparators are not suitable.

3.3 Our analysis shows that the PayPal margin has still been underestimated

As explained in our previous submission, the 25% and 28% operating margin is for PayPal's business including its acquiring services. To estimate the margin for PayPal's business excluding its acquiring activities, we need to estimate the typical operating margin for an acquiring business.

Various PayPal documents and communications suggest that its acquiring activities generate lower margins than the PayPal-branded checkout transactions and payments made with PayPal itself.[61] This is confirmed by our analysis: over the last five years, publicly listed acquirers have achieved operating margins of approximately 10%,[62] ranging from 7% in 2018 to 12% in 2020.[63]

In 2022, acquiring activities (referred to as 'Unbranded Processing') accounted for at least 30% of PayPal's total payment volume ('TPV').[64] PayPal's data indicates that this segment has grown considerably in recent years, with an average annual growth rate of 40% since 2018.[65]

We can use these two data points (the operating margin for acquiring activities and the share of the PayPal's acquiring activities within the PayPal group) to estimate the operating margin for PayPal *without* its acquiring business. Table 3.1 below shows that PayPal's margin (excluding acquiring) is likely to be around 30%.

Annex 10 notes that *"[w]e note Mastercard's reference to PayPal's acquiring business, which we assume is referring to PayPal's gateway and payment processing services. We*

---

[60] Annex 10, May 2024, para. 6.128.

[61] For example, PayPal's 2022 Annual Report states: *"The increase in transaction expense rate in 2022 compared to 2021 was also attributable to unfavourable changes in product mix with a higher proportion of TPV from unbranded card processing volume, which generally has higher expense rates than other products and services."* In addition: *"Transaction revenues grew more slowly than TPV and the number of payment transactions in 2021 due primarily to a decline in eBay's marketplace platform TPV where we had historically earned higher rates, […], a higher portion of TPV generated through Braintree by bill pay partners, large merchants, and other marketplaces which generally pay lower rates with higher transaction volumes."*

[62] This is based on net revenues. We note that the vast majority of the acquirers analysed do not even report interchange and network fees separately from revenues. In other words, revenues are presented net of these fees.

[63] We assessed the operating margins of 11 publicly listed acquirers from Europe and North America: Adyen, Worldline, Nexi, Fiserv, Global Payments, Block, Shift4 Payments, Nuvei, Evo Payments, Paysafe and Priority Technologies. The estimates represent the median for the sample.

[64] Which include both the payments volume acquired through PayPal's subsidiary Braintree and other credit and debit card processing through PayPal acquiring services. In addition to unbranded processing, there are transactions where PayPal acts as an acquirer that are not captured in the Braintree TPV—for example, the transactions acquired by PayPal's Zettle acquiring service for CP transactions. As such, the use of the Braintree TPV is likely to underestimate the share of transactions where PayPal acts as an acquirer.

[65] PayPal 2022Q4 Investor Update, slide 8.

do not agree that it would be appropriate to remove these services from the margin estimate , for the reasons set out in paragraph 6.45."[66] However, paragraph 6.45 does not provide any evidence as to why it would not be appropriate to remove acquiring business services from the margin estimate.[67] The only point that paragraph 6.45 makes is that the PSR considers it to be likely that the acquiring services are largely operating in competitive markets. That is not a reason for not removing the acquiring business service from the margin estimate.

Table 3.1 PayPal adjusted operating margins for 2018–22

	Formula	2018	2019	2020	2021	2022
PayPal 'group' operating margin[1]	A	22%	25%	24%	28%	25%
Braintree's share of PayPal's TPV[2]	B	19%	21%	23%	24%	30%
Median operating margin of publicly listed acquirers[3]	C	7%	6%	12%	10%	8%
Adjusted PayPal margin	D = (A – (C x B)) ÷ (1 – B)	26%	30%	28%	34%	32%

Note: [1] Reported on the basis of net revenues (i.e. after deducting interchange and network fees). [2] Braintree's share of PayPal's TPV was reported by PayPal for 2018, 2021 and 2022. The figures for 2019 and 2020 have been estimated based on information provided by PayPal about the growth rate of the TPV for each segment in the years 2018–21. [3] All operating margins were estimated using net revenues (i.e. after deducting interchange and network fees). We assessed the operating margins of 11 publicly listed acquirers from Europe and North America: Adyen, Worldline, Nexi, Fiserv, Global Payments, Block, Shift4 Payments, Nuvei, Evo Payments, Paysafe and Priority Technologies.
Source: Oxera analysis based on the annual reports of publicly listed acquirers and PayPal.

As previously explained to the PSR, the analysis in Table 3.1 still underestimates the operating margin for PayPal transactions that are not card-based. There are different ways in which PayPal transactions can be funded: using a card; a credit transfer/direct debit; or using a PayPal balance. The margin of 30% is a weighted average margin for these types of transaction. As PayPal explains in its annual report, the margin it makes on a transaction funded by a PayPal balance or by a credit transfer/direct debit is higher than that on transactions funded by a card. For a card transaction, the net revenue is smaller (due to interchange and network fees) than for a transaction funded by a credit transfer/direct debit (since fees for such services are smaller) or funded by a PayPal wallet balance. Although the internal PayPal costs are likely to be higher for such transactions (e.g. as a result of PayPal providing the buyer protection and incurring the associated costs), PayPal's annual reports indicate that the net effect is that margins are higher on transactions funded by credit transfers/direct debits or by a PayPal wallet balance. In other words, the margin for non-card PayPal transactions is likely to be higher than 30%.

[66] Annex 10, May 2024, para. 6.129.
[67] Ibid.

3.4 Conclusion

We agree with the PSR that PayPal can be considered a relevant comparator for Mastercard. However, we note that PayPal's margin had been considerably underestimated. Although Annex 10 has now provided additional estimates of 25% and 28%, it has not made further adjustments and not provided any valid reasons for not doing so. Our calculations show that the PayPal comparator margin is likely to be higher than 30%. Furthermore, although Annex 10 recognises that the adjustment (resulting in margins of 25% and 28%) is valid, it appears to treat these estimates as just a sensitivity analysis.

4 Oxera analysis of the margin for Discover

4.1 Oxera estimate of Discover payment services margin

The PSR February 2023 Working Paper included Discover and 31 other companies in the credit services sector of NYSE in a comparator benchmarking exercise of Mastercard Inc profits. The Working Paper stated that *"[w]e have benchmarked Mastercard Inc and Visa Inc profits against two groups of US-listed companies, under the informational technology (IT) and credit services sectors of the NYSE. We chose these two groups as we consider they comprise companies with similar business models to Mastercard and Visa."*[68] However, the PSR later shared its emerging view that Discover was not a suitable comparator for Mastercard's relevant UK operations. The PSR noted that this was because the business model of Discover incorporated banking services as well as payment services.

We responded and explained that it would be possible to calculate the margin for Discover's payment services and that there was therefore no valid reason for dismissing Discover as a comparator. Discover reports its revenues and operating margins for its 'Payment Services' segment separately from its other business segment, 'Digital Banking'. We explained that Discover's Payment Services segment includes the PULSE ATM network, the Diners Club card network, as well as payment transaction processing and settlement services on the Discover Global Network.

In our recent submission to the PSR, we estimated the five-year average operating margin of Discover's Payment Services segment at 44%.[69] Our estimate was based on Discover's segmental information available in its published financial statements.

4.2 Annex 10 response to the Oxera analysis

Annex 10 responds to this analysis and notes that it is not clear how costs are allocated between segments. And that 'Corporate overhead' is not allocated to the payment services segment.[70]

We note that the generally accepted accounting principles ('US GAAP') require a public entity to report a measure of segment profit or loss that the chief operating decision-maker ('CODM') uses to assess segment performance and make decisions about allocating resources. This would allow users of the annual reports to assess the performance of the segments in the same way that management reviews them.[71] This implies that, while it may be the case that not all relevant costs are allocated to the Payment Services segment of Discover in the published financial statements, the unallocated proportion is likely to be small.

[68] PSR, February 2023, para. 4.24.
[69] Average operating margins between FY2018 and FY2022.
[70] Annex 10, May 2024, para. 6.31.
[71] FASB (2023), 'Segment Reporting (Topic 280)', November, p. 40.

Moreover, it is possible to undertake further analysis and make an adjustment for the potentially unallocated costs associated with the 'corporate overheads'. We present an alternative approach to estimating Discover's margin in the next section.

4.3 Alternative approach to estimating Discover's payment services margin

Discover does not specify the measure or components of the corporate overheads in its published financial statements. However, these costs will be covered under non-interest expense.[72] As an alternative approach, we allocate the non-interest expense between Payment Services and Digital Banking on the basis of the FTEs for each of these segments. Under this approach, we estimate average margins for Discover's Payment Services segment for 2018–22 of 34% and 38% including and excluding equity investments, respectively.[73]

Table 4.1 shows the operating margins for Discover's Payment Services segment for the period 2018–22 after allocating the non-interest expenses based on FTEs.

Table 4.1 Operating margin for Discover's Payment Services segment, 2018–22

	2018	2019	2020	2021	2022	2018–22 average
Including equity investments	43%	46%	43%	68%	-30%	34%
Excluding equity investments	43%	46%	29%	30%	42%	38%

Note: According to the Discover 2023 annual report, the number of employees was 21,100. We obtained the FTEs data for Discover's Payment Services division from LinkedIn. There are four distinct company profiles for Discover on LinkedIn. These are: (1) Discover Global Network, 226 LinkedIn profiles, including employees of Discover Network, Diners Club International and PULSE (or the Payment Services Segment); (2) Diners Club International, 342 LinkedIn profiles; (3) PULSE, 343 LinkedIn profiles; (4) Discover Financial Services (excluding PULSE), 20,493 LinkedIn profiles. Our review shows that there are only 264 unreported profiles—i.e. the number of employees from Discover's 2023 annual report is 264 higher than the number of profiles on LinkedIn. Using this approach, we allocated 4.4% of non-interest expense to the Payment Services division and the remainder to the Digital Banking division. For the years 2018, 2019 and 2022, this results in higher costs for the Payment Services division than the costs reported under Discover's segmental accounts in its published accounts. For the years 2020 and 2021, this results in lower costs for the Payment Services division. For the years 2020 and 2021, the table presents the margins based on Discover's segmental information available in its published financial statements, as we had done in our previous submission.
Source: Oxera analysis based on Discover Financial Services' 10-K annual reports for the years 2019–23.

4.4 Competitive conditions

In Annex 10, the PSR now argues that *"Discover's payment services may benefit from a lack of effective competitive constraints when setting prices for merchants, at least in*

[72] The components of non-interest expense include: Employee compensation and benefits, Marketing and business development, Information processing and communications, Professional fees, Premises and equipment and Other expense. See, for example: Discover's 2023 annual report, p. 68.
[73] As explained in our previous submission, since a part of the operating revenue reported in this segment relates to the performance of the equity investments made by Discover in other publicly listed payments companies—which are more volatile than the rest of the revenues in this segment—we have presented the operating margins both with and without accounting for the equity investments

certain geographies. This is, for example, because Discover is widely accepted in the US."[74]

Annex 10 therefore decides to exclude Discover as a comparator. It is not clear how from the fact that *"Discover is widely accepted in the US"* it can be inferred that Discover's payment services may *"benefit from a lack of effective competitive constraints"*. Furthermore, the PSR acknowledges that even if that were the case, *"[…] it is possible that competitive pressures in the issuing side may mean that higher prices on the acquiring side could be competed away by competition for credit card and debit card customers (e.g. through cardholder benefits), as well as for banking customers (e.g. through an acceptance of higher risk customers)."*[75]

4.5 Conclusion

We conclude that, contrary to what Annex 10 suggests, Discover's Payment Services segment can be included as a relevant comparator for Mastercard. We have estimated the margin at 34%–38%.

[74] Annex 10, May 2024, para. 6.37.
[75] Ibid., para. 6.37.

5 Review of the Interim Report's cross-check analysis

5.1 Introduction

We agree with the Interim Report that it is useful to cross-check any conclusions from detailed margin comparator benchmarking against a broader sample of listed comparator companies. We disagree that the Interim Report has conducted this cross-check in a robust manner, nor has it dealt with our concerns effectively (or at all).

Our first concern is that the Interim Report has shifted its empirical focus for its cross-check analysis from NYSE listed companies to FTSE 100 constituents on the basis of significant UK exposure of the FTSE 100 constituents. Notwithstanding there are criticisms of the reliance on only NYSE, the shift to FTSE 100 is not appropriate in two key ways.

1. the underlying premise is incorrect. FTSE 100 companies have global exposure.

2. the FTSE 100 index, unlike NYSE, has few technology stocks (less than 1%)[76]. This means it is unlikely that selecting comparators on the basis of accounting measure of capital employed intensity, without regard for off-balance sheet intangible assets, will give a good comparison.

Our second concern compound the first concern. The Interim Report has given insufficient weight to the role of intangible assets when considering both the relevant sample of listed companies and how to interpret the results.

A recent Bank of England paper highlights the important role of off-balance sheet intangible assets. ✂. Hence the PSR's insistence on benchmarking Mastercard against companies with a capital employed intensity of 1 without accounting for additional off-balance sheet intangible assets is not a reliable methodology.

Our third concern is that it is incorrect to look at median or mean measures from a comparator set and conclude that margins above those levels would indicate excessive or high profitability. This would lead to conclusions that 50% of companies are excessively profitable at any one time. Benchmarks should be based on at least upper-quartile measures and would need to be shown to be persistent.

Hence the conclusion the Interim Report draws that margins for companies like Mastercard are around 20% or less[77] is not reliable, given the incorrect premise that the FTSE 100 index is a useful universe of relevant listed comparators and the incorrect capital employed intensity measure that does not give due weight to intangible assets.

In contrast, Oxera's empirical analysis (submitted to the PSR in response to a confidential Working Paper from December 2023) is based on other more relevant indices with broader coverage. Focusing on these indices show that a wide range of margins up to 40% are

[76] FTSE Russell (2023), 'FTSE 100 Index Factsheet', 29 December.
[77] Annex 10, May 2024, para.6.97

common, including for businesses with a low capital employed intensity but where other indicators suggest there may be strong intangible assets.

A robust cross-check based on relevant listed comparators would show that Mastercard's margins for its relevant UK operations are within a reasonable range.

5.2 Review of PSR Annex 10 cross-check analysis

5.2.1 The cross-check in Annex 10 is too narrow

While the February 2023 Working Paper focused exclusively on NYSE-listed stocks, Annex 10 is now focusing exclusively on the FTSE 100 for this analysis. The Interim Report explains that *"[w]e chose the FTSE100 in preference to international indices as the latter would likely result in a smaller, rather than a larger proportion of companies in the index that have a significant UK exposure."*[78]

This is not a valid reason for relying exclusively on the FTSE index, and such an approach is likely to overlook various relevant companies.

- Mastercard is a global company, connecting individuals, businesses and organisations in more than 210 countries and territories.[79] As such, it is not clear why Annex 10 insists on placing more weight on companies that *"have a significant UK exposure".*
- Annex 10 seems to view *"being listed in the UK"* as being analogous to being active in the UK. We note that, while the FTSE 100 contains companies that are active in the UK, the FTSE 100 constituents do not necessarily *"have a significant UK exposure"*. Indeed, the constituents of the FTSE 100 index are heavily influenced by foreign earnings and have significant global exposure.[80]
- Moreover, there are many companies listed elsewhere that are active in the UK.

In our previous submission, we explained that the conclusions that the PSR had drawn about the operating margins that can be observed in competitive markets were also affected by its decision to look at FTSE 100 companies only. By using indices with broader coverage (e.g. S&P 500, NASDAQ 100, STOXX Europe 600, STOXX Global 1800), the PSR would have observed that there are various examples of companies with operating margins above 30% in competitive markets (see our empirical analysis in section 5.3).

The Interim report responds to our comment that *"[w]e do not consider that the presence of more companies with high margins in the international benchmarks suggests that the result of our cross check would necessarily be significantly different, noting that we have mainly looked at averages when reviewing the results of the cross check (see*

---

[78] Annex 10, May 2024, para. 6.85.

[79] Mastercard states on its website: 'By connecting individuals, businesses and organizations in more than 210 countries and territories today, we're unlocking opportunity for more people in more places for generations to come'. See Mastercard, 'Always moving forward', https://www.mastercard.us/en-us/vision/who-we-are.html#:~:text=Connecting%20everyone%20to%20Priceless%20possibilities,places%20for%20generations%20to%20come (Accessed 01 July 2024)

[80] LSEG (2024), 'The UK's very global; country index', 5 March, https://www.lseg.com/en/insights/ftse-russell/the-uks-very-global-country-index (last accessed 12 July 2024)

paragraph 6.97). We have set out in paragraph 6.116 why we consider industry averages to be a more appropriate basis for deriving a competitive comparator benchmark margin than individual companies within an industry."[81] We note that this response does not address our concern. Using a mean or median level of performance for each market or sector as a benchmark is not appropriate; it would imply that around half the firms in these indices were earning excessive returns (we discuss this in more detail in section 5.2.3).

In sum, the reason that the Interim report provides for exclusively focusing on FTSE 100 companies is incorrect. Also, the February 2023 Working Paper did look at companies listed outside the UK.

The importance of intangible assets

In our previous submission to the PSR, we referred to a recent research paper by economists at the Bank of England that sought to understand whether the *"missing investment puzzle"* (large differences between the return on capital and the risk-free rate) could be explained by the growing role of intangibles that might have been under-reported in companies' accounts.[82] Using a dataset covering a broad range of intangible assets,[83] the Bank of England paper found that the new investment in intangible assets, which had previously not been captured in similar datasets, accounted for approximately 60% of investment in all intangible assets, and 40% of investment in all assets (tangible and intangible).[84] By incorporating these previously unrecorded intangible assets into an empirical model, the Bank of England paper concluded that the inclusion of intangible assets explained the *"missing investment puzzle".*[85] In other words, high returns are explained by intangible assets not being properly reported in annual accounts.

The Interim Report acknowledges our reference to the BoE paper and states that *"[i]t is not clear from Mastercard's submission that the results of the cross check would be different if the adjustments made in the Bank of England paper were applied to all companies in the sample as the Bank of England report (as cited by Mastercard) indicates that it is likely that intangible asset values in other index constituents may also be understated."*[86]

The Interim Repot seems to have misinterpreted our message. We do not intend to prove that *"the results of the cross check would be different if the adjustments made in the Bank of England paper were applied to all companies".*[87] Rather, as explained before, our

[81] Ibid., para. 6.134.
[82] Bailey, A. et al. (2022), 'Structural change, global R* and the missing-investment puzzle', Bank of England Staff Working Paper, No. 997, October.
[83] Seven categories of intangible assets were included in this new dataset that had not been captured in earlier versions: 'Industrial Design', 'New product development costs in the financial industry', 'Innovative Property', 'Brand', 'Organisational Capital', 'Training' and 'Economic Competencies'. See Bailey, A. et al. (2022), p. 30.
[84] Bailey, A. et al. (2022), p. 30.
[85] Bailey, A. et al. (2022), p. 2. A related paper by economists at the European Investment Bank using a similar dataset, but focusing on the role of intangible assets in both Europe and the USA, reached similar conclusions. See Corrado, C. et al. (2016), 'Intangible investment in the EU and US before and since the Great Recession and its contribution to productivity growth', EIB Working Papers, No. 2016/08.
[86] Annex 10, May 2024, para. 6.136.
[87] Ibid.

concern is that the Interim Report has not properly acknowledged the role of intangibles in explaining companies' margins.

First, our empirical analysis of a broader sample of companies shows that there are various companies with low capital intensity that have higher margins (see section 5.3). Some of the companies with higher margins may in reality have a higher capital employed intensity than the balance sheet data would suggest due to having intangible assets that are not reported (or under-reported) on the balance sheet.

Second, the Bank of England analysis is based on industry-level data. As such it implicitly considers that the value of intangible assets and ratio of intangible to tangible assets vary across companies in different industries—there is therefore no reason to assume that the adjustments to the assets for Mastercard and all companies in the sample would be the same.

5.2.2 The PSR has not properly acknowledged the role of intangibles

While the PSR acknowledged in its February 2023 Working Paper that Mastercard may have a substantial amount of intangible assets that are not captured in its accounts,[88] The Interim Report now seems to disregard this point from its analysis by assuming that Mastercard is not a capital-intensive business.

In addition, the Interim Report does not acknowledge our reference to the PSR's February 2023 working paper and notes that *"Mastercard has only suggested that it is likely that its capital intensity is greater than 1 and has only provided evidence of a general nature, which is likely to apply to a significant number of companies in the sample."*[89]

It is well established that the accounting standards treat tangible and intangible investments differently (i.e. internally generated assets such as computer software, patents and copyrights may not be capitalised—the PSR recognises this in its February 2023 Working Paper[90]). Academics, practitioners and regulators are aware of this accounting idiosyncrasy and make adjustments for intangibles to improve the usefulness of accounting data.[91]

Consequently, we note that Annex 10 is incorrect to assume that Mastercard's capital employed intensity is equivalent to 1; ✂ (as acknowledged in the February 2023 Working Paper[92]). This also means that Annex 10 is wrong to exclude companies with a higher capital intensity when benchmarking Mastercard's operating margin.

[88] In its February 2023 Working Paper the PSR notes that *"Whilst a significant proportion of Mastercard Inc and Visa Inc's reported assets are in the form of intangible assets, the reported accounting value may not reflect the true economic value. The accounting values will exclude any internally generated goodwill relating to the brand, relationships with customers, etc. Generally accepted accounting principles (GAAP) do not allow recognition of these amounts due to the difficulty in measuring them"*. See: PSR, February 2023, para. 3.34.
[89] Annex 10, May 2024, para. 6.136.
[90] PSR, February 2023, para. 3.34.
[91] See, for example: CMA Guidelines, Annex A, para. 14.
[92] PSR, February 2023, para.3.34

In sum, the Interim Report does not consider the importance of off-balance sheet intangibles when interpreting the results of the cross-check analysis. This implies the inference drawn from the analysis that companies with a reported capital intensity of similar to Mastercard have EBIT margins of approximately 16% and 24% is not meaningful.[93]

5.2.3 It is not appropriate to look at average margins across industries

Annex 10 uses the *average* level of margin of a set of companies as a benchmark. In our recent submission to the PSR, we explained that using a mean or median level of performance for each market or sector as a benchmark would not be appropriate; it would imply that around half of the firms in these indices were earning excessive returns.

The PSR has not responded to the substance of this point (i.e. our point that it would not be logical to benchmark against the mean or median). The PSR only responds by providing an interpretation of the CMA guidelines:

The Interim Report states that "*[w]e understood Mastercard's comments regarding the range of margins to imply that the competitive benchmark margin should be set by reference to the highest and lowest margin in an industry. We do not agree with this approach. For example, the CMA guidelines state that In practice, a competitive market would be expected to generate significant variations in profit levels between firms and over time as supply and demand conditions change, but with an overall tendency towards levels commensurate with the cost of capital of the firms involved..*"[94]

Annex 10 goes on to state that "*this clearly indicates that the industry average in a competitive market is the relevant benchmark […].*"[95]

However, it is clear from the text that the CMA is referring to the "*overall tendency over time*", not the average in an industry. It is good practice to average over time to remove measurement noise. However, averaging over the sample of firms could result in overlooking firms that take more risks and/or are very successful in innovating and enhancing their service proposition. Industry categories can be very broadly defined and may contain firms that are subject to different types and degrees of risk. For example, as explained, both eftpos and Mastercard are active in the payment services industry, but their activities, service propositions and risk profiles are very different.

5.3 Oxera's empirical analysis on the relationship between capital employed intensity and EBIT margins

In its February 2023 Working Paper, the PSR chose to analyse only the margins of companies listed on the NYSE, excluding any companies listed on other exchanges. However, the PSR has since changed its approach and now has analysed exclusively UK-listed companies that are constituents of the FTSE 100 index, disregarding its previous

[93] Annex10, May 20224, para. 6.105
[94] Ibid., para. 6.116.
[95] Ibid..

analysis of companies listed on the NYSE. This means that the PSR has included only a limited set of companies in its cross-check, in particular in certain sectors. For example, as at December 2023, only 1% of the market capitalisation of the FTSE 100 index was related to technology companies[96]. By comparison, in the STOXX Global 1800 index of 1,800 companies in 24 countries,[97] Information Technology ('IT') companies represent 25% of the Index's market capitalisation.[98] In the S&P 500 and the NASDAQ 100 indices, IT stocks account for 29% and 58% of the indices' respective market capitalisations.[99]

In our previous submission we presented Figure 5.1, Figure 5.2, Figure 5.3 and Figure 5.4 below and explained that they present the relationship between operating margins and capital employed intensity for the S&P 500, the NASDAQ 100, the STOXX Europe 600 and the STOXX Global 1800 respectively. In all four indices, and in particular for the more technology-heavy NASDAQ 100 and S&P 500, there are considerably more examples of companies with relatively high margins and low capital employed intensity. When looking at companies with capital intensity of less than 1, or between 0.5 and 3, for example, the indices indicate much higher operating margins than the FTSE 100 does for companies (see Fig 14 in Annex 10).

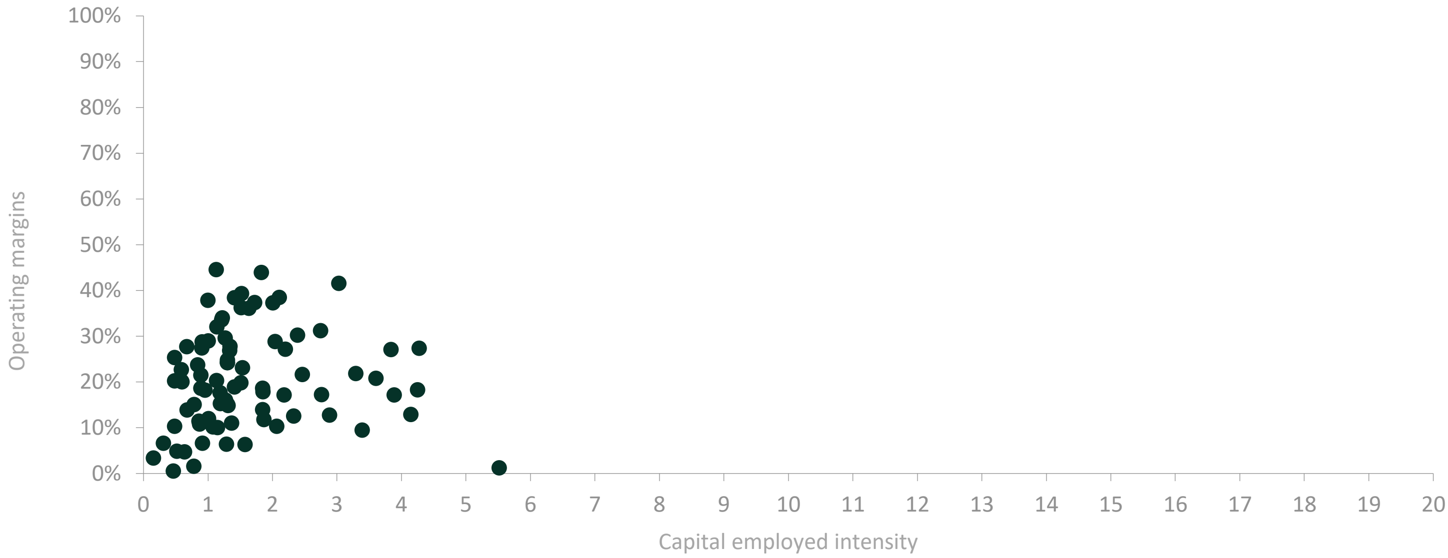
We conclude that the conclusion in Annex 10—that *"except for the small number of outliers, margins for businesses with a low capital employed intensity (i.e. businesses with a capital employed intensity of around 1 or less) are no higher than around 20%."*[100]—is incorrect. The sample of companies selected by the PSR is too narrow; analysis of a broader sample of companies shows that there are various companies with low capital intensity that have higher margins.

We note that Annex 10 does not discuss any of our analysis of other indices.

---

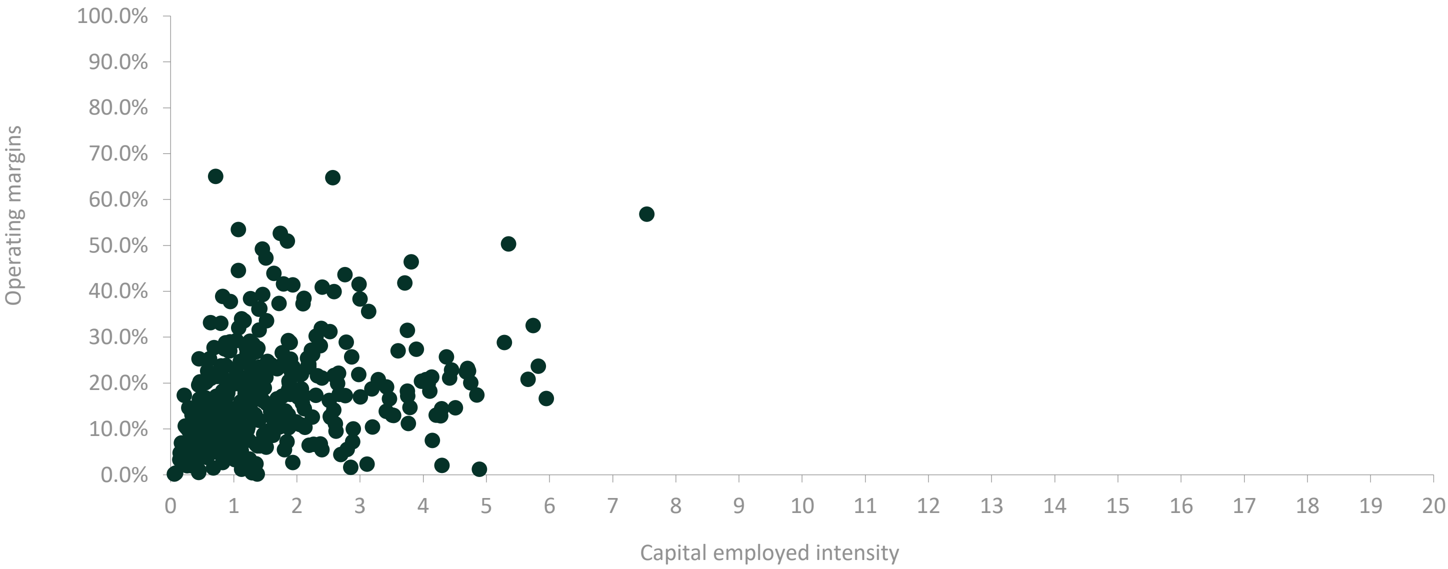
[96] FTSE Russell (2023), 'FTSE 100 Index Factsheet', 29 December.
[97] The list of countries consists of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Singapore, Spain, Sweden, Switzerland, the UK and the USA. The list of constituents is available online at https://www.stoxx.com/factsheets (last accessed 12 January 2024).
[98] STOXX (2023), 'Benchmark Indices – STOXX Global 1800 Index Factsheet', 29 December.
[99] S&P Dow Jones Indices (2023), 'S&P 500 Factsheet', 29 December. Nasdaq (2023), 'Nasdaq-100', 29 December.
[100] Annex 10, May 2024, para. 6.92.

Figure 5.1 Relationship between capital employed intensity and operating margins for the NASDAQ 100 index, 2018–22



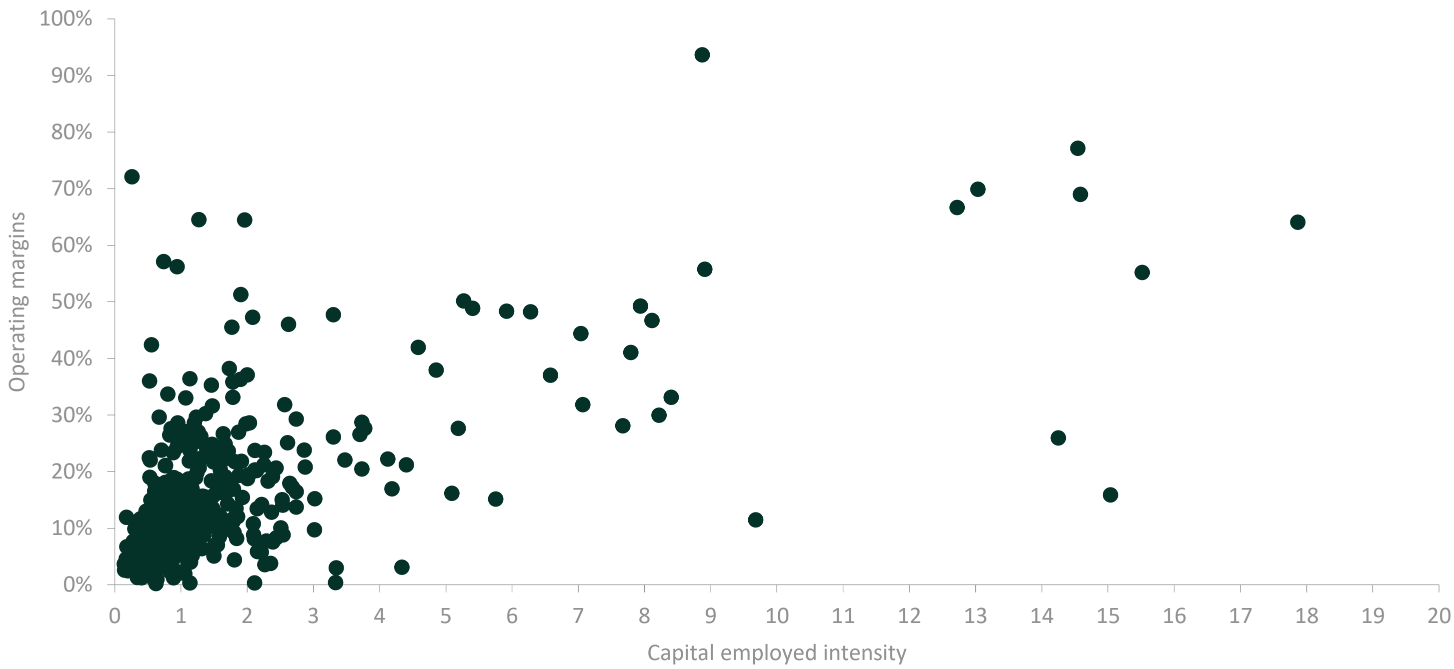
Note: Operating margins and capital employed intensity are presented as averages across the five-year period 2018–22. Companies with negative operating margins have not been included.
Source: Oxera analysis based on Bloomberg data.

Figure 5.2 Relationship between capital employed intensity and operating margins for the S&P 500 index, 2018–22



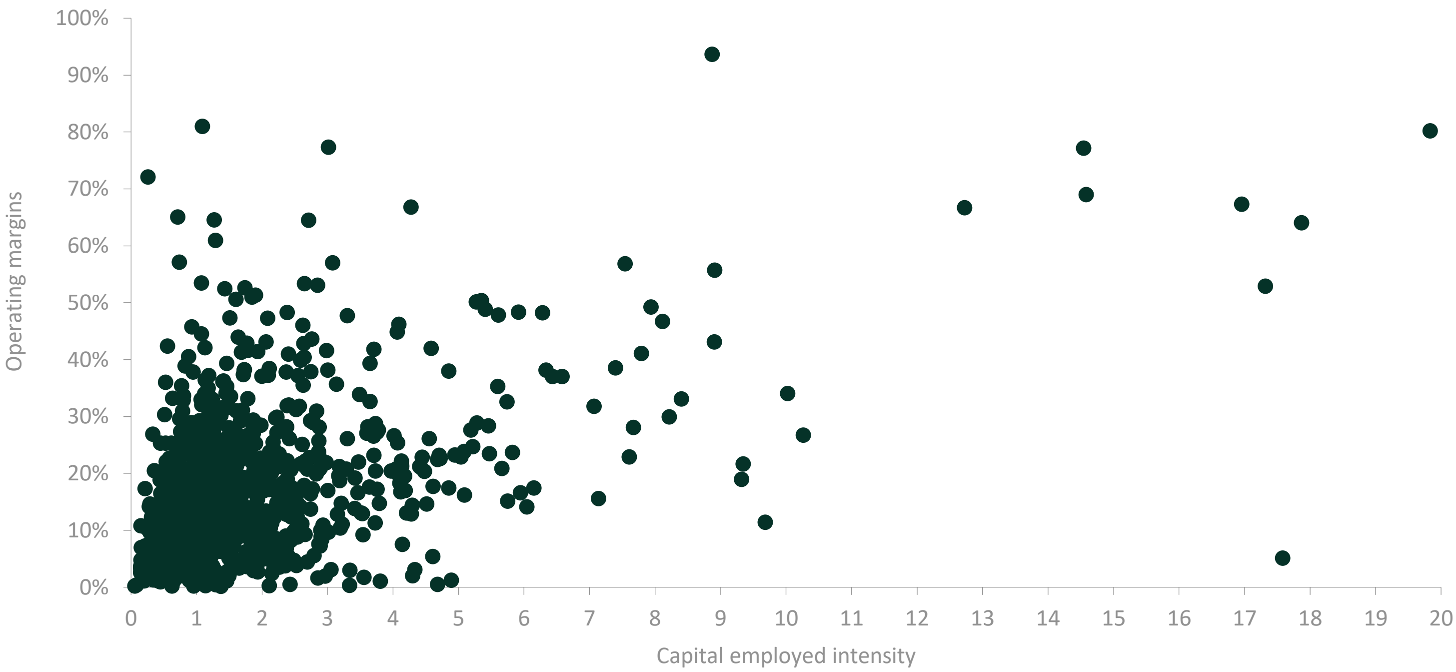
Note: Operating margins and capital employed intensity are presented as averages across the five-year period 2018–22. Companies with negative operating margins have not been included.
Source: Oxera analysis based on Bloomberg data.

Figure 5.3 Relationship between capital employed intensity and operating margins for the STOXX Europe 600 index, 2018–22



Note: Operating margins and capital employed intensity are presented as averages across the five-year period 2018–22. Companies with negative operating margins have not been included.
Source: Oxera analysis based on Bloomberg data.

Figure 5.4 Relationship between capital employed intensity and operating margins for the STOXX Global 1800 index, 2018–22



Note: Operating margins and capital employed intensity are presented as averages across the five-year period 2018–22. Companies with negative operating margins have not been included.
Source: Oxera analysis based on Bloomberg data.

6 Oxera analysis of additional comparators

6.1 Introduction

The Interim Report has identified a very limited number of comparators and our analysis has demonstrated that two of these are not suitable.

A small sample opens the possibility of significant distortion by a single data point. Although the PSR has applied a cross-check on its analysis, the cross-check is both flawed and too narrow. In any case, a cross-check cannot be used as justification for compromising the quality of the benchmarking itself.

In this section, we provide examples of a number of different types of companies with characteristics that are similar to those of Mastercard.

Our approach of increasing the number of comparator firms is also aligned with the PSR's February 2023 Working Paper in which it explained that it is relevant to look at technology companies and that some may share similarities with Mastercard. For example, two-sided platforms and marketplaces that bring together consumers and retailers may undertake activities similar to those undertaken by Mastercard in terms of licensing users and developing fraud detection and prevention technologies. In its February 2023 Working Paper, the PSR stated that *"[w]e chose these two groups [IT and credit services] as we consider they comprise companies with similar business models to Mastercard and Visa. Many companies within these groups [IT and credit services] serve multiple distinct customer groups (which constitute different sides of a market)."*[101]

The Interim Report has changed the approach and looks only at companies providing payment services. It provides only a high-level remark for deviating from this approach, simply stating that "*[…] companies that do not provide these [i.e. payment] services would not be selected as comparators. This is the main reason why we did not include most of the companies from the February 2023 working paper.*"[102]

We have identified the following types of companies that have characteristics that are similar to those of Mastercard: two-sided platforms and markets places, information technology companies and franchises (Mastercard operates a franchise model that licenses issuers and acquirers).

This list of companies is non-exhaustive but enlarges and strengthens the sample of comparators. These comparators are in addition to PayPal and Discover (discussed in sections 3 and 4).

6.2 Additional comparators

Error! Reference source not found. shows that in the FTSE 100 (considered in Annex 10), t here are only 6 and 2 companies with margins higher than 30% and 40%, respectively.

[101] PSR, February 2023, para. 4.24 and footnote 43.
[102] Annex 10, May 2024, para.6.114

The number as well as the percentage of companies with operating margins of more than 30% and 40% are higher in other more relevant indices (for the reasons discussed in section 5.3).

Table 6.1 Analysis of operating margins of the constituents of main stock indices, 2018–22

	FTSE 100	NASDAQ 100	S&P 500	STOXX Europe 600	STOXX Global 1800
Number of constituents	100	100	500	600	1,800
Non-financial companies with available data	78	98	416	473	1,454
With margins above 30%	6 (8%)	16 (16%)	41 (10%)	43 (9%)	138 (9%)
With margins above 40%	2 (3%)	3 (3%)	18 (4%)	28 (6%)	74 (5%)

Note: For all the companies included in these five indices, we use the (unadjusted) operating profits reported by Bloomberg in order to calculate the operating margin.
Source: Oxera analysis based on Bloomberg data.

We find that various companies within the indices have characteristics that are similar to those of Mastercard and can be added to the sample of selected comparators.

6.2.1 Transaction and payment processing services

There are around 13 companies[103] in the indices in Table 6.1 that are classified as ‘transaction processing and payment services’ under the GICS. The average margins for this group range between -0.68% and 44% (measured for the period 2018–22).

Within this group, there are various types of payment services companies. Not all of them have characteristics similar to those of Mastercard. Payment services companies include the following.

- *Payment processing companies*—these include companies providing processing services for, for example, card issuers and account-to-account credit transfers. The PSR case team explored and discussed A2A payment processing companies as a potential comparator for Mastercard but agreed that the nature of the services and the risks that these companies are exposed to are likely to be significantly different compared with Mastercard. [104] Furthermore, many of these companies, such as those offering services to issuers or acquirers, do not operate in two-sided markets.
- *Money transfer services*—this group includes companies such as Wise (formerly Transferwise) and OFX, the comparator identified in Annex 10. These companies provide international money transfer services. They help individuals to transfer money to family and friends overseas and enable businesses to send

[103] Excluding Visa and Mastercard.
[104] The PSR case team discussed with Mastercard and Oxera the potential use of an A2A payment processing company as a comparator.

and receive money to and from other businesses. In terms of functionalities, it is similar to using a domestic credit transfer service offered by a bank, with the main difference being that these companies will transfer the money across the border and also provide a currency conversion service. As discussed in section 2.3, these companies are unsuitable as a comparator for Mastercard.

- *Acquirers and payment facilitators*—these companies do not operate in two-sided markets and although they play a role in four-party retail payment systems (such as Mastercard and Visa), their activities and the risks they are exposed to are quite different.

Card issuers are typically classified as credit institutions rather than payment services companies. Although card issuers do not operate in two-sided markets, some of their activities and the risks they are exposed to may still be similar to those of retail payment method providers. On the other hand, they may have a substantial credit portfolio which may make these companies less suitable as a comparator; this may then require further analysis.

We expect the margins for these aforementioned types of companies to be lower than for companies such as Mastercard and Visa (and PayPal and Discover) that provide retail payment methods. This is indeed what we observe.[105]

The companies that focus on delivering retail payment methods are likely to be relevant as comparators. As discussed above, this includes PayPal (with a margin higher than 30%) and Discover (with a margin of between 34% and 38%). Other relevant companies include those that manage payment networks for a number of purposes, such as paying for fuel (fuel cards), paying out employee benefits (e.g. meal vouchers) or for purchases at specific stores (store cards). Some of the largest players in this sector include Corpay (formerly Fleetcor), WEX (in particular its Fleet Solutions division), Sodexo (in particular its 'Benefits and Rewards' segment, now known as 'Pluxee'), and Edenred.

These companies operate in two-sided markets. Both Corpay and WEX offer fuel cards to corporates and petrol stations.[106] Pluxee and Edenred operate reward and discount schemes and have specific subsets of retailers, corporates and employees as users and customers.[107]

[105] We have not undertaken an analysis of all companies but can provide some examples. Fiserv (focusing on transaction processing) has an average margin of 19%, FIS (focusing on A2A processing), a margin of 10%; acquirers typically have margins of less than 15% (see section 3.3). Wise has an average margin of 7% and OFX (as calculated in Annex 10) of 18%. All margins have been calculated for the period 2018–22.

[106] Both companies offer other services as well. We note that some of these other services may be relevant and that the annual reports of these companies show that a significant portion of their revenue is driven by their fleet divisions. According to WEX annual reports, payment processing an transactions are primary revenue source in the Fleet Solutions segment.

[107] Annex 10 seems to raise concerns about including certain types of companies that offer payment services simply because these companies focus on certain segments, arguing that "*We consider that this suggests that they are therefore likely less reflective of the broader payments market than the comparators we have identified, which all serve multiple industries.*" Annex 10 does not explain why this would be the case or why this would mean that these companies would not be suitable as comparators.

Across these companies, the average operating margin in the period 2018–22 was 25% to 48%.[108]

eftpos also provides a retail payment method. However, as discussed in section 2.2, its service offering is much narrower and it is user-owned. This is likely to result in a lower margin for eftpos (and this is indeed what we observe). There are potentially other companies in this category, such as Ideal (until recently owned by Currence), but its service offering is also much narrower and Currence is also user-owned.

In sum, this analysis indicates that margins may range between 25% and 48%. The margins of comparators PayPal and Discover (see sections 3 and 4) fall within this range.

6.2.2 Information technology

There are 49 companies in the indices in Table 6.1 that are classified as software (systems and application) under the Global Industry Classification Standard (GICS). The average operating margin in the period 2018–22 for these companies ranges between -25% and 43%.[109]

Within this group, between 19% and 29% of the companies (depending on the index) had a five-year averaged EBIT margin of above 30%. The 90th percentile profitability in this group is 33%.

In addition the PSR in its February 2023 working paper looked at 68 companies in the IT sector.[110] We analysed these companies and find that there are 12 companies in this list that are classified as software companies (systems and application) under GICS. The average operating margin in the period 2018–22 for these companies ranges between 3% and 38%.

6.2.3 Franchises

There are a number of sectors where a franchising model is common. For example, most of the world's largest hotel chains operate a considerable number of their branded hotels under a franchise model, whereby the franchise operators themselves do not manage the hotels but instead focus on developing the brand, setting rules and standards, and provide support and services so that the hotels can be managed and deliver a customer

108 These are the margins for Edenred, Corpay (formerly Fleetcor), Pluxee and WEX. All margins have been calculated for the 2018–22 period. Edenred's margins range between 31% and 34%. Corpay's (formerly Fleetcor) margins are estimated for its Fuel's division and range between 45% and 51% (except for FY2018–19 where margins are calculated at the group level because segmental information is not available). Similarly, WEX's margins are calculated for its Fleet Solutions' division and range between 28% and 40%. (WEX reports an adjusted operating income as well as an unadjusted operating income—we estimated the margins based on unadjusted operating income however we made our own adjustment of excluding impairment charges.) Sodexo's margins are estimated for its 'Benefits & Rewards Services' division and range between 20% and 31% (Sodexo's Benefits and Rewards division (i.e. Pluxee) has been recently separated from Sodexo and its 3-year audited combined financial statements for FY2021–23 are available on sodexo.com).

109 The range is after excluding one loss making company. Including that company would change the range to -65% and 43%.

110 PSR, February 2023, para 4.25. And Annex 3, Table 13.

service experience consistent with the brand of the hotel.[111] This is also the case with some prominent restaurant and fast-food chains as well as supermarkets.[112]

Within these industries, we observe a broad range of operating margins. In the case of the hotel chains, the operating margins of their franchising business segments ranged from 13% to 49% in the period 2018–22. In the case of fast-food companies, the operating margins for their franchising business segments ranged from 15% to 62% over the same period.[113]

[111] Examples include Wyndham Hotels & Resorts, InterContinental Hotels Group, Choice Hotels International and Hyatt Hotels.

[112] Examples include McDonald's, Yum Brands (the owner of Pizza Hut, Taco Bell and KFC), Dominos, Dunkin' Brands Group and Papa John's. Among supermarkets, some of the most prominent examples of franchisers include Carrefour and SPAR.

[113] These are the margins for the hotel chains and restaurants listed in footnotes 111 and 112. Data on the franchise segment of supermarket franchises is not publicly available.

7 Conclusion

The Interim Report identifies only three comparators (eftpos, OFX and PayPal) for benchmarking the margins of Mastercard and finds that the margins for these comparators ranged from 12–18% on average over the period of 2018–22.

Oxera's review concludes that this analysis is not robust and reliable.

First, the number of comparators is very small; a sample of just three comparators opens the possibility of material distortion by a single data point. Second, two of the three comparators are not suitable (eftpos and OXF). The Interim Report has revised its estimate of PayPal's margin (in response to comments from Oxera) and now presents margins of 25% and 28% rather than 15% and 17%. The Oxera submission explains that this still underestimates the margin of PayPal for the purpose of a comparison with Mastercard.

Oxera's empirical analysis of a larger sample of relevant comparators results in the following estimates: the margin for PayPal is higher than 30%, for the payment services segment of Discover between 34% and 38%, and for other relevant companies in the payment services sector between 25% and 48%. In other relevant sectors, we find a wide range of margins: companies that operate a franchise business have margins between 13% and 62%, and companies providing software systems and applications information have margins between -25% and 43%. Within this last group, between 19% and 29% of the companies have a five-year averaged margin of above 30% and the 90th percentile margin in this group is 33%.

This analysis clearly demonstrates that the Interim Report has significantly underestimated the margins of comparators.

Visa

VISA EUROPE'S RESPONSE TO THE PSR'S SCHEME AND PROCESSING FEES MARKET REVIEW INTERIM REPORT OF 21 MAY 2024

VISA EUROPE'S RESPONSE TO THE PSR'S SCHEME AND PROCESSING FEES MARKET REVIEW INTERIM REPORT OF 21 MAY 2024

Introduction

Visa Europe Limited ('**Visa**') welcomes this opportunity to engage with the PSR's Interim Report ('**IR**') on scheme and processing fees. The market review has been a significant undertaking for both organisations, and we remain committed to the process and continuing our constructive engagement.

In line with Visa's mission to **"*uplift everyone, everywhere by being the best way to pay and be paid*"**, we share the PSR's goal of ensuring the UK retains its leading status as a thriving and innovative payments ecosystem, with positive outcomes for merchants and consumers. We believe that this will ultimately help deliver sustained economic growth in the UK. Visa has contributed significantly to the UK economy over many years, building trust through the billions of transactions we have enabled, which themselves are supported by our significant investments in resilience, cybersecurity and fraud prevention. This trust helps build the confidence that people and businesses need to spend and invest more in the UK and is especially important in an increasingly digital world where threats from bad actors are constantly evolving.

We all know how vital economic growth will be, both for the businesses and consumers we ultimately serve, and for the UK. Indeed, we have chosen the UK to be the base of our European Market Support Centre and one of three global data centres. We believe that aligning with the PSR to ensure that payments continue to contribute towards growth is foundational, and something on which we can jointly build.

Visa delivers positive and continually improving outcomes for merchants and cardholders

Building and maintaining trust is at the heart of our commitment to innovation and investment, with Visa having invested £7 billion over the past five years. These investments have contributed towards:

- Keeping the Visa global network **reliable** by making sure that cardholders and merchants can pay or be paid whenever and wherever they need to. We view our responsibilities to UK financial stability as foundational and remain persistent in our focus on operational resilience in an increasingly digital world. Our network is 99.999% reliable and has capacity to handle up to 83,000 transactions per second globally – a number that increased more than threefold in the past decade.

- Providing **security,** which is more important than ever, given the concerning levels of new types of fraud and threat actors, including rapid developments in cyber- related crimes. The investments that Visa and the rest of the ecosystem have made have ensured that fraud rates on our network are near historic lows. We work extremely hard to protect user data and our network against ever increasing cyber threats. The UK is home to one of our four global Cyber Fusion security centres, with our UK based teams using cutting-edge technology to monitor, detect and mitigate constantly evolving threats to our network.

- We give cardholders the **confidence** they need to spend money, knowing that they will not be held liable for fraudulent activity through our Zero Liability Guarantee. Meanwhile, merchants can be confident that they will be paid. They have many things to worry about already and getting access to their money should not be one of them. More broadly, we engage with a wide range of parties on security issues. We were the first payments system operator to participate in Stop Scams UK, and partner with the Global Anti-Scam Alliance. We produce regular bulletins and best practice guidelines for our clients, as well as hosting meetings and conferences, to inform and educate them on security issues.

However, reliability, security and confidence are not enough on their own. **To continue to support economic growth, people and businesses need innovation, value for money and choice in payments.** The UK has a thriving payments sector, with many innovations launching here earlier than in most other countries. Visa has played a key role in the development and rollout of such innovations in the UK, including:

- **Contactless payments**, which were launched here earlier than in most other countries, and now account for 63% of all credit card and 76% of all debit card transactions made in the UK.
- **Tokenisation**, which replaces cardholders' primary account numbers ('**PANs**') with a unique digital identifier that can be used for payments without disclosing account details and secures the resulting transactions with a unique cryptogram. This technology devalues data, helping to mitigate the risk of data theft. Tokenisation has led to increased authorisation rates, reduced transaction times, and prevented billions of pounds in lost sales and customer service costs for merchants.

These innovations have transformed the way in which consumers transact with UK merchants. The total net benefit to UK merchants from Visa's investments in contactless and tokenisation (through, for example, time savings, reduced frictions, and lower fraud) is estimated at approximately [£9-11] billion.[1]

Other examples of Visa innovations launched in the last several years - and the benefits generated for UK merchants and consumers - include:

- Visa **Payment Threat Intelligence** - delivers intelligence reports to clients on threats based on scanning dark web and criminal forums.
- **eCommerce Threat Disruption** - monitors merchant checkout pages to keep them safe from malware.
- Visa **Payment Threats Lab** - tests card issuers' networks for fraud vulnerabilities.
- Visa played a key role in developing the '**Request to Pay**' message that forms the basis of the Pay.UK standard launched in May 2020 - giving customers more flexibility over regular bill payments.
- Visa **Transaction Controls** - gives cardholders the power to limit when, where, and how specific cards are used, improving security and preventing fraud, waste, and misuse.
- Visa **Account Updater** - allows issuers to update a cardholder's card details when their payment card expires, lowering costs to merchants and improving the payment experience for cardholders.
- Visa **Provisioning Intelligence** gives issuers capabilities to evaluate instances where users first set up a new token (for example, when they set up or 'provision' a digital wallet), ensuring that they relate to legitimate activity rather than bad actors.
- Visa **Payment Passkey Service** - confirms a cardholder's identity and authorises online payments by scanning their biometrics and replaces the need for passwords with one-time passcodes.

[1] This figure is an estimate for the years 2017-2027. See Technical Annex 3 for further details.

The technologies that we facilitate also enable extensive digital innovation, leading to better user experiences and more control for customers and merchants, alike. In recent years, the Visa ecosystem has grown significantly in functionality.

Indeed, we have seen outcomes for UK cardholders and merchants improve when using or accepting Visa cards. Evidence directly from a series of surveys of UK small merchants undertaken by Visa highlights these positive outcomes and the clear improvement over the last five years. This includes, for example, an increasingly high proportion of UK small merchants agreeing that Visa combats fraud well (increase from 63% to 83% over five years). **Figure 1** below summarises key results from these merchant surveys:

Figure 1: Key results from Visa UK merchant surveys

	2019	2022	2024
The electronic payments system in the UK is working well	61%	68%	71%
Visa is trusted by customers	83%	84%	85%
Cards are the easiest way for my business to take payments	63%	67%	70%
Visa ensures payments are secure	80%	83%	90%
Visa combats fraud well	63%	77%	83%
The technology behind card payments is constantly changing and improving	61%	69%	69%
Visa is innovative	41%	68%	76%
Visa provides good value for money	49%	74%	77%

Source: Visa external merchant surveys 2019, 2022 & 2024.

Positive outcomes are driven by strong competition in payments

The UK payments sector is characterised by strong competition between different types of payment methods and service providers. In recent years, the payments sector has seen the entry and expansion of a wide range of new payment services, driving greater choice and building an increasingly intense competitive environment. **There is a large and increasing range of competitors to card payments:**

- **Digital wallets**, such as Apple Pay, Google Pay and Samsung Pay, have strong brands with direct customer relationships, and are increasingly expanding into payment systems.
- **Buy Now Pay Later ('BNPL')** is expected to be the fastest-growing e-commerce payment method in the UK through to 2025.
- **Account-to-account payments** are growing very rapidly. At the beginning of 2023, the UK was home to 246 regulated third-party payment providers, compared to 338 across the whole of the European Economic Area.[2]
- **American Express** is an established player in the UK payments landscape, accepted by approximately half of all UK card-accepting merchants.[3]
- **Well-established international payment systems**, such as AliPay, have the potential for entry and subsequent rapid growth in Europe (including the UK) given the increasingly global nature of the payments sector.

In addition, many payments companies are appealing to changing consumer behaviours by providing more complex digital-only wraparound services, building strong brand values, facilitating a large

2 Open Banking, 'The OBIE Marks Completion of CMA Open Banking Roadmap on fifth anniversary' (13 January 2023).
3 Digital & Card Payments Yearbooks, European Region, UK, Statistical Yearbook 2021/2022.

number of non-card-based transactions, and in some cases increasingly having characteristics of payment systems. This includes challenger banks such as Monzo, Starling and Revolut.

Furthermore, with the growth of new technologies, the rise of e-commerce, and the blurring of lines between online and face-to-face transactions, merchants are increasingly well-placed to play a role in influencing payment methods. Combined with increasing customer flexibility, including the rise of digital wallets, market conditions are in place to allow further rapid shifts in behaviour.

Visa has also played a key role in building the UK's position as a global leader in payments and must continue to vigorously compete in what is a highly dynamic sector. We are firm believers that choice in payments underpins a competitive landscape and continuous innovation. Furthermore, within our ecosystem we actively facilitate competition. Our open network creates fertile ground for vigorous ecosystem competition, to the benefit of both UK merchants and consumers and we augment this with programmes such as our 'Fintech In a Box Programme'. The UK is home to a thriving fintech ecosystem: fintechs often choose to launch in the UK, confident they can innovate, develop and expand their businesses from here to across the globe.

The PSR's market review into card scheme and processing fees

The extent of positive outcomes in UK payments is no accident. It is the product of significant investment, shaped by innovation and competitive dynamism and is underpinned by stable, proportionate, and consistent regulation. In this context, we support the PSR's mission of ensuring this success continues, and maintaining a healthy, broad-based payments ecosystem that can effectively support economic growth and meet the evolving needs of all stakeholders in the future. As noted above, over the past several years, we have witnessed (and been a driving force behind) unprecedented changes, including new technology like tokenisation, a proliferation of new payments companies (with the UK being one of the world's fintech capitals), and a vast increase in the number of new merchants and use cases, such as transit and contactless. We recognise that this environment of constant change and innovation poses challenges for regulation, as it must flex and evolve to ensure that economic growth, supported by innovation, can continue, while appropriately mitigating unintended consequences.

At a global level, we notice an increasing regulatory focus on operational resilience. In the UK, there have been considerable developments in the regulation of the payments sector in the past few years, both on the financial stability side and led by the PSR (in the latter case, including through the card acquiring market review). Indeed, there are limited parallels globally for the PSR and its work and this reinforces the importance of constructive engagement between the public and the private sectors. As a result, we have worked closely with the PSR since its inception and support the PSR's aims of ensuring that payment systems (of which our card network is one of many) work to support the economic and social interests of the people and businesses that use them, and the overall health and growth of the UK economy.

We turn now specifically to this market review.

In line with the PSR's statutory objectives, Visa believes in evidenced-based regulation that promotes the best interests of all users. However, in many important respects, the IR's provisional findings are not supported by evidence. The IR also does not factor in the outcomes for end users of payments systems, including safety, security, reliability, innovation and the value that end users derive from their use of payment systems.[4] The result is a set of proposals that do not enhance value for cardholders, merchants and wider market participants, and may even put at risk the positive outcomes and innovation we observe in the sector, both of which are important to the promotion of growth and the wider interests of the UK economy.

4 Visa ToR Consultation Response, 5 August 2022.

We would welcome the opportunity to engage more on these points. Below, we set out the more specific evidential and analytical concerns we have with the IR's provisional findings.[5]

Competition in payments is intense and likely only to increase going forward

The UK payments sector is characterised by strong competition between a variety of payment providers, resulting in a complex set of competitive constraints that Visa considers in the day-to-day running of our business. This is evident from the fact that card networks only accounted for 9% of UK transactions in 2023.[6] The change in the market over the last few years has been considerable, and this fundamental point seems to have been largely ignored from the evidence – typically change, innovation and growth would be the hallmarks of a highly effective and competitive market. ***(See Technical Annex 1 for further details.)*** Our specific points in relation to this include:

- Not taking full account of evidence submitted by Visa in business documents, and from stakeholder feedback received by the PSR, of the competitive constraints that alternative payment methods exert on Visa. This includes many examples of internal governance and market intelligence documents that both acknowledge the competitive threat from alternative payment methods as well as documenting how Visa's strategy has shifted in response. For example, [✂].[7]
- Not sufficiently investigating the likely future growth of these competing alternative payment methods, especially against the backdrop of a dynamic UK and global payments ecosystem. For example, BNPL is expected to be the fastest-growing e-commerce payment method through to 2025 in the UK,[8] and Open Banking payments in the UK have doubled between 2022 and 2023.[9] There are also significant efforts by UK authorities to promote alternative payment infrastructures, such as the development of interbank payments and Open Banking, in which the PSR is directly involved.[10]
- Focusing disproportionately on the competitive constraints on the acquirer and merchant side of Visa's payments network. Contrary to the suggestion in the IR, there is nothing unusual or wrong about competitive constraints and pricing that differ across the two sides of a platform. This is backed up by economic theory and real-world outcomes in two-sided markets, where relative prices and competitive constraints often vary between two sides of the market.

On optional services ***(see Technical Annex 4 for further details)***, the assessment in the IR understates the level of competitive constraints. It almost exclusively focuses on whether there are direct alternatives to Visa's services, and in doing so understates the importance of acquirers and merchants choosing not to use a service (either because they do not want or need the service, or because they can 'self-supply'). Even looking at direct alternatives, the IR does not consider the range of providers which Visa (and Mastercard) have identified and which are available to merchants (with the PSR not having consulted any merchants on this topic), and makes assertions about Visa's advantage in providing a one-stop shop solution without any evidence.

---

5 To the extent this response does not comment on any part of the IR, this should not be understood as Visa's agreement with those parts of the IR.

6 Source: UK Finance, *UK Payment Statistics 2024, Table 27.2*. Figure based on card networks' share of total UK transaction value in 2023.

7 [✂]

8 *See* FIS Study, 2022.

9 JROC, 'Recommendations for the next phase of open banking in the UK' (17 April 2023), para 1.2.

10 The PSR monitors the work of Pay.UK, the body responsible for overseeing the development of the UK's interbank infrastructure (consolidated under the New Payments Architecture). Alongside this, the PSR has responsibility for the development of Open Banking through its role on its oversight committee (the Joint Regulatory Oversight Committee).

Visa's fees are competitive, but its offer is much wider

Competitive pressures drive innovation, and the recent Future of Payments Review recognised that "*innovation appears to be occurring in the cards payments market at a significant rate*"[11] and that "*we see considerable innovation in the cards market over the coming years*"[12]. Users of Visa services value this innovation, which is one of the key 'non-price' factors through which Visa competes with other payment methods as well as a significant source of the value that Visa provides to clients and end users.

By contrast, the IR appears to have a narrow focus on profitability, fees and cost-based pricing, and does not reflect the importance of non-price factors to Visa service users. Such a focus in the IR is even less appropriate given that: (a) Visa does not provide a commodity service, but rather operates in a dynamic and competitive payments landscape, characterised by a range of different business models; and (b) the IR itself recognises that the fee levels associated with Visa (and Mastercard) are *lower* than the fees associated with popular alternative payment methods in the UK, such as American Express, PayPal and BNPL.[13] It is difficult to reconcile any notion that Visa is not sufficiently constrained on the acquirer (and merchant) side with this pricing pattern.

Additionally, the PSR's analysis of fees and profit margins in the IR leads to inaccurate results, in particular due to: (i) not adequately considering evidence that Visa's fees are competitively priced; (ii) issues in statistical models that overestimate fee increases and do not take service quality improvements into account; and (iii) a profitability benchmarking analysis that gives a false picture of the level of Visa's profitability (including by using an inappropriate benchmarking comparator set).

Overall, it is hard to understand the "*likely*" harm to UK acquirers and merchants arising from Visa's scheme and processing fees put forward in the IR. For instance, the IR does not evidence that Visa's fees or profit margins are, or are likely to be, higher than a competitive level, despite overlooking the information Visa provided which indicates that Visa's fees are competitively priced and that its profit margins are comparable to other players, including in the UK payments landscape. ***(See Technical Annexes 2 and 3 for further details.)***

Visa's significant ongoing investments generate material direct benefits for end users as well as wider benefits for the UK economy

Visa's ongoing investments generate significant direct benefits for end users, including UK merchants, which far outweigh merchants' cost of accepting Visa cards. ***(See Technical Annex 3 for further details.)*** In addition, and as set out above, evidence from customer surveys indicates that outcomes for UK SME merchants have been improving in recent years. Therefore, the comments from merchants in the IR that they have not seen adequate improvement in service are misleading – they already receive an exceptionally high level of service quality, including on the availability of the Visa network and decreasing fraud rates. Our track record has rightly set merchant expectations at increasingly high levels, year in, year out, delivered by our constant investment and focus on maintaining these outcomes in our rapidly changing world. It is more difficult than ever just to maintain the already high service quality given the increase in new threat actors. We are proud of our achievements in the UK: over 200 months of continuous availability; 99.999% processing quality, and fraud incidents occurring in less than 0.3% of transactions involving a UK issuer (a standard which Visa has maintained despite an increase in the prevalence and sophistication of threat actors).

---

11 Future of Payments Review, page 64.
12 Future of Payments Review, page 69.
13 *See*, for example, IR para 4.50.

Indeed, and as noted above, for UK merchants, the total net benefit from Visa's investments in contactless and tokenisation alone is conservatively estimated at approximately [£9-11] billion over 2017-2027. For instance, those benefits come in the form of contactless technology enabling a quicker checkout process which benefits merchants through staff wage cost savings. Tokenisation has also led to higher payment authorisation rates and reduced online payment friction, leading to incremental sales. If the IR were to take into account the demonstrably high value of the positive non-price outcomes delivered by Visa's payment system, it would likely come to a very different overall view regarding the experience of end users of Visa's services and whether the market is working well (notwithstanding the evidential and analytical concerns identified above).

Visa's client satisfaction survey results are very positive

Visa has submitted evidence to the PSR showing an unbiased view of the overall experience of Visa's customer base, which remains very positive. A recent Visa client satisfaction survey indicates that [✂] UK acquirers rated Visa at 7/10 or better and [✂] of UK acquirers rated Visa at 9/10 or better. This evidence does not appear to have been given appropriate weight in the IR's analysis.

Instead, the IR focuses on negative feedback, without recognising that an international organisation as large as Visa inevitably receives a range of feedback from clients in respect of our approaches towards communication and messaging. As a result, isolated examples of negative feedback appear to have been extended unduly to more generalised conclusions. ***(See Technical Annex 5 for further clear evidence on the improvements Visa has made and continues to make for our clients.)***

The PSR's proposed remedies

We welcome future engagement with the PSR on the objectives of any remedies.

We do not believe the IR provides evidence of any specific harms which require resolution. Overall, there are rightly very high standards that need to be met for regulatory intervention, which have not been met in the IR. ***(See Technical Annex 7 for further details).*** The PSR has proposed a wide range of remedies and, while we appreciate that this is the start of a conversation with the sector, it is difficult for stakeholders to understand the goal of each remedy and how they individually or collectively drive towards resolving any of the issues identified in the IR.

We stand by the themes we have made in earlier engagement with the PSR and, in this spirit, we want to engage constructively with the PSR on remedies. With this, and as before, we believe the following guiding principles are critical:

- **Promoting growth, competition and innovation through a proportionate approach applied equally to all.** Given the backdrop of a dynamic UK and global payments ecosystem, it is critical that any remedies that are developed are targeted, proportionate, and can be flexible as the market evolves. It is also important that the impact of any remedies on competition is understood, to help ensure that there is a level playing field across the range of products and services provided by payment service providers, card schemes and others. Trust in the payments systems should never be jeopardised.
- **Building on existing governance and engagement.** There have been considerable developments in the regulation of the payments sector in the past few years. Visa has been voluntarily sharing details of fee changes with the PSR since 2016, and with the MoUs with the Bank of England ('**BoE**') and with the Financial Conduct Authority ('**FCA**'), the PSR has built the ability to work in tandem with the other financial regulators to ensure a coordinated approach.
- **Building on the PSR's prior work from the acquirer market review**. Visa does not control acquirer pricing to merchants. One of the strengths of the four-party model is the role of acquirers as partners with their merchants – pricing services to them in ways that reflect

their merchants' needs and priorities and supporting them through their choices around payment acceptance. The PSR led the way with its card acquiring market review starting in 2018, emphasising the importance of transparency to merchants in that review, and there is an opportunity to build further on this.

We have carefully considered the extent to which the proposals are aligned with our shared ambitions. Unfortunately, we have concerns that the remedies do not further our shared ambitions and may in fact put many of them at risk. We set out below how three of the proposed remedies are likely to have material unintended consequences:

- **Requiring a pricing methodology overseen by the PSR.** Visa is concerned that this proposed remedy (including the suggestion of cost-based pricing) would risk harming competition, innovation and ultimately the interests of service users of payment systems (for example, by restraining Visa's ability to respond to changes in the competitive landscape or reducing Visa's ability to price services to reflect Visa's investments including in forward-looking innovations that significantly benefit UK merchants and consumers). Visa is also concerned that such a remedy may, in effect, amount to a price cap or price control in all but name, something that the PSR expressly considers is not appropriate (and in any case, is not justified by the findings in the IR, nor within the PSR's powers under the Financial Services (Banking Reform) Act 2013 ('**FSBRA**') s.54/55).
- **Requiring mandatory consultation on fee changes.** This would be unprecedented and is likely to significantly harm competition, innovation and ultimately the interests of service users of payment systems. Such a remedy runs the risk of forcing Visa and Mastercard to signal their future pricing intentions to one another (and the broader industry), which would be contrary to good regulatory and competition policy, and has the potential to create additional risks around security and resilience.
- **Requiring card schemes to reduce the number of services they provide.** This could require Visa to offer bundled services and reduce the choice and functionality available to clients. This would, in turn, have an adverse impact on competition, service quality and innovation, and is likely to reduce benefits for end users. For these reasons, regulatory and competition policy typically discourages 'bundling'. Visa is concerned that even a remedy which requires what we understand the PSR is terming 'fee simplification' is likely to have a similar effect in terms of reducing customer and end user choice.

In ***Technical Annex 6***, we provide further detailed observations on the PSR's proposed remedies. This includes our concerns with the legal aspects of the PSRs approach, especially given that the PSR's legal framework was not designed to allow for the implementation of some of these remedies.

There is clearly a choice ahead. Ensuring the continued progression of a market that is dynamic, innovative, and evidently producing positive outcomes for people and businesses: resilient, reliable and secure payments that are easy to take for granted. Alternatively, pursuing interventions that could have real risks without any clear upside. Such risks could include systemic failure through lack of investment; dampening of competition in the market, and the risk of the UK becoming a payments 'island', disconnected from global innovation and the associated economic growth.

We value the ongoing opportunity to work together to evolve and grow the market to allow it to contribute to economic health as it has done in the past. We look forward to working with the PSR to deliver this outcome.

VISA EUROPE'S RESPONSE TO THE PSR'S SCHEME AND PROCESSING FEES MARKET REVIEW INTERIM REPORT OF 21 MAY 2024

TECHNICAL ANNEXES

1. Technical Annex 1: Concerns with the PSR's assessment of competitive constraints

1.1 As set out in Visa Europe Limited's ('**Visa**') response to the PSR's Interim Report ('**IR**') (Visa's '**Response**'), the payment sector is characterised by strong competition driving positive outcomes. The assessment in the IR understates the level of competitive constraints that Visa faces. Technical Annex 1 explains our concerns in this regard in more detail. These concerns permeate the IR's provisional findings including on outcomes for UK acquirers and merchants. Our primary concerns with the contents of the IR include that:

(a) The IR's analysis does not properly take into account or place sufficient weight on the business documents that Visa has submitted and the third-party feedback provided to the PSR of the competitive constraints that established and growing alternative payment methods already exert on Visa;

(b) The IR does not sufficiently investigate the future growth of alternative payment methods, which are likely to grow significantly in the future and will likely replace significant volumes of card transactions; and

(c) The IR does not properly consider competitive dynamics in two-sided markets, which economic literature indicates requires determining whether the overall price structure across the two sides and non-price outcomes are efficient (including socially efficient).

Competitive constraints by established and growing alternative payment methods in the UK

1.2 Visa's business documents provided to the PSR show that Visa monitors a wide range of alternative payment methods, which it recognises constrain Visa's pricing[14] and drive its innovation. For example:

(a) The [✂] from March 2022 [✂] notes that Visa expects [✂]. The document notes that [✂].[15]

(b) The [✂] from March 2022 notes that "*[✂]*.[16]

(c) A [✂] from May 2022 explains how "*[✂]*.[17] The document specifically notes [✂].[18] Another Visa document – [✂] from September 2022 [✂]. This document notes that the [✂].[19]

(d) A [✂] from May 2022 states that there is [✂]. Visa's strategy is noted [✂].[20]

1.3 Visa's business documents recognise that it has responded to the competitive threat from alternative payment methods, including by [✂]. For example:[21]

---

14 Contrary to the IR's dismissal of the competitive constraint imposed by alternative payment methods on the basis that these do not constrain Visa's scheme and processing fees to acquirers. See, for example, IR, footnote 93: "*rapid switching to a new payment method* [...] *would not necessarily constrain the level of scheme and processing fees charged to acquirers*".

15 [✂].

16 [✂].

17 [✂].

18 [✂].

19 [✂].

20 [✂].

21 The fact that [✂]. As the IR recognises at para 6.104, [✂]. In addition, the IR admits that its approach to selecting internal documents relating to fee changes may have a sampling bias. Specifically, the IR recognises that *"by selecting*

(a) A Visa document describes how Visa's [✂].[22]Visa's [✂] is also noted as being [✂].[23] Another Visa UK [✂] highlights that [✂].[24]

(b) Visa implemented an [✂] . A [✂] explains that [✂][25]

1.4 In Annex 9 of the IR, the PSR recognises that Visa's business documents go beyond tracking other players' market performance, and instead show that Visa considers alternative payment methods to be a threat and that Visa considers itself to be price constrained as a result of this competitive threat and has responded competitively to this threat through its pricing decisions and innovation strategy.[26] These findings are not, however, given any weight in reaching the IR's provisional findings.[27] This evidence of significant dynamic competition is directly relevant to the IR's assessment of competitive constraints Visa faces with regards to its acquirer-facing pricing and non-price strategies and it was therefore necessary for it to be taken into account in the IR's provisional findings.

1.5 In addition, evidence that the PSR possesses points to these alternative payment methods already having a material presence in the UK, and that this will only grow in the near-term as a result of both consumer and merchant demand. Two-thirds of acquirers consulted by the PSR noted that they must offer payment methods other than Visa (and Mastercard), including other card schemes, digital wallets, BNPL and Open Banking, or risk losing existing customers or failing to acquire potential customers.[28] In addition, only four of 17 acquirers consulted by the PSR said they believe Visa and Mastercard face limited competition.[29] This is consistent with a 2021 external report prepared for Visa which noted that [✂].[30]

1.6 Global Payments also reports that digital wallets accounted for the largest share of UK e-commerce payments (by transaction value) in 2023 at 38%, with account-to-account and BNPL each representing 7%.[31] Further, PayPal's published reports show that it is widely accepted by UK merchants and used by UK consumers, with a PayPal-commissioned survey finding that 75% of online UK businesses surveyed offered PayPal as a payment option.[32] In addition, the IR recognises that PayPal transactions funded by non-card options already account for a significant percentage of overall payments using PayPal.[33] Similarly, Klarna already has a large presence in the UK – it is

the fee changes with the largest revenue impact in the UK, we have implicitly privileged cases in which competitive constraints may have been less pressing. It is plausible that, in the presence of competitive constraints, Mastercard and Visa may have decided against large increases of certain fees. Our selection would tend to exclude those cases, as those fee changes would tend to have a smaller revenue impact." (IR, Annex 8 para 8.131).

22 [✂].

23 [✂]

24 [✂]

25 [✂].

26 *See*, for example, IR, Annex 9 para 3.9:. "*Visa's documents also describe* [✂]. See also IR, Annex 9 paras 3.14, 3.16, 3.18-3.19 and footnote 11: "*we note that Visa's response also makes reference to:* […] *(iii) the competitive threat of alternative payment methods; we agree with Visa that potential constraints to its future revenues from its core business are not necessarily limited to "future cash displacement"*".

27 There is no basis to reject this evidence - as the IR appears to do – on the grounds that [✂] (*see* IR, Annex 9 para 3.17) and because [✂] (*see* IR, Annex 9 para 3.21). The document instead shows that [✂]. In addition, the IR itself recognises that [✂].

28 IR, Annex 1 para 1.71.

29 IR, Annex 1 para 1.77.

30 [✂].

31 Global Payments Report 2024, page 113.

32 PayPal, 'PayPal eCommerce Index 2022 Deep Dive: The UK', November 2022.

33 IR Annex 1, para 1.173. There is therefore no basis for the IR's provisional finding that PayPal poses a limited risk of rail substitution in the short to medium term (IR, Annex 1 para 1.173). Consumers can, and do, choose to use payment methods other than cards to fund their PayPal transactions and the PSR's own evidence collected from third parties indicates that [✂]of UK domestic PayPal transactions are already funded by non-card-based payment methods (IR, para 4.115).

accepted by more than 25,000 UK merchants[34] and has grown rapidly over the past few years.[35] In addition, evidence collected by the PSR from third parties indicates that a [✂].[36] [37] The IR also downplays the significance of established players such as American Express, which is accepted by approximately half of all UK card-accepting merchants[38] and the IR finds accounted for [✂] of UK credit card transactions from 2018–2021.[39] This is why Visa's business documents show that it considers alternative payment methods to be very important competitors.

The likely future growth of alternative payment methods

1.7 The IR does not sufficiently investigate the likely future growth of alternative payment methods and instead bases its provisional findings on an incorrect view that alternative payment methods do not pose a credible threat currently or in the very near future (as explained above).[40] This static approach to assessing competition is not appropriate in the context of a forward-looking review of a dynamic and innovative market as well as statements in the IR itself that the PSR considers it important to look at the likely evolution of the competitive landscape over the next three to five years.[41]

1.8 [✂] .[42] [✂]. There is evidence that rail substitution by digital wallets and BNPL is credible and that this will have a significant effect on the share of card transactions in the UK. Apple has been expanding in payment services, including soft-launching a new iPhone wallet app that is integrated with the UK's Open Banking framework, and could credibly begin accepting or switching to Open Banking in the future.[43] [✂].[44] Similarly, Klarna announced in March 2024 that it is launching an Open Banking-enabled payment option that allows UK customers to fund BNPL transactions directly from their bank account.[45] Acquirer feedback received by the PSR similarly notes that "*if – as is expected – these payment methods will also offer (or move over entirely) to other rails such as bank transfers, this will significantly reduce the card share of the market*".[46] At a minimum, the threat of such a transition represents a current price constraint on Visa as increasing prices above competitive levels is likely to encourage players [✂] to increase or accelerate their plans.

1.9 Visa also notes that the PSR has not consulted any UK consumers, and has consulted only a very small number of UK merchants which the IR recognises are not representative of the overall merchant population in the UK.[47] In assessing constraints specific to the supply of optional

---

34 Klarna UK, 'Why Klarna Is a Long Term Growth Partner for Retailers',

35 Klarna, 'Europe Turns Pink: Klarna Announces Huge Growth in Key European Markets', August 2023.

36 IR, Annex 1 para 1.198.

37 Visa also notes the IR's reference to [✂] (IR, Annex 1 paras 1.196 and 1.205). This is not supported by evidence cited in the IR. From the perspective of both merchants and consumers, BNPL offers an alternative payment method to Visa cards and, in this way, BNPL providers are a competitive constraint. In addition, consumers can, and do, choose to use payment methods other than card to fund their BNPL transactions as indicated by evidence gathered by the PSR from one BNPL provider who noted that "*non-card payment methods constitute a large proportion of funding transactions in the UK*" (IR, Annex 1 para 1.203).

38 Digital & Card Payments Yearbooks, European Region, UK, Statistical Yearbook 2021/2022.

39 IR, Annex 1 para 1.306.

40 *See*, for example, IR, paras 1.16 and 4.123.

41 IR, Annex 1 para 1.4.

42 [✂]

43 New Apple Pay feature helps users access account information more conveniently - Apple (UK).

44 [✂]. Visa notes the PSR and FCA joint call for information on big tech and digital wallets (CP24/9, July 2024) in which the PSR recognises that Apple and Google's mobile ecosystems are "*each characterised by large installed bases, strong brand attachment and network effects*" which allow them, in principle, to "*determine the extent to which rivals are able to access and integrate their payment options*". The paper then acknowledges the threat of rail substitution stating that, in future, "*Digital wallet providers that currently offer pass-through services may no longer rely on existing card schemes or payment rails.*" (CP24/9 paras 3.7 and 5.3).

45 Klarna International, 'Klarna adds open banking settlements for 18 million consumers and 32,000 retailers'.

46 IR, Annex 1 para 1.115.

47 IR, Annex 2 para 2.83.

services, the IR also states that no direct merchant feedback was collected.[48] The IR therefore does not take into account the views of an important group of end users of Visa's (and other) payment systems, including their views on the current and potential future competitive landscape of payments in the UK. This is a critical gap in the PSR's evidential base.

1.10 There is nevertheless evidence that the PSR possesses which supports the view that alternative payment methods are likely to grow significantly in the future (and within the timeframe noted in the IR as being relevant to the PSR's assessment, i.e. three to five years), and will likely replace significant volumes of card transactions. One acquirer told the PSR that "*it anticipates a considerable uptake in* […] *alternative payment options and forecasts this to continue in the coming five years*".[49] Other acquirers noted that card usage is expected to flatten in the future, other payment methods are expected to continue to grow[50] and "*competition from outside the card ecosystem will increasingly be a feature of the UK payments market*".[51]

1.11 Consistent with feedback received by the PSR, Visa notes that BNPL is expected to be the fastest-growing e-commerce payment method in the UK through to 2025.[52] Open Banking payments have almost doubled between 2022 and 2023, with 130 million Open Banking payments in 2023 compared with 68 million in 2022,[53] and are expected to continue to grow significantly as a result of strong regulatory and Government support including PSR-led initiatives.[54] Indeed, the Sixth Open Banking Impact Report notes that "[t]*here is no sign of a slow-down in the growth trend*".[55] The IR states that open banking will likely be an effective alternative to cards in the future.[56] This is further supported by stakeholder feedback, with most acquirers (8 of 11) noting that Open Banking has the potential to "*grow and/or act as a potentially strong competitive threat in the future*",[57] and all Payment Initiation Service Providers ('**PISPs**') consulted by the PSR stated that they "*plan to grow their* [Open Banking] *business in the next few years*".[58] One PISP explained that it could take only "*a couple of years to produce an open banking product which can compete with cards*".[59] The PSR should consider this evidence when carrying out this market review.

1.12 There are also clear examples of rapid market disruption which illustrate that the payment landscape can rapidly evolve in response to entry and expansion. For example in Sweden, 21% of e-commerce transactions were paid using BNPL in 2023, materially overtaking credit and debit cards (at 16% and 14% respectively).[60] In Denmark, the digital wallet MobilePay only took three years from launch to obtain 3 million users (out of a total population of approximately 5.9 million), and now has more than 4.4 million users.[61] In Poland, Blik offers an A2A solution that was first introduced in 2015 and grew rapidly to account for almost 70% of e-commerce spending in Poland in 2022.[62]

48 IR, para 4.166.
49 IR, Annex 1 para 1.74.
50 IR, Annex 1 para 1.77.
51 IR, Annex 1 para 1.79.
52 FIS Global, 'Global E-commerce Market Projected to Grow 55 Percent by 2025', March 2022.
53 Open Banking Limited, Sixth Open Banking Impact Report, March 2024.
54 The open banking Joint Regulatory Oversight Committee published its recommendations and actions paper in April 2023, noting that its proposed roadmap for *"lay*[ing] *the groundwork for the end state* [for open banking]" is *"ambitious … but … is achievable*". JROC, 'Recommendations for the next phase of open banking in the UK' (17 April 2023), paras 1.20 and 1.21. See also Chris Hemsley's speech at the Payments Regulation and Innovation Summit 2024 in which he states that open banking "*is the payment sector's way forward*" and that the PSR's five-year strategy includes expanding open banking in payments.
55 Sixth Open Banking Impact Report, Adoption Analysis (March 2024).
56 IR, para 1.16.
57 IR, Annex 1 para 1.237.
58 IR, Annex 1 para 1.268.
59 IR, Annex 1 para 1.272.
60 Global Payments Report 2024, page 109.
61 Danmarks Nationalbank, Payment Habits in Denmark
62 Bloomberg, Fintech Plotting EU Mobile Payments Revolution Expands Abroad.

In addition, even subtle actions taken by UK merchants to encourage consumers towards alternative payment methods can have a material impact on Visa's business. For example, Revolut introduced a 'top up by bank transfer' feature in 2021 which it lists as the 'Recommended' funding option over using card. Visa's data indicates that [✂].[63] These factors point to, and further support, the magnitude of the threat from alternatives and the need for Visa to respond competitively to this – as explained in further detail above.

Competitive dynamics in two-sided markets

1.13 While the IR recognises that Visa operates a two-sided payment system,[64] it justifies regulatory intervention on the basis that Visa (and Mastercard) do not face sufficient competitive constraints from one side, i.e. acquirers and merchants.[65] This is not, however, supported by economic principles underpinning the assessment of two-sided markets.

1.14 A key feature of 'platform markets' such as cards is that a full understanding of the competitive constraints that the platform firm faces is only possible by analysing competitive constraints on both sides of the platform.[66] Not doing so means that any assessment will not reflect the true competitive pressures that the platform firm faces. The analysis in the IR does not take into account the wealth of evidence that Visa faces significant competitive constraints in attracting card users. These competitive constraints both affect Visa's ability to set prices on the issuing side, and its ability to set prices on the acquiring / merchant side, since any reduction in the acceptability of Visa by merchants could also harm usage of cards by consumers.

1.15 Moreover, there is nothing unusual or wrong about competitive constraints that differ across the two sides of a platform market.[67] Whenever users on one side of a platform have more elastic demand (e.g. consumers choose between different payment methods at point-of-sale)[68] and users on the other side have less elastic demand (e.g. merchants seek to accept a range of payment methods based on consumer preference), platforms will typically recoup more revenue on the side of the market with less elastic demand. This competitive outcome is not unique to payment systems and can be observed across a range of two-sided markets. Economic theory or literature does not support an assumption that asymmetric competitive constraints and pricing in two-sided markets lead to inefficient or harmful outcomes. Rather, it is necessary for regulators to investigate (as other regulators have done in the past) actual market behaviour and outcomes using appropriate tools and analytical benchmarks, including to determine whether the overall price structure between the two sides of the market and non-price outcomes are socially efficient. As explained in Technical Annex 2, the evidence cited in the IR and available to the PSR does not support a provisional finding that Visa's fees are likely causing harm to UK acquirers and merchants, and instead points to the market working well for both UK merchants and consumers.

63 Visa analysis [✂].
64 IR, paras 3.12-3.13.
65 *See*, e.g. IR para 4.177.
66 OECD, Market Definition in Multi-Sided Markets, June 2017, pages 9-11.
67 This is contrary to the position that appears to be adopted in the IR, *see* paras 1.21, 6.150-6.154.
68 As recognised in the IR – *see* para 4.44, with data indicating that 37% of UK debit cardholders carry more than one debit card and 45% of credit card holders carry more than one credit card.

2. Technical Annex 2: Concerns with the PSR's technical methodology for assessing Visa's fee changes and profitability

2.1 As set out in our Response, the UK payments sector is competitive and produces good outcomes across multiple dimensions. The analysis of fees and profit margins in the IR does not reflect this and as a result leads to inaccurate results. Technical Annex 2 explores Visa's concerns with the technical methodology applied in the IR for assessing Visa's fee changes and profitability.

2.2 The IR does not provide an appropriate basis to conclude that Visa's fees or margins are, or are likely to be, higher than a competitive level. We have three main concerns:

(a) **The IR does not seem to consider and assess the evidence of important non-price outcomes for UK acquirers and merchants, including the significant value delivered by Visa for all end users as a result of Visa's investments in innovation, resilience, safety and security, and instead narrowly focuses on Visa's fees and profitability.**

(b) **The IR's assessment of the change in Visa's scheme and processing fees does not appropriately measure the change in fees and misses important context on the wider competitive environment within which Visa operates.**

(c) **The IR's profitability assessment cannot be relied upon to draw conclusions on whether the market is working well for UK acquirers and merchants, given the fundamental limitations of the exercise and that it uses an inappropriate comparator set.**

Issues concerning the assessment of Visa's fee levels and changes in Visa's fees in the IR

2.3 Intervening with market signals is considered one of the most intrusive forms of regulatory intervention. Such a regulatory response could only be justified by fully evidenced findings that Visa's fees are unjustifiably high. The fact that Visa's fees have increased is not itself sufficient to justify regulatory intervention of the kind proposed in the IR; it is instead necessary to establish that Visa's current fee levels are unjustified, e.g. with reference to an appropriate competitor benchmark(s) or to the value derived by end users from Visa's payment system and services. The IR does not include such an assessment.

2.4 Visa has additional concerns with the IR's assessment of the change in Visa's scheme and processing fees, including that it does not appropriately measure the change in fees, misses important context on the wider competitive environment within which Visa operates and the significant value delivered by Visa for users of its payments system.

The evidence shows that the level of Visa's acquirer fees is competitive

2.5 The IR does not adequately consider evidence that Visa's acquirer scheme and processing fees are competitively priced. The IR recognises that the fee levels associated with Visa (and Mastercard) are *lower* than the fees associated with popular alternative payment methods in the UK, such as American Express, PayPal and BNPL,[69] and that Visa's scheme and processing fees represent a

[69] *See*, for example, IR para 4.50: "*Merchants, however, would have in most cases no incentive to try to steer customers from Mastercard or Visa towards American Express, as the fee levels associated with American Express would be higher.*" See also IR para 4.54 ("*we note that the fees PayPal charges merchants are* [✂] *than the MSC paid on Mastercard and Visa transactions. Merchants, therefore, may have an incentive to accept PayPal as a payment method to increase their sales, but have limited incentive to steer customers from Mastercard or Visa towards PayPal in response to an increase in scheme or processing fees*") and IR para 4.55 ("*merchants accept BNPL solutions as payment methods, despite their providers typically charging much higher fees than for card transactions*"). See also IR footnote 201.

very small fraction (less than 20%) of overall merchant acceptance costs for Visa (and Mastercard) cards.[70]

2.6 The PSR previously found in its card acquiring market review that the weighted average merchant service charge for four-party card transactions in 2018 was just 0.6%[71] and that the smallest merchants paid around 1.8%.[72] By comparison, American Express costs UK merchants as much as 3.95% + €0.11,[73] PayPal charges 2.9% + £0.30 for UK domestic transactions,[74] and Klarna costs 4.99% + £0.20 + €0.11 (Pay Over Time) or 2.90% + £0.20 + €0.11 (Pay Later) for UK transactions.[75]

2.7 Further, and based on the PSR's previous findings on the weighted average merchant service charge ('**MSC**'), even assuming Visa's scheme and processing fees had increased by 50% since 2018 (and assuming this was fully passed on to merchants which Visa does not agree with for the reasons set out below), the cost of acceptance of a Visa card would still today be materially less than these alternatives, with an MSC of less than 0.7% (and less than 1.9% for smaller merchants).

2.8 In this respect, it is also noted that [✂]

Figure 1 – [✂]

2.9 It is difficult to reconcile any notion that Visa is not sufficiently constrained on the acquirer (and merchant) side with this pricing pattern.

2.10 Rather, this pricing pattern is consistent with the evidence set out in Technical Annex 1, that Visa is constrained (including in the fees charged to acquirers) by a range of alternative payment methods and by the threat of entry and expansion. The IR does not engage with these considerations.[76] It seems to us surprising that the IR instead relies on this pricing pattern as a basis for finding that Visa is *not* effectively constrained, arguing that Visa's lower cost of acceptance reduces the incentive of merchants to encourage consumers to use other means of payment.[77] There is no basis to find a *lack* of competitive constraint (and, on that basis, harm to acquirers and merchants) because Visa is significantly cheaper for merchants to accept – and offers competitive and often greater functionality – than popular payment alternatives.[78]

---

70 *See*, for example, IR para 4.91, and footnote 166: "*Assuming, for example, an overall 50% real increase in scheme and processing since 2018 and no real increase in the other components of the MSC would lead to scheme and processing fees growing to approximately 20% of the MSC.*"

71 PSR, Market review into card-acquiring services Final report, Figure 11 (p. 69).

72 PSR, Market review into card-acquiring services Final report, Table 7 of Annex 2 (p32). This 1.8% figure is consistent with the fact that even the most expensive offerings targeted at the smallest merchants offer fees well below 2%. For example, Sumup's pay as you go pricing for face to face transactions is 1.69%.

73 *See* Adyen's website.

74 PayPal (UK), Merchant Fees.

75 *See* Adyen's website.

76 IR, paras 6.32-6.33.

77 *See*, for example, IR para 4.50: "*Merchants, however, would have in most cases no incentive to try to steer customers from Mastercard or Visa towards American Express, as the fee levels associated with American Express would be higher.*" See also IR para 4.54 ("*we note that the fees PayPal charges merchants are* [✂] *than the MSC paid on Mastercard and Visa transactions. Merchants, therefore, may have an incentive to accept PayPal as a payment method to increase their sales, but have limited incentive to steer customers from Mastercard or Visa towards PayPal in response to an increase in scheme or processing fees*") and IR para 4.55 ("*merchants accept BNPL solutions as payment methods, despite their providers typically charging much higher fees than for card transactions*"). See also IR footnote 201.

78 *See*, for example, IR para 6.60.

Visa's investments in innovation, resilience, safety and security generate significant value for UK merchants and consumers

2.11 Furthermore, the IR does not adequately reflect evidence that the PSR possesses which shows that Visa's scheme and processing fees fund the significant investments Visa makes to improve the payment experience, for the benefit of all participants and end users of Visa's payment system including UK merchants and consumers.[79] For example (and as set out in more detail in Technical Annex 3 below), Visa invests significantly and continuously to:

(a) ensure a reliable, resilient and safe payments infrastructure, achieving a 99.999% processing quality and with fraud incidents occurring in less than 0.3% of transactions involving a UK issuer,[80] a standard which Visa has maintained despite an increase in the prevalence and sophistication of threat actors; and

(b) develop and innovate its payment system to deliver increasing value for all customers and end users by, for example, developing new services and investing to improve existing services.

2.12 Visa's services are highly differentiated and have changed over time, in a market in which competition takes place, and benefits are delivered, over multiple dimensions. Indeed, as demonstrated in Technical Annex 1 above and Technical Annex 3 below, Visa competes (and provides benefits to users) on the basis of a wide set of price <u>and</u> non-price considerations particularly with regards to safety, reliability, resilience and innovation, and Visa's investments generate significant direct and wider benefits to UK merchants, UK cardholders and the UK economy. Despite this, the analysis in the IR which focuses solely on Visa's fee increases and margins is most appropriate for commodity goods or services, and as a result risks leading to regulatory approaches that have adverse unintended consequences.

The econometric modelling in the IR risks overstating the extent of increases to Visa's fees

2.13 The 'main models' relied on in the IR do not accurately measure changes in fees over time and risk leading to an overestimated view of the magnitude of increases to Visa's fees between 2019 and 2022.

2.14 Firstly, the 'main models' (V3-V6) relied on in the IR suffer from misspecification issues. A more appropriate specification for the IR to rely on – either instead of the 'main models' (specifications V3 – V6) or in addition to – is the V2 specification which excludes problematic controls and is therefore less likely to suffer from model misspecification issues.

2.15 Model misspecification arises when a regression model does not properly reflect the factors driving the dependent variable of interest. A well specified model needs to include an appropriate set of explanatory variables and accurately capture how these variables influence the dependent variables. Incorrect specification can provide misleading estimates of the regression coefficients, resulting in inaccurate results.[81] For example, inclusion of irrelevant (or marginally relevant) explanatory variables can lead to the problem of 'overfitting'.[82] Overfitting through the inclusion of too many explanatory variables risks suggesting relationships between the dependent and explanatory variables that are not representative of market reality. Overfitting can ultimately lead to a reduction

79 *See*, for example, Visa's submission [✂].
80 Visa's [✂].
81 For example, see discussion of issues that can result from model misspecification in Cameron, A.C. and Trivedi, P. K. (2009), *Microeconometrics methods and applications*, pp. 90-95.
82 J. M. Wooldridge, *Introductory econometrics: a modern approach* (5th edn, 2012) pages 303-326-. J. D. Angrist & J. Pischke, *Mostly Harmless Econometrics: An Empiricist's Companion* (2009) pages 38-47.

in a model's efficiency in accurately estimating the relationships being investigated[83] and, with respect to the IR's assessment, leads to a higher estimate of fee changes than when the additional controls are omitted.

2.16 While the IR recognises that model specification is important for the robustness of the econometric analysis' findings and that it has a relatively small sample size,[84] the IR nevertheless relies on the V3-V6 specifications over V2. In fact V3-V6 are likely to suffer from the overfitting issues set out above whereas V2 is more robust as it is based on fewer variables and therefore has additional degrees of freedom, and retains a high adjusted R-squared. There is no structural rationale for the inclusion of certain additional control variables in V3-V6, namely the share of[✂][85] [✂]. Visa's acquirer fees have [✂]. As such, the [✂] of an acquirer's transactions in a year are not structural drivers of *gross fees paid as a proportion of transaction value*.[86] All of the remaining additional control variables have little – if any – explanatory power, and could confound the results of the analysis.[87] As such, there are good reasons to doubt whether these additional controls included in V3-V6 are appropriate for the IR's modelling. Overall, this indicates that the IR should, at a minimum, place more weight than it does on specification V2.

2.17 Secondly, the IR primarily relies on models that include all fees charged by Visa to acquirers, including fees for optional services, which results in an overestimate of Visa's fee increases. The inclusion of optional fees is not appropriate as they are charged by Visa for new and innovative services, many of which were introduced part-way through the period under review. Because the IR's regressions do not control for the value of these new, optional services, this creates an upwards bias in the IR's estimates of Visa fee changes.

2.18 Correcting for these two errors leads to significantly lower estimates of increases in Visa acquirer fees. **Table 1** below shows the IR's V2, which regresses the *log of gross fees paid by as a proportion of transaction value* on dummy variables for each financial year and controls for acquirer-specific differences. The IR's V2 specification – which excludes potentially problematic control variables – indicates that Visa's acquirer fees have increased by [✂] between 2019 and 2022[88] and estimates an [✂] of [✂] when focusing on mandatory fees[89]. These findings are significantly lower than the [✂] increase relied on by the IR based on the V3-V6 'main models'.

---

83 Cameron, A.C. and Trivedi, P. K. (2009), *Microeconometrics methods and applications*, page 93.

84 IR, Annex 7 paras 7.49a and 7.67a.

85 The share of [✂] is only a driver of scheme and processing fees for issuers, not acquirers. [✂].

86 As previously explained to the PSR, [✂].

87 Some of these controls show very limited within-acquirer variation between 2019 and 2022 and therefore provide little (if any) further explanatory power above and beyond the acquirer dummy variables. This is especially the case where large acquirers (e.g. [✂]) show little variation as the IR's main models are weighted by acquirer transaction value. Similarly, the [✂]is highly correlated with the [✂] transactions when weighted by transaction value (correlation coefficient of [✂]). None of these controls are individually statistically significant in V3-V6, except for the share of credit transactions in V6 which is only significant at the [✂] level.

88 To calculate the estimated percentage increase in acquirer gross fees paid by as a proportion of transaction value between 2019 and 2022 we raise e to the power of the coefficient on the 2022 dummy variable: [✂].

89 [✂].

Table 1: Regression results adjusting for selected errors in the IR's analysis

Variable	Excluding potentially problematic control variables*	Excluding potentially problematic control variables and analysing mandatory fees only
2018	[✂]	[✂]
	[✂]	[✂]
2020	[✂]	[✂]
	[✂]	[✂]
2021	[✂]	[✂]
	[✂]	[✂]
2022	[✂]	[✂]
	[✂]	[✂]
Acquirer Fixed Effects	[✂]	[✂]
N	[✂]	[✂]
Adjusted R-squared	[✂]	[✂]

*Note: *Results are as per the 'V2' specification presented in IR, Annex 7 Table 13.*

2.19 Thirdly, these results present an incomplete picture and overstate the extent of fee increases as they do not account for increase in service quality over time. As explained in further detail in Technical Annex 3 below, Visa invests significant amounts to continuously improve existing services and innovates to develop new services and functionalities, for the benefit of all end users including UK merchants. Any assessment of increases to Visa's fees must take this important context into account. The IR's econometric analysis does not, however, include adjustments for changes in service quality and innovation in its dependent variable.[90]

2.20 The approach taken in the IR would only be appropriate if there had been <u>no</u> improvements to service quality between 2019 and 2022. This is not the case and is inconsistent with evidence submitted to the PSR and Visa's customer surveys (as explained in Technical Annex 3 below) which shows that Visa's service quality has continuously been improving as a result of Visa's significant investments. The IR recognises that Visa has introduced new and improved services, that there have been improvements to security and reliability over time, and that Visa's innovation has brought benefits to UK acquirers and merchants.[91] None of these considerations are reflected in the IR's econometric analysis nor more widely in the IR's assessment of Visa's acquirer fees.

[90] There are analytical methods which can be used to capture changes in quality in a regression analysis (e.g. including a 'deflator' on prices to reflect service quality changes, as described in Abdirahman, M. et al (2020), '[Telecoms Deflators: A Story of Volume and Revenue Weights](#)'. This issue is likely to be more acute as a result of the IR's reliance on econometric results that look at cumulative fee increases over a longer time period, i.e. focusing on the coefficient on the 2022 year dummy variable, which measures the change in fees from the base year (2019) to 2022. It is more likely that quality improvements and innovations will be introduced over a longer period of time, thus further impacting the robustness of the IR's econometric analysis. In addition, any inflationary impacts that have not been accounted for will compound and be more significant over a longer time period.

[91] IR, paras 6.48, 6.49 and 6.54.

The IR does not, for example, include any assessment of whether the overall fees paid by merchants reflect the value that merchants derive from Visa's payment system and may be justified by the significant investments Visa has made in security, resilience, reliability, service quality, and innovation, all of which significantly benefit UK merchants and consumers.

2.21 Separately, a further error the IR makes is with regards to the treatment of 'Other fees' in Table 2 and Figure 31 of Annex 6. As explained previously to the PSR, these fees do not have transaction value or transaction volume as drivers, and as such looking at the change in these fees as a percentage of transaction value is uninformative and misleading. In particular, we note the high variation and no trend in these fees as reported in Table 2 of Annex 6, further suggesting that this metric is not informative. As such, these fees should be omitted from Table 2 and Figure 31 of Annex 6.

There is an insufficient evidentiary basis to conclude that fee increases are passed on to UK merchants

2.22 The econometric estimates are based on fee data for acquirers and as such provide no information or evidence regarding pass-through of fees from acquirers to merchants. Overall, there is an insufficient evidentiary basis for the IR to conclude that all acquirer scheme and processing fee increases are automatically passed on to UK merchants.[92] We note that:

(a) As the PSR found in its card acquiring market review, the vast majority (i.e. over 95%) of UK merchants are on standard or fixed contracts where it is at the acquirer's discretion whether (and the extent to which) scheme and processing fees are passed on to the merchant.[93]

(b) The PSR has not carried out a quantitative analysis of acquirer data in order to make findings on the extent of any pass-on to merchants[94] and instead relies on:

(i) Historical analysis carried out as part of the card acquiring market review, which the PSR recognised at the time was "*less strong*" due to "*concerns about the data on scheme fees that underpin the pass-through analysis*".[95]

(ii) General feedback from acquirers that they would pass 'most' fee increases on to merchants "*at some point*" and "*possibly with a lag*", and even then from [✂].[96]

(iii) Feedback from only the largest merchants, which the IR recognises are not representative of the overall merchant population in the UK and are likely to be on IC++ contracts.[97] Even then, the PSR has not robustly tested with merchants the extent to which they observed changes to the fees they pay and whether these can be attributed to changes in Visa's acquirer fees. The evidence cited in the IR shows widely varying estimates from merchants as to how their fees have changed (with some responses indicating increases far lower than those estimated by the PSR, including one merchant indicating an increase of only 12% since 2017).[98]

---

92 *See*, for example, IR para 1.16: "*Acquirers typically pass-through scheme and processing fees in full to merchants.*"
93 PSR Card acquiring market review Final report, para 3.64.
94 Visa notes that the PSR did carry out such an assessment as part of the card-acquiring market review but has chosen not to do so for this market review.
95 PSR Card acquiring market review Final report, para 5.66.
96 IR, para 4.127.
97 IR, para 3.11 and IR, Annex 2 paras 2.83 and 2.86.
98 IR, para 6.98.

2.23 A number of factors point to acquirers being unlikely to automatically pass-on fee increases to merchants. In particular, acquirers may be unable to (given contract terms with merchants) or decide not to make changes to their merchant contracts when Visa fee increases are applied. Acquirers may decide that the cost of making these changes (e.g. management, administrative, and customer service costs) outweigh the fee increase. Acquirers facing strong competition may also choose not to implement fee changes (or only pass-through some of the fee increases they face) to the extent this risks merchants switching to acquirers that have not reflected these changes in the MSC.

Issues concerning the profitability assessment in the IR

2.24 As explained in Technical Annex 3 below, a narrow focus on % EBIT margins is not an appropriate basis to conclude on whether the market is working well for UK acquirers and merchants, and regulatory intervention based on such a narrow assessment risks creating unintended consequences. It does not reflect the wider context that Visa operates in a competitive landscape which is characterised by significant non-price competition and service innovation and that Visa's four-party model means that Visa's EBIT margin is likely to be erroneously inflated relative to alternative payment methods.

2.25 In addition, the IR's profitability assessment suffers from fundamental flaws and cannot be relied on to make any legally sound findings on the likelihood that Visa's fees cause harm to UK acquirers and merchants, as we go on to explain below.

The profitability comparator set used in the IR is not appropriate

2.26 There is no basis to conclude (as the IR does) that eftpos and OFX are the "*best available*" or even "*sufficiently similar*" comparators in terms of operations and risk profile to Visa (and Mastercard).[99] The IR itself acknowledges that these comparators have materially different operations to Visa and can only be considered sufficiently similar to Visa when considered together.[100]

(a) eftpos is a domestic, debit card-only payment system which does not offer credit cards and international payment services,[101] and is a member-owned organisation.[102] Its operations, business model and risk profile are therefore materially different to Visa's UK operations, which include a mix of transaction types and is operated as a commercial business. Eftpos cannot therefore be a rational comparator for Visa's UK operations. In addition, and as explained in further detail in Technical Annex 3, the IR does not recognise that the comparatively low margins of domestic-only schemes like eftpos results in very low levels of investment in innovation, which further points to eftpos being an inappropriate comparator to Visa's business.

(b) OFX only provides foreign exchange services,[103] which Visa understands relates to the provision of remittances and consumer-to-consumer transfers. This is not reasonably comparable to the wide range of services Visa offers with regards to its card payment system. For example, OFX offers significantly fewer consumer and merchant benefits than

99 IR, Annex 10 para 6.152.

100 IR, Annex 10 paras 6.67-6.68. There is nothing in economic theory or literature which supports an approach that relies on the individual margins of inappropriate comparators.

101 IR, Annex 10 paras 6.51 and 6.53.

102 IR, Annex 10 para 6.57. The IR considers that it is "*plausible*" that eftpos' margins are risk reflective despite it being a member-owned business. The IR does not provide any evidence to support this assumption, and relies on peculiar reasoning that margins for eftpos may be risk-reflective because its owners are a diverse set of organisations with differing incentives.

103 IR, Annex 10 para 6.60.

a Visa card, with money transfers using OFX typically irrevocable once processed[104] compared with the extensive merchant and consumer protections offered by Visa. In addition, the IR recognises that OFX operates on a much smaller scale (i.e. processing much fewer transactions) compared with Visa[105]. All of these factors point to OFX having a materially different business operation and risk profile to Visa's UK operations.

(c) The IR does not investigate whether other differences between these comparators and Visa, for example with regards to their efficiency level, innovation, stage of the firm life cycle, further point to them not being suitable comparators to Visa.[106]

2.27 Visa agrees with the IR that PayPal is not an ideal comparator but notes that it is a more suitable comparator than eftpos and OFX. Nevertheless, any like-for-like comparison between PayPal and Visa's margins must account for the differences between their business models, as explained in Technical Annex 3 below.

2.28 The IR excludes American Express and Diners/Discover despite these being more appropriate than eftpos and OFX. Similar to Visa (and Mastercard), American Express and Diners/Discover both operate card-based payment systems that support domestic and international payments, as well as offering credit cards.[107] While credit-related services make up a greater portion of their businesses comprise, this difference is less substantial than the differences between Visa and the IR's selected comparators. [108] Further, the IR's assertion that the margins of American Express and Diners/Discover might not be representative of a competitive level has no evidential basis. The fact that they are widely accepted (either in the US or for specific merchant segments) is an indication of competition working well and of merchants exercising choice. In addition, the evidence set out above in Technical Annex 1 shows that the UK payments landscape is competitive.[109]

2.29 Visa's margins are unlikely to be unduly high when assessed against a wider and more robust range of comparators. In particular, the IR dismisses a range of companies that are [✂],[110]and [✂]. For example:[111]

(a) [✂].[112] [✂].

(b) [✂].

2.30 In addition, suitable comparators can include companies that operate in a different market or sector where they nevertheless have sufficiently similar business operations and risk profile.[113] Visa has significant similarities with players in other competitive markets that operate a global two-sided network which involves significant and continuous investments in technology and innovation.[✂]:

(a) [✂]**.**

(b) **[✂]**.

---

104 OFX, '[How Can You Avoid Money Transfer Scams?]'
105 IR, Annex 10 para 6.64.
106 *See* for example, [OFT guidelines] for conducting comparative profitability margin analysis (para 7.36).
107 IR, Annex 10 para 6.26-6.27.
108 *See* IR, Annex 10 paras 6.27-6.28.
109 IR, Annex 10 paras 6.33 and 6.37.
110 The IR dismisses these potential comparators on the basis of [✂]. However, as the IR recognises[✂].[111] For each company, the EBIT margin shown is the average EBIT margin for 2018-2022.
111 For each company, the EBIT margin shown is the average EBIT margin for 2018-2022.
112 [✂].
113 *See* IR, Annex 10 para 6.155(c) for the basis on which the IR dismisses [✂] and [✂].

2.31 The IR's choice of comparators is selective, and any assessment of Visa's (and Mastercard's) profitability on this basis cannot be relied on to make legally sound findings on whether Visa's fees cause harm to UK acquirers and merchants.

There are significant limitations in using published financial accounts for a margins comparison exercise

2.32 The IR relies on accounting-based profit margins, calculated by reference to published financial statements and reflecting individual accounting standards, judgements and policies. This is not, however, representative of economic measures of profitability. Importantly, accounting practices can differ significantly between firms, which limits the comparability of profit margins calculated from published financial statements. For example, companies may have different accounting standards or apply different policies and judgements, which can result in significantly different margins. These standards and policies relate to, for example, whether research and development costs are capitalised or expensed, the recognition of assets and hence depreciation or amortisation that is not recognised if internally generated, estimates of the useful economic life of assets, impairment policies, the treatment of one-off costs, and the effects of leasing assets. Differences between companies' margins can therefore be driven by a range of factors, including true differences in profitability or differences in accounting practices, and as such a comparison of % EBIT margins calculated based on published accounts is an imprecise indicator of profitability. This limits the robustness of the IR's profitability comparator assessment and is, further exacerbated by the PSR's decision to rely on only three potential comparators.

2.33 This problem permeates other aspects of the IR's comparator analysis, including by understating PayPal's estimated margins and relying on a flawed cross-check of the margins of FTSE 100 companies, as described below.

2.34 The IR does not appropriately adjust PayPal's accounting data to ensure better comparability with Visa's published accounts. Certain adjustments are required to account for a consistent treatment of R&D. Visa highlighted to the PSR the necessary adjustments, which results in an adjusted average PayPal margin of 27% over the five-year period under review.[114] In addition, Visa notes that Mastercard also proposes adjustments to PayPal's margin to improve its comparability. Specifically, these adjustments relate to interchange and network fees and the exclusion of acquiring services, which may increase PayPal's margins by 10pp and 5pp respectively.[115] The IR instead considers that other adjustments could operate in opposite directions (i.e. to reduce PayPal's margins)[116] but does not explain what these 'other factors' may be or the size of the potential effect these might have on PayPal's margins. The IR therefore relies on an unadjusted margin for PayPal which is likely to understate its true margins relative to Visa (and Mastercard). In any event and as explained in Technical Annex 3 below, these margins should be compared with Visa on a like-for-like basis, i.e. accounting for differences between four-party and non-four-party payment models.

2.35 The IR also relies on a cross-check against the margins of certain FTSE 100 companies which is of limited value. There is a high degree of uncertainty with regards to how these published datapoints on margins and capital intensity are calculated. In particular, differences in company-specific accounting policies can have a material impact on the published figures, limiting the weight that can be placed on this data for a comparative exercise. For example, accounting data may provide an inconsistent picture of a company's capital intensity. Companies investing in fixed assets can capitalise these assets at cost and potentially revalue them over time. On the other hand, internally

114 IR, Annex 10, paras 6.151(c) and 6.153.
115 IR, Annex 10, para 6.120.
116 IR, Annex 10, para 6.127.

generated intangibles are not recognised under accounting rules but should be recognised when conducting an economic profitability assessment.[117] Indeed, the IR's cross-check under-estimates [✂], resulting in a misleading and incorrect view that Visa employs very little capital relative to its profit margin. In any event, Visa notes that the IR's cross-check includes several companies with [✂]. The IR provides very limited consideration of these companies and instead states (without evidence) that these firms might not operate in a competitive market.[118]

The UK profitability margin data provided by Visa is a more reasonable reflection of Visa's UK profitability

2.36 Any approach to estimating the profitability of Visa's UK operations will face challenges given the global nature of Visa's business, which offers a wide range of services across geographies and does not report UK or product line profitability.[119] Any methodology used to allocate costs and revenues from the Global or European businesses to the UK is therefore likely to require caveats and contain certain unavoidable limitations. Given this, Visa has engaged extensively with the PSR during the course of this market review to generate the 'fully-loaded' UK P&L accounts. This has included presenting evidence that an activity-based costing ('**ABC**') allocation is not feasible due to the level of common costs incurred that are not attributable to specific activities.

2.37 The IR nevertheless dismisses the UK P&L accounts which Visa provided on the basis of its view that the data is 'likely' to understate Visa's UK profitability. This is not correct, for reasons that include:

(a) There are simple and intuitive reasons why [✂], given, for example, [✂].

(b) The IR relies on internal Visa documents [✂]. These documents do not, however, [✂].

(c) There is no reasonable basis to consider that Visa's published global accounts are likely to present a more reliable estimate of Visa's UK margins than the UK P&L provided to the PSR. Global accounts are representative of Visa's global business, whereas the UK P&L presents UK-specific financials based on audited accounts prepared for the purposes of meeting other regulatory requirements,[120] and applying a methodology which Visa has discussed with the PSR for over a year.

2.38 As such, it remains the case that the submitted fully-loaded UK P&L is a more reasonable reflection of Visa's UK profit margins than Visa's global accounts. The submitted UK P&L data is therefore an appropriate datapoint for any assessment of the profitability of Visa's UK operations and the IR's rejection of this is wrong.

The profitability assessment used in the IR does not provide a forward-looking view of the market

2.39 The IR's profitability analysis is based on an assessment of historical profitability data (margins). Such an analysis is, by definition, backward-looking and at odds with the purpose of a market review which is to establish a current and forward-looking assessment of the market. There is no basis to assume that historical profitability is a good indicator for Visa's likely future profitability, particularly in the next three to five years. As explained in Technical Annex 1, there is a likelihood of strong entry and expansion by alternative payment methods in this time period which the IR has not adequately investigated. Indeed, the IR justifies this backward-looking approach on the basis that it has not identified any evidence which indicates that Visa's profitability is likely to decline

117 These intangibles are used in a similar way to what is traditionally defined as 'capital' in other companies.
118 IR, Annex 10, para 6.91.
119 IR, Annex 10, page 15.
120 The audited UK accounts are produced to meet IFR requirements.

significantly in the medium term,[121] by which we understand means within the next three years, indicating it has not considered the likely trends in the three-to-five-year period.

2.40 In addition, the IR's provisional findings on Visa's medium term profitability are based on an incorrect interpretation of Visa's business documents. The IR references documents that [✂].[122] For example, internal documents from 2021 and 2022 cited in the IR indicate that Visa Europe's margins [✂]. Notwithstanding that Visa Europe's margins are not representative of the margins for Visa's UK operations, the actual margin in Visa Europe's accounts [✂]. These differences may occur for a variety of reasons specific to the individual documents, for example [✂]. The documents relied on in the IR therefore do not provide a sufficient evidential basis to support any provisional findings on Visa's likely future margins for its UK operations.

2.41 It therefore remains the case that the use of a backward-looking assessment limits the reliability of the IR's conclusions on the competitive constraints faced by Visa.

121 IR, Annex 10, para 5.12.
122 IR, Annex 10, para 5.8.

3. Technical Annex 3: Additional issues concerning the IR's narrow focus on Visa's fees and profitability

3.1 Competition in the UK payments sector takes place across multiple dimensions including price, service quality and innovation. As set out in our Response, the IR appears to have a narrow focus on profitability, fees and cost-based pricing, and does not reflect the importance of non-price factors to Visa service users.

3.2 Technical Annex 3 explains in more detail Visa's concerns in this regard, which may lead to potential unintended consequences and regulatory intervention that could damage the value currently derived by all users of Visa's payment system, including UK merchants. In particular, we have two concerns:

(a) **The IR focuses on a comparison of Visa's EBIT margins against the margins of other payment methods without adjusting for important differences in Visa's four-party payment model. This approach risks misidentifying harm to end users. As a result, any regulatory intervention in these circumstances may hinder, rather than promote, innovation and competition in the market (e.g. by promoting non-four-party payment systems over four-party payment systems).**

(b) **The IR does not sufficiently consider the significant investments Visa makes in security, resilience, reliability and innovation, and that these investments generate material direct benefits for end users as well as wider benefits for the UK economy. The PSR should therefore consider the impact of any regulatory intervention on Visa's incentive to innovate, particularly given that domestic card schemes which charge lower fees (and have low margins) do not typically innovate at pace.**

Concerns with the assessment of EBIT margins in the IR

3.3 The IR provisionally finds that Visa's margins are likely higher than a competitive level based on a comparison of Visa's EBIT margins against the margins of eftpos, OFX and PayPal.[123] However, and separately to the concerns raised in Technical Annex 2 above, a like-for-like comparison of Visa's margins against those of alternative payment methods like PayPal should reflect the inherent differences between four-party and non-four-party payment models and the impact this has on EBIT margins.

(a) Four-party scheme operators (i.e. Visa and Mastercard) continuously invest in the valuable technology that enables transactions to take place, with end users then able to choose from a wide range of issuers and acquirers who provide direct payment services to merchants and consumers. In this way, the scheme operators effectively 'outsource' the costs of managing the direct relationship with end users to third parties and generate revenue only with respect to fees charged to issuers and acquirers. These fees represent only one part (and, as the IR recognises, a very small part) of the final price (i.e. the MSC) paid by merchants to acquirers.[124]

(b) Other payment methods do not typically 'outsource' this component – they provide services and charge fees directly to merchants and consumers. They retain the full costs and revenue generated from the provision of payment services to end users and will

---

123 IR, para 6.150.

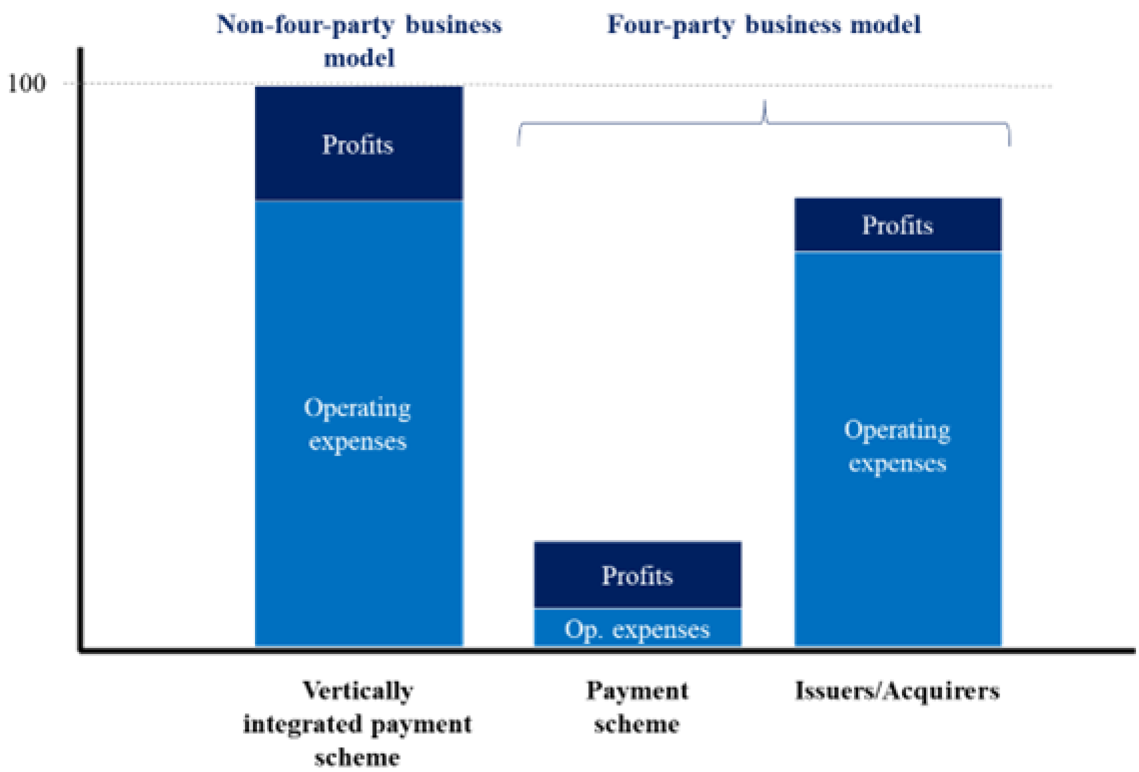
124 See Technical Annex 2 above. The scheme operator will need to ensure that the downstream revenues generated by acquirers and issuers is sufficient to at least cover their costs.

therefore inevitably have a higher revenue and cost base than Visa (and Mastercard), with a consequential impact on the EBIT margins.

(c) The lower revenue generated by four-party models results in higher profits as a percentage of revenue, whereas the higher combined revenue and costs of non-four-party payment models results in lower profits as a percentage of revenue. Four-party and non-four-party payment systems can therefore generate different % EBIT margins even if they are both competitively constrained to the same extent. Comparing their margins is not comparing like with like.

3.4 By way of illustration (and as shown in **Figure 2** below), in a hypothetical scenario where a non-four-party payment scheme generates the same outcomes as in a four-party payment scheme in terms of investment in innovation, operational costs, and revenue from end users, the four-party payment scheme's EBIT margin will be higher than the margins as a percentage of revenue for the non-four-party model. On the IR's analysis, this would result in the incorrect conclusion that the four-party model may be generating excessive profits based on a profit to revenue ratio when compared against the non-four-party payment scheme, notwithstanding that the outcomes for end users are identical.

Figure 2: Illustration of the concern with a comparison of % EBIT margins between four-party and non-four-party business models



3.5 Had the PSR conducted a 'full chain' assessment that compared Visa and PayPal's profits in a like-for-like way, it would have reached very different conclusions on Visa's profitability. In particular, assuming that Visa were to operate a non-four-party model in which it undertakes end user facing elements of the payments system, the expert economic consultancy [✂] finds that Visa's profitability would be comparable to (or lower than) the margins of other payment methods including PayPal.

3.6 [✂] estimates that aggregating revenues and costs across all scheme participants (i.e. issuers, acquirers and Visa) – excluding transfer payments between the different participants – results in EBIT margins of approximately 27.5% (2021) and 20.6% (2022).[125] In comparison, EBIT margins based on published financial accounts of various alternative payment methods are estimated at: (i) 24.4% (2021) and 18.9% (2022) for American Express; (ii) 59.4% (2021) and 52.3% (2022) for Diners (Discover); as well as (iii) 16.2% (2021) and 12.2% (2022) for PayPal.[126] Thus, Visa's margins are on average materially lower than Diners, and comparable to other payment methods such as American Express and PayPal. Full details of the computations and assumptions are set out in Supplemental Annex 1.

3.7 It is therefore not appropriate – as the IR does – to rely on higher EBIT margins for four-party payment systems relative to other payment systems, such as PayPal, as *necessarily* indicative of a lack of competitive constraints and harm to acquirers and merchants. When considering end user outcomes, it is necessary to take into account a wide range of factors including the total price paid by UK merchants and consumers, i.e. the MSC in the case of a Visa (and Mastercard) card transaction, and to ensure that profitability is assessed on a like-for-like basis as between four-party and non-four-party payment systems. The PSR otherwise runs the risk of misidentifying harm to end users and imposing regulatory interventions which hinder – rather than promote – innovation and competition in the market (e.g. by promoting non-four-party payment systems over four-party payment systems).[127]

Visa's significant investments to improve the "quality, efficiency and economy" of its payment system are consistent with the PSR's objectives

3.8 Visa invests significant amounts in the safety, security, reliability and ease-of use of its payment system, for the benefit of all end users including UK merchants and consumers. These investments result in a resilient and secure payments sector, giving people and businesses trust that money can move reliably, swiftly and safely, in turn contributing to economic growth.

(a) **A reliable and resilient platform**. Visa's ongoing investments have resulted in Visa offering the highest levels of resilience, with over 200 months of continuous availability and 99.999% processing quality. Our platform has capacity to handle up to 83,000

125 [✂] aggregated acquirers' total MSC revenue and issuers' net interest revenue, and deducted costs incurred by acquirers, issuers and Visa. In order to avoid double-counting revenue and costs incurred by different scheme participants due to transfer payments (i.e. scheme and processing fees to Visa, interchange from acquirers to issuers), [✂] assumed that the full chain revenue for a hypothetical non-four-party Visa payment scheme would be the revenue of a monoline acquirer (represented by Global Payments UK) and the net interest revenue (over credit loss provisions) of a monoline issuer (represented by Capital One Global), scaling the revenue and costs of all players to be on a consistent basis. This acquirer and issuer were chosen on the basis that: (a) Global Payments UK is the only acquirer that publishes financial information which breaks out interchange payments from scheme and processing fees, and (b) Capital One is the largest monoline issuer with the widest global presence, noting that stress-tested estimates based on revenue and costs of the UK monoline issuer Vanquis produces even lower full chain margins. Differences between 2021 and 2022 margins reflect a decline in profitability of the issuing business, which is present for both monoline issuers and competing non-four-party payment systems like American Express. See Supplemental Annex 1 for further details on [✂] methodology and data relied on for the calculations.

126 See IR, Table 3.

127 There is no justification for discriminating between different business models. Indeed, one of the key principles of effective regulation is that it should be 'technologically neutral' and should not pick winners between different standards and business models. For example, the CMA has committed to carrying out its digital market functions in a 'technology-neutral way' (*see* principle 7 of the CMA's 11 operating principles). Similarly, the FCA frequently states that it takes a "*principles-based, outcomes-focused and technology-neutral*" approach to regulation (*see*, e.g. the FCA's written evidence to the House of Lords Communications and Digital Select Committee inquiry into large language models. This is also supported in academic literature, e.g. in the work by Nobel-prize winning Professor Jean Tirole who noted that: "*Whatever regulation (or lack thereof) one advocates neutrality with respect to business organization should be the rule, so as to let the most efficient organizational forms emerge.*" See Tirole, J. 2011. "Payment card regulation and the use of economic analysis in antitrust", *Competition Policy International.*

transactions per second globally – a number that increased more than threefold in the past decade. We also provide a range of services to mitigate disruption risks on the network arising from non-availability in our ecosystem more broadly. For example, Stand-In Processing (STIP) can provide processing services when an issuer is unavailable to respond to an authorisation request, and in the 12 months to February 2023, we provided STIP for [✂] of payments volume across [✂] issuing clients.

(b) **Rapid and seamless transactions.** Visa invests to ensure that it can continue to offer a quick and convenient payment experience, with merchants benefitting from quicker authorisation.

(c) **Robust payment protections and security.** Visa offers industry-leading fraud prevention and service-user protections, amplified by the Zero Liability Guarantee.[128] In addition, Visa's investments in fraud and cybersecurity have prevented over £30 billion in global fraud in 2023, up from £18 billion in 2022,[129] and in the UK card fraud on the Visa network has reduced by 28% in the three years to 2023.[130] Globally, Visa has invested $10 billion in cybersecurity and technology in the last five years with which Visa is able to tackle over 70,000 cyber-attacks per day around the world.[131]

(d) **Innovative services.** Visa invests to develop innovative services to improve the payment experience for all end users. For example, Visa has continuously invested to improve and add new features to Visa Advanced Authorisation, Visa's artificial intelligence tool for analysing emerging fraud patterns. This tool is capable of evaluating up to 500 unique risk attributes per transaction for 'in-flight' transaction risk scoring,[132] and has helped prevent $28 billion of fraud annually. Visa's eCommerce Threat Disruption, launched in 2019, is a service that continuously monitors merchant checkout pages for potential malware injection. Visa is able to identify any potential compromise and provide guidance on how to remove the malware, thereby limiting the amount of time a merchant is compromised. In one example, Visa identified data-skimming malware on a food online ordering system and the quick response from the Visa Payment Fraud Disruption Team potentially saved infected merchants as much as $141 million.[133]

3.9 These investments take place against the backdrop of a rise in the prevalence and sophistication of threat actors, requiring increasing investment to maintain the same high standard. For example, the annual cost of cybercrime worldwide has grown on average 57% a year between 2018 and 2023, and the cost is expected to continue to grow over the coming years and reach $14 trillion by 2028.[134] See **Figure 3**, which provides an illustration of the evolution in threat actors and the strategies deployed. Visa has made significant investments to address these threat actors. In 2018, Visa integrated Visa Europe into its global network infrastructure in order to leverage its triple-redundant protection. In the same year, the European Cyber Fusion Centre was established in London, and the number of employees working to counteract cyber threats has grown rapidly: Visa's Global Cyber Function nearly doubled from [✂] FTEs in FY18 to [✂] FTEs in FY23, and the Global

128 In addition to the Visa Zero Liability Guarantee aimed at cardholders, Visa also offers a form of "settlement guarantee" to its clients, which means that a client can still receive their settlement funds in relation to Visa transactions in the event of failure of another client to fund its settlement obligations, subject to the conditions set out in the Visa Rules.

129 Visa, 'Visa's new AI tool for Faster Payments could help save UK over £330m a year on fraud and APP scams', 30 May 2024.

130 Visa Navigate, 'Stepping up the fight against fraud', September 2023.

131 Pymnts, 'Visa extends risk management solutions to non-Visa transactions', 27 March 2024; American Banker, 'How Visa's risk chief defends it against 71,000 cyber attacks a day', 23 February 2023.

132 Visa, 'Visa Advanced Authorisation and Visa Risk Manager'.

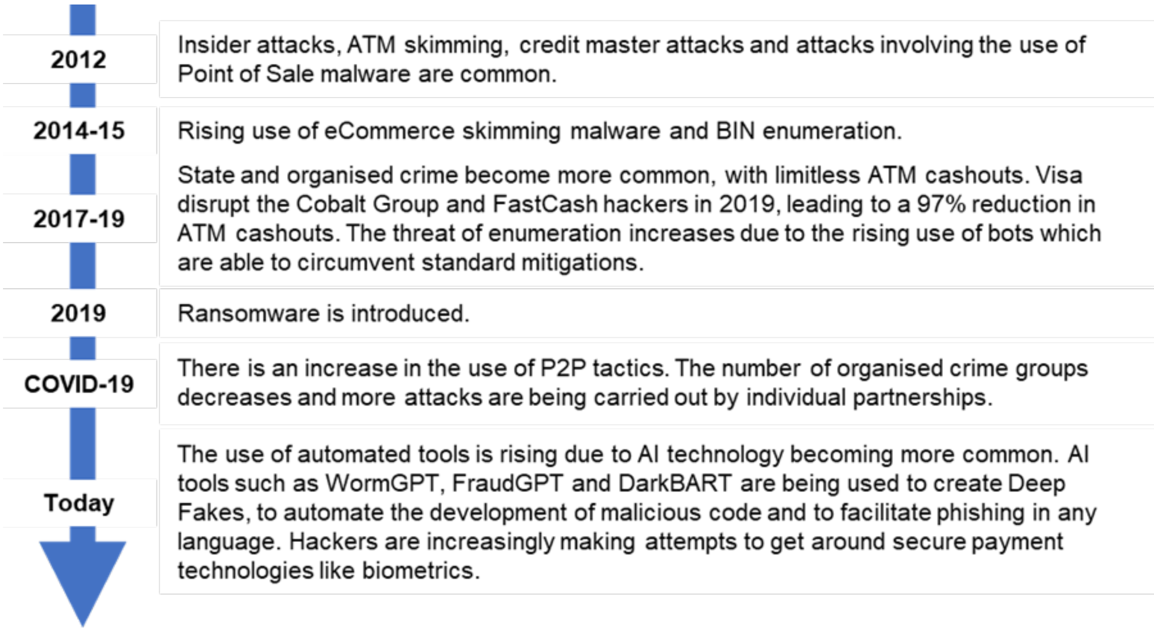
133 Visa, 'Detecting compromised eCommerce merchants and disrupting fraud'.

134 Statista, 'Cybercrime expected to skyrocket in coming years', 22 February 2024.

Risk Operations Centre has grown from [✂] FTEs in FY18 and is expected to be close to [✂] by the beginning of FY25.

3.10 It is important to combat these challenges to ensure the overall functioning of Visa's card system, but these investments may not be directly observable to end users (e.g. where investments are made to protect the network from large-scale cyber-attacks). Absent these investments, it is likely that service quality would decline and that this decline *would* be noticeable to end users.

Figure 3 – Evolution of threat actors



3.11 Evidence from merchant surveys commissioned by Visa demonstrate that merchants derive significant value from Visa's investments in these areas and that service quality has been improving. Visa commissioned an external party to conduct merchant surveys in 2019, 2022 and 2024 to collect UK merchants' views on payment networks generally and on Visa. These surveys covered a range of merchant types, with a particular focus on SMEs.[135, 136]

(a) 71% of merchants surveyed in 2024 considered that <u>the UK electronic payments system is working well</u>, up from 68% in 2022 and 61% in 2019.

(b) 85% of merchants surveyed in 2024 agreed that <u>Visa is trusted by customers</u>.

(c) 70% of merchants surveyed in 2024 agreed that <u>cards are the easiest way to accept payments</u>, up from 67% in 2022 and 63% in 2019.

(d) 90% of merchants surveyed in 2024 agreed that <u>Visa ensures payments are secure</u>, up from 83% in 2022 and 80% in 2019.

(e) 83% of merchants surveyed in 2024 agreed that <u>Visa combats fraud well</u>, up from 77% in 2022 and 63% in 2019.

---

135 Prior to 2024, the surveys only collected responses from SMEs (businesses with under 250 employees). In 2019 and 2022, responses were collected from 2,000 and 1,000 SMEs respectively. In 2024, large businesses were also surveyed. Out of 307 merchants surveyed in 2024, 71% were SMEs and 29% were large businesses.

136 Visa Merchant Survey 2024.

(f) 69% of merchants surveyed in 2024 considered that card payment technology is constantly changing and improving, up from 61% in 2019.

(g) 76% of merchants surveyed in 2024 considered that Visa is innovative, up from 68% in 2022 and 41% in 2019.

(h) 77% of merchants surveyed in 2024 considered that Visa provides good value for money, up from 74% in 2022 and 49% in 2019.

3.12 These figures present clear evidence that the market is working well to produce good outcomes for market participants.

The significant investments Visa makes and the consequent direct benefits for end users and benefits for the wider UK economy outweigh the merchant cost of accepting Visa cards

3.13 The IR acknowledges that "*the payment sector has seen a lot of innovation in recent years – including from Mastercard and Visa*" and that this innovation has "*been to the benefit of both the issuing and acquiring sides, including to the benefit of merchants and consumers*".[137] The IR states that it has taken innovation into account in its assessment.[138] However, the IR does not include any analysis of the implications of having lower fees and profitability on incentives to innovate, and the impact that slower / less innovation might have on the welfare of end users (both UK merchants and consumers) and the wider UK economy. This is a key omission in the IR's analysis and provisional findings.

3.14 Visa's scheme and processing fees are necessary to support Visa's significant investments to improve the 'quality, efficiency and economy' of its payment system – including significant ongoing investments in innovation and related risk-taking – which is consistent with the PSR's objectives. These innovations generate substantial direct benefits for end users, namely UK merchants and cardholders as well as benefits for the wider UK economy. Any analysis of Visa's fees and profitability must take this into account as well as consider the impact that regulatory intervention might have on Visa's innovation incentives.

3.15 As explained above, Visa continuously makes significant investments in innovation that generate direct benefits for its end users. For example, Visa played a leading role in the development and rollout of contactless payments and tokenisation.[139] These innovations have transformed the way in which consumers transact with UK merchants. Contactless payments now account for 63% of all credit card and 76% of all debit card transactions made in the UK.[140] In addition to being foundational to the widespread development of e-commerce, tokenisation has led to increased authorisation rates, reduced transaction times, and crucially prevented billions in lost sales and customer service costs for merchants.[141]

137 IR, para 6.54.

138 IR, Introduction to Section 6 and paras 6.18-6.19.

139 Visa is the second most important contributor to contactless technology by number of patents and is the third by patent citations. It is also the second most important contributor to tokenisation technology by number of patents and the most important by number of patent citations. Upon the introduction of its payWave technology in late 2007, Visa partnered with Barclays to introduce one of the first contactless payment cards in Europe called the OnePulse, a chip-and-PIN card that was both an Oyster card and a Visa contactless payment card. It later worked with Barclays to enable and launch the use of contactless and wearables ('**Tap to Pay**') across the TFL network. See: Finextra, 'Barclaycard rolls out Oyster payments card', September 10, 2007 and [✂].

140 UK Finance, 'UK Finance: Card Spending Update for March 2024', March 2024.

141 Even small frictions in the payment process can cost merchants billions in lost sales and customer service costs. See B. Cole and A. Ansari, 'Convenience and control: Why the future of eCommerce is tokenization', Cybersource, April 2022. See also Visa Token Service Fact Sheet June 2020 and Barclaycard analysis of the impact of the introduction of SCA

3.16 The expert economic consultancy [✂] has conservatively estimated[142] the benefits of contactless and tokenisation for UK merchants and consumers in relation to Visa payments. They compute these benefits – as a result of reduced transaction times, fraud rates, and payment friction, as well as from an increase in authorisation rates – as amounting to: (a) for contactless, [✂]; and (b) for tokenisation[✂]. Between 2017 and 2027, [✂] estimates that UK merchants and consumers will receive at least [✂] of benefit from contactless and at least [✂] from tokenisation, in respect of Visa transactions. For UK merchants, the total net benefit from Visa's investments in contactless and tokenisation is estimated at (at least) [£9-11] billion. Detail on the results is set out in **Table 2** below, with full details of the computations and assumptions in Supplemental Annex 2. These calculations show that the benefit to UK merchants and consumers of these innovations substantially exceeds the fees paid by merchants. These estimates do not take into account a range of end user benefits that are more difficult to quantify nor the effect that Visa's investment have had in terms of facilitating follow-on investments and innovations, which would tend to increase the estimated benefits for end users and the wider UK economy.

Table 2: [✂] estimate of the UK end user benefits of contactless and tokenisation in relation to Visa payments, cumulative over 2017-2027 (millions)

Benefit	UK Consumer Benefits	UK Merchant Benefits
Tokenisation		
Reduction in Fraud	[✂]	[✂]
Increased Authorisation Rate	[✂]	[✂]
Time Savings from Card on File	[✂]	[✂]
Decrease in Cart Abandonment	[✂]	[✂]
Total Benefits for Tokenisation	[✂]	[✂]
Total Adoption Costs for Tokenisation	[✂]	[✂]
Contactless		
Time Savings from Contactless	[✂]	[✂]
Total Benefits for Contactless	[✂]	[✂]
Total Adoption Costs for Contactless	[✂]	[✂][143]
Total Benefits	[✂]	[✂]

requirements on non-compliant merchants: Barclays, '[Retailers risk losing out on £3.64million in sales each day as SCA deadline approaches](#)'.

142 [✂] calculations do not include other benefits for UK merchants and consumers including from an expansion of overall retail activity e.g. due to innovations promoting the growth of e-commerce.

143 [✂].

Benefit	UK Consumer Benefits	UK Merchant Benefits
Total Adoption Costs	[✂]	[✂]
Total Net Benefits	[✂]	[✂]

3.17 [✂] explains that these large benefits imply that Visa's investment in technologies like contactless and tokenisation create large spillovers for the UK economy. This can be seen quantitatively from the fact that the social internal rate of return ('**IRR**') from contactless and tokenisation significantly outweighs Visa's private IRR, as set out in **Table 3** below.[144, 145] In addition, the 'social benefit to cost' ratio – which compares the overall benefits generated to society by the technology to the overall cost incurred by all stakeholders including Visa – shows that contactless and tokenisation generated large benefits relative to their underlying costs.[146] These estimates mean that reductions in payment innovation could be highly costly for UK merchants and consumers, given that returns from innovation primarily accrue to third parties, rather than innovators like Visa, This points to a heightened risk of unintended consequences from regulatory interventions which have the effect of dampening private innovation incentives.

Table 31: The social impact of the innovations in the UK

Innovation	Visa's Private IRR for the UK	Social IRR for the UK	Social Benefit to Cost Ratio
Tokenisation	[✂]	[✂]	[✂]
Contactless	[✂]	[✂]	[✂]

3.18 Other examples of Visa innovations and the benefits these generate for UK merchants and consumers include:

(a) A recent optional value-add Visa Account Updater technology which allows issuers to update cardholder's card details when their payment card expires. For consumers, this relieves them of the need to update their card information for those merchants that have their card on file and lessens the risk that they will incur late fees or suspended services. Merchants also benefit from lower operating costs and minimising the risk of poor customer experiences (and potentially lost sales). Visa estimates that this technology could increase Card-Not-Present ('**CNP**') transaction approval rates by [✂], generating [✂] of incremental sales across the UK.

(b) Visa recently launched Visa Provisioning Intelligence ('**VPI**'), an AI-based product designed to identify and predict the probability of token provisioning fraud. Visa anticipates that VPI will help lower fraud rates, reduce the incidence of card declines and

144 IRR is the compound annual rate of return earned on a project or investment. Visa's IRR is based on [✂]. Similarly, the social IRR corresponds to the hypothetical case in which society decides to invest resources in developing and adopting an innovation. In this scenario, the social IRR reflects the return society obtains from its investment.

145 These IRRs are computed based on the *actual success* of contactless and tokenisation. The private return to Visa ex ante was significantly riskier and more uncertain. The observation that social returns significantly exceed private ones is the relevant one for determining the risk of innovation being underprovided ex ante.

146 This ratio is calculated as social benefit over social cost. The social benefit includes end-user (i.e. merchant and consumer) benefits for Visa transactions, Visa's private benefits, and issuers' benefits.

increase the number of legitimate provisioning requests, resulting in increased payment volumes.

(c) Visa played a leading role in developing the ‘Request to Pay’ message that forms the basis of the Pay.UK standard, aimed at giving customers more flexibility over regular bill payments.[147] The Request to Pay framework launched in May 2020,[148] and Pay.UK estimates that the service could deliver benefits to the wider UK economy of £1.3 billion per year.[149] This service – which provides unique reference data and a digital audit trail – can streamline bill reconciliation and significantly cut finance back-office costs. It also helps prevent fraud and make bill payments more secure.[150]

3.19 In addition, Visa’s investments generate wider innovation by other players in the ecosystem. For example, Visa’s significant investments to promote and support the widespread availability of contactless payments has facilitated the emergence of mobile payments, cashless stores and automated check outs. The faster flow of transactions has also allowed merchants to repurpose their real estate from handling payments to more productive purposes; whether that be a supermarket which is able to use floorspace previously given over to checkouts to stock more products, a TfL underground station that can rent out a former ticket office as a coffee shop, or a sandwich shop that can viably operate in smaller premises. Payment innovations therefore have a wider effect on other stakeholders and market participants which contributes to growth of the UK economy, and Visa (and other payment schemes) must ensure that innovation also keeps pace with these wider developments.

3.20 The IR’s narrow focus on Visa’s margins and not whether these margins reflect a reasonable return for Visa’s innovation efforts is therefore not appropriate given, in particular, the significant direct and wider spillover benefits these efforts generate for UK merchants, UK consumers and the UK economy.

3.21 The PSR’s analysis must consider these benefits, as well as the potential negative effect that regulatory intervention might have on the innovation incentives that help deliver them and the impact this might have on future innovation. The importance of this assessment can be seen from the slower pace of development of domestic card schemes which charge low fees. These domestic card schemes introduced technologies later (and even then, only in response to competitive pressure from innovators like Visa). Visa launched contactless in the UK in 2007, whereas these domestic card schemes were delayed by as long as a decade: the Australian eftpos scheme launched contactless in 2014, the Danish Dankort scheme in 2015, and the German Girocard and the Norwegian BankAxept schemes in 2016.[151] Industry observers have pointed out that the same was also true for tokenisation: card schemes such as Visa and Mastercard started using the technology much earlier than the domestic schemes.[152] In addition, the patent count and citations show that these domestic schemes do not innovate and develop technology, but rather adopt technology that is created by innovative companies like Visa.[153]

---

147 Visa, ‘Visa supports Pay.UK in delivering successful request to pay pilot ahead of full service launch’, 27 May 2020 and [✂].

148 Pay UK, Request to Pay.

149 Pay UK, Request to Pay.

150 Pay UK, Request to Pay.

151 *See* Juniper Research, “Contactless Payments: Key Opportunities, Emerging Trends & Market Forecasts 2022-2027” September 2022, p. 17.

152 *See* Juniper Research, “Payment Tokenisation: Key Opportunities, Segment Analysis & Market Forecasts 2022-2027” July 2022, p. 19.

153 *See* GlobalData, “Patents Publications and Performance Indicators Database,”

3.22 Overall, the IR does not recognise the critical role of innovation incentives and the potential harm to UK merchants and consumers that would likely arise from regulatory intervention that does not assess them. As set out in more detail in Technical Annex 6, the current approach adopted in the IR risks dampening competition and innovation in the UK payments landscape and risks contravening the PSR's regulatory principles under s.53 (read with s.49(3)(c)) of the Financial Services (Banking Reform) Act 2013 ('**FSBRA**').

4. Technical Annex 4: Concerns with the PSR's assessment of Visa's optional services

4.1 As set out in our Response, the UK payments sector supports a diverse user base and use cases. We recognise this by providing an offering that is not 'one size fits all', and by ensuring that many of our services are made available on an optional basis.

4.2 Technical Annex 4 sets out in more detail our key concerns relating to the IR's assessment of optional services. In particular, we have two main concerns:

(a) The IR does not appropriately assess competitive constraints that Visa is subject to with respect to optional services, in particular by: (i) appearing to conflate the potential impact of not using an optional service with *needing* that service; (ii) not adequately assessing the credibility and viability of alternative providers of optional services; and (iii) not adequately representing the degree of buyer power that many clients have.

(b) The IR does not sufficiently consider the dynamic competitive landscape for alternatives to Visa's optional services, and acquirers' and merchants' ability to select alternative providers.

4.3 As explained in the IR, 'optional services' are "*services which are complementary to the core scheme and processing services. Acquirers are under no obligation to purchase these services and they are not strictly necessary for acquirers or merchants to accept card payments or to process them*".[154] Initiatives to develop optional services fit within Visa's overarching objective to continuously innovate and provide all user groups with valuable functionalities to improve their experience of Visa's payment system.

4.4 We also note, for clarity, that Visa does not provide services directly to merchants, and therefore has neither control nor visibility over how acquirers supply optional services to merchants. References in this document to merchants choosing to use a service relates to their choice to adopt a service from their acquirer.

The purpose of optional services and the choices that acquirers and merchants have

4.5 In considering the extent to which competition is working well vis-à-vis the schemes' optional services, the IR suggests that the absence of a direct or equivalent alternative offering is indicative of ineffective competitive constraints.[155] The IR provisionally concludes that Mastercard and Visa are subject to "*varying degrees of competitive constraints*"[156] in the optional services they provide to acquirers (and merchants). It goes on to state that in some cases, there are "*strong indications*" that the "*lack of effective alternatives"* may result in Mastercard and Visa *"not facing effective competitive constraints*".[157]

4.6 It is wrong to assume – as the IR appears to – that a lack of direct or equivalent alternatives is evidence of a lack of sufficient competitive constraint. In concluding this, the IR seems to overlook the purpose of optional services, which is that they are designed to go beyond Visa's core scheme

154 IR, Annex 4 para 4.3.
155 *See*, e.g. IR, para 1.28 (second bullet) and Annex 4, para 4.10.
156 IR, para 4.174.
157 IR, paras 4.174 and 4.181.

and processing services and that these services can be sourced either from Visa, an alternative provider or *not at all*. In particular, and as the IR partly recognises:[158]

(a) at least some acquirers and merchants may be able to self-supply, either by developing capabilities internally that are comparable to Visa's optional services or by deploying a solution that addresses the business need in a different way;

(b) acquirers and merchants may decide that they would not derive sufficient benefit or value from a particular service to justify choosing to purchase that service; and

(c) acquirers and merchants may not need to use a particular optional service in the context of their business.

4.7 Indeed, optional services offer additional functionalities for acquirers and merchants to choose from depending on their specific needs, and they are free to choose whether to purchase any particular service. In Visa's experience, optional services can be particularly beneficial to acquirers and merchants that want an additional functionality but may not currently have this in-house and/or find it more efficient to source these externally (e.g. from Visa, Mastercard or another third-party alternative provider).

Concerns with the assessment of Visa's individual optional services

4.8 The analysis in the IR conflates the potential impact of not using an optional service with *needing* that service, and also does not adequately assess the credibility and viability of alternative providers of optional services. Both of these points are discussed below.

Acquirers and merchants do not 'need' to use optional services

4.9 Much of the analysis in the IR regarding Visa's (and Mastercard's) optional services is based on feedback from some acquirers that there may be 'negative consequences' from not using certain optional services, which the IR states points to there being 'significant implications' if they did not purchase an optional service.[159] In focusing on this, the analysis in the IR does not reflect a key distinction between optional and mandatory services, which is that optional services are not needed to participate in Visa's scheme and are instead valuable for individual acquirers and merchants based on their specific needs.

(a) The fact that some user groups choose not to purchase a particular optional service from Visa (or can cease purchasing such a service) exerts a real and ongoing competitive constraint on Visa in terms of both price and is a key consideration for Visa in continuing to develop and improve such services.

(b) The question that the PSR asked acquirers in relation to this (i.e. "*what would be the implications for your activity as an acquirer if you did not use the optional service*") assumes that there <u>would</u> be implications for acquirers associated with not using a service. The IR also assumes that potential negative consequences from not using a particular service are sufficient to find that acquirers and merchants *need* that service. It is logical that any acquirer that chooses to purchase an optional service derives value from that service, and that there may therefore be some negative consequences if they did not use that service. A more appropriate question would have been whether the acquirer or

[158] *See*, for example, IR, para 3.25: "*Acquirers* […] *are not required to purchase these* [optional] *services from Mastercard and Visa and can, at least in principle, source them from alternative providers, self-supply, or not use those services at all*".

[159] *See*, for example, IR Annex 4 paras 4.131, 4.227 and 4.250.

merchant needs the optional service to be competitive on the market (and not whether there might be *any* negative consequences) and what the impact would be on the acquirer or merchant's business if this service was not available on the market.

4.10 Overall, the analysis in the IR is incorrect because it conflates the negative impact of not using a service (and even then, only for some acquirers) with needing the service. Indeed, much of the evidence presented in the IR reflects the additional value that Visa's customers and end users derive from individual services (consistent with submissions by Visa and Mastercard).

There are viable and credible alternatives to Visa's optional services

4.11 While the IR recognises that there are multiple potential sources of competitive constraints on Visa's supply of optional services,[160] it does not sufficiently account for them in its analysis.

(a) Firstly, the IR does not adequately consider how and why merchants and acquirers choose not to adopt optional services from Visa, which can include the ability of acquirers and merchants to self-supply, develop internal capabilities, and/or address a particular need in a different way. Of note is that the PSR does not appear to have asked acquirers about the possibility of self-supplying certain optional services in its questionnaire. Rather, the PSR only asks about alternative available services.[161] The significance of self-supply is missed across each of the optional services categories assessed in the IR.

(b) Secondly, the IR rejects evidence of available alternatives provided by Visa (and Mastercard) but relies on evidence that it acknowledges is of limited value.[162]

(c) Thirdly, the IR identifies that for many optional services, merchants make the choice as to whether to use/adopt a service, but the IR does not include any evidence from direct engagement with merchants on this subject.

4.12 It is therefore inappropriate for the IR to rely primarily on incomplete acquirer evidence when Visa (and Mastercard) have also identified clear alternatives. For many of Visa's optional services, clients can (and often do) replicate the value proposition associated with a given use case by drawing on internal capabilities (potentially in conjunction with alternative solutions offered by Visa or other providers) as well as third-party alternatives.[163, 164]

4.13 We consider these issues below in greater detail for each category of services analysed in the IR.

Category 1

4.14 The IR first considers optional services where the choice of whether to use the service is ultimately made by the merchant ('**Category 1**').[165] The services in Category 1 include a range of authentication services and other solutions that are designed to support merchants to verify cardholder identity (3DS 2.0, VTS, CVV2, AVS), check and update payment credentials (AV, VAU) and 'pre-authorise' transactions. The services are generally intended to help reduce fraud and the level of friction in digital payments and to improve approval rates and enhance the security of the card payment system.[166] These services are typically the result of significant investment by

160 *See*, for example, IR paras 4.152 and 4.159.
161 IR, Annex 4 para 4.14.
162 *See*, for example, IR para 4.167; and *see* IR, para 4.172 and 4.173 in relation to Category 2 and Category 3.
163 *See* discussion in relation to Category 1 below.
164 *See* discussion of Category 2 below. See also IR Annex 4, paras 4.201-4.202,4.205; 4.212, 4.215 and 4.218. See also IR Annex 4, Table 5, which shows that [✄].
165 *See* IR, para 4.171.
166 *See* Visa Europe's [✄].

Visa and are intended to be value-enhancing for merchants. The IR's competitive assessment of services in this category is flawed for the reasons described below.

4.15 Firstly, despite acknowledging that it is generally merchants who choose to use these Category 1 services, the PSR has not engaged directly with any merchants on this subject. While the IR acknowledges this limitation,[167] it nonetheless proceeds to undertake a competitive assessment using information provided only by acquirers, who "*might have a good understanding of what alternatives are available* [to merchants]".[168] Absent engagement with merchants, the IR cannot credibly assess what drives merchants' decision-making when choosing to use these optional services or the competitive constraints for these services.

4.16 Secondly, the IR has not assessed how the differing business needs and preferences of merchants can greatly affect how they choose to use authentication services (and other security solutions offered by card schemes and other service providers). Merchants' level of engagement with Category 1 optional services will depend on a merchant's level of 'tolerance' for fraud risk and friction in payments, including based on factors such as:

(a) How extensively the merchant seeks to use certain 'secure' authentication solutions for digital payments, often by considering whether a transaction falls within the scope of relevant Strong Customer Authentication ('**SCA**') regulations and/or whether any exemptions apply. We estimate that, in 2022, less than of e-commerce transactions on UK-issued Visa cards used Visa's 3DS service.

(b) The extent to which the merchant wants to invest in transaction risk analysis ('**TRA**') tools that help to estimate more accurately the risk of fraud associated with a particular transaction. This, in turn, can help to maximise the use of SCA exemptions.[169] Acquirers with lower fraud rates are also more likely to be able to secure SCA exemptions using TRA.[170]

(c) Whether a merchant is developing their own authentication capabilities in-house (i.e. 'self-supply'). For example, large firms in the technology and retail sectors can leverage direct consumer relationships to enter or expand into providing authentication services that compete effectively with Visa and other third-party solutions, including on Visa card transactions.

(d) Whether payment methods with digital payment 'front-ends' that can also validate customer identity, including on Visa card transactions, are also accepted by the merchant. For example, a retailer can choose to accept Apple Pay and authenticate a payment using a thumbprint or face recognition technology (instead of using, say, 3DS authentication). Non-card-based payment systems (including open banking-enabled A2A payments) can also enable e-commerce authentication without the use of any card-based authentication service.

4.17 The analysis in the IR does not adequately consider any of the above and instead focuses narrowly on the availability of direct third-party alternatives to each service as identified by acquirers rather than merchants.

---

167 *See* IR, para 4.166.
168 *See* IR, para 4.166 and FN 267.
169 *See* Visa Europe's [✂].
170 *See*, for example, [Understanding Strong Customer Authentication - Adyen.]()

Category 2

4.18 The IR then considers optional services where the choice of whether to use the service is ultimately made by the <u>acquirer</u> ('**Category 2**'). The two Visa services in Category 2 include selected Visa network reporting services (the TC33 CAS Advice service and TC33 POS Advice service).

4.19 The IR considers that the evidence on the existence of alternatives for Category 2 is "*mixed*" and states that it is "*difficult to reach a firm conclusion on the existence of competitive constraints*".[171] The IR reaches two contradictory conclusions based on its view that "*Visa's ability to implement such a price change* [for its [✂]] *may suggest the presence of ineffective competitive constraints*" while also recognising the existence of constraints in "*some alternatives that can be either self-supplied or supplied by a third party*". [172] The IR's provisional conclusions in respect of Category 2 are inaccurate and inconsistent with the evidence for several reasons.

4.20 Firstly, the IR does not give adequate weight to the evidence submitted by acquirers regarding the value of and alternatives to using Visa's TC33 CAS Advice and TC33 POS Advice services, which corroborates points made by Visa[1] (as well as Mastercard)[173] in submissions to the PSR. Evidence from acquirers shows that:

(a) Multiple acquirers do not use these specific Category 2 services as they do not require them, have developed an equivalent capability in-house, or are able to replicate the value proposition associated with these services using data from their internal systems and solutions such as the Visa Analytics Platform ('**VAP**'),[174]

(b) Acquirers can (and indeed do) stop using these Category 2 services as their business needs change over time, with one acquirer noting that it stopped using the TC33 CAS Advice service for this reason,[175]

(c) Acquirers who said they use these services recognised the associated value proposition, including helping with interchange billing, avoiding data mismatches, improving business operations, and enhancing service performance.[176]

4.21 Secondly, the analysis in the IR seems to suggest that even if a service is very important (or even essential) for some acquirers, this somehow implies that it should not be an optional service in circumstances where it is not important (or essential) for other acquirers. This could have an adverse impact on innovation and a detriment on end users. It should not be seen as a competitive problem if Visa offers valuable services that allow acquirers to make decisions whether to 'build or buy' the service, or which provide additional valuable functionality that many (or even all) acquirers find useful. These services, instead, contribute more efficiency, cost savings for acquirers, and competition between acquirers, which remain free to develop their own solutions.

4.22 Thirdly, [✂] . [177] [✂] :

---

171 IR para 4.172.
172 IR para 4.172.
173 IR, Annex 4 paras 4.173-4.175.
174 IR, Annex 4 paras 4.201-4.202, 4.205, 4.212, 4.215 and 4.218. See also IR Annex 4, Table 5, which shows that only around half of the largest acquirers purchased Visa's network reporting services in this 'category'.
175 IR, Annex 4 para 4.201.
176 IR, Annex 4 paras 4.201 and 4.214.
177 [✂]

(a) [✂] . [178] [✂] . [179]

(b) [✂]. [180]

Category 3

4.23 The IR lastly considers optional services where the choice of whether to use the service is ultimately made by the <u>acquirer</u> and, in the IR's view, evidence from acquirers strongly indicates an absence of effective competitive constraints ('**Category 3**'). The two Visa services in Category 3 include selected network reporting services (Visa Settlement Service ('**VSS**') reports and Single Message System ('**SMS**') Raw Data/Reports).

4.24 The IR considers that the evidence from acquirers indicates that there is "*a lack of alternatives and limited countervailing buyer power*" for these services.[181] Visa disagrees with the IR's provisional conclusions in respect of Category 3. The IR's competitive assessment of services in this category is not correct for several reasons.

4.25 In relation to VSS Reports:

(a) **It is unclear if the IR's analysis relates to the relevant service.** The IR finds that "*all ten acquirers told us they had purchased this service in the last 12 months*". [182] However, it is unclear if these statements are in relation to optional VSS reports offered by Visa or whether they relate to the VSS reports that are included free of charge in Visa's core service offering. [✂]. Visa has not been provided with the underlying responses from acquirers, and notes that it is possible that acquirers' responses to this question relate to the free VSS report.

(b) **The IR's assessment of competitive constraints does not consider relevant alternatives.** Critically, clients can choose a tailored set of optional VSS reports depending on their specific needs, rather than receive reports that may not be relevant/useful to them. Optional VSS reports can be particularly beneficial to acquirers who may not currently have the capabilities needed to estimate detailed financial positions internally and/or find it more efficient to source the service externally. Clients who perform their own estimations may also benefit from internal operational structures that enable easier settlement.[183] The IR acknowledges evidence of alternatives to individual optional VSS reports provided by Visa, including acquirers' ability to self-supply and opt out of individual VSS reports.[184] However, the IR does not consider and account for these alternatives properly in its competitive assessment.

4.26 In relation to Visa's SMS Raw Data/Reports service:

(a) **The IR's assessment of competitive constraints does not consider relevant alternatives.** Indeed, the IR recognises that the PSR has not asked acquirers about the specific alternatives for this service put forward by Visa.[185]

---

178 [✂]
179 [✂]
180 [✂]
181 IR, para 4.173.
182 IR, Annex 4 para 4.223.
183 *See* Visa Europe's [✂].
184 IR, Annex 4 para 4.220 and 4.221.
185 IR, para 4.173.

(b) **The analysis in the IR overstates the implications of not using the service.** The IR states that acquirers highlighted "*significant implications*" if they do not use Visa's service. However:

(i) 2/10 acquirers said that they had not purchased this service in the last 12 months, suggesting they did not require it. One acquirer said that not using the service would have no impact on its business.[186] Indeed, in our commercial experience, clients who have strong internal capabilities can rely on their own data/capabilities and do not need to use Visa's SMS Raw Data/Reports services.

(ii) 3/10 acquirers noted that they need this service for Visa Direct, a solution that market participants can separately choose to use or not use.

(iii) The primary use case for SMS Raw Data/Reports in the context of card-based payments is to provide acquirers with transaction-level authorisation and clearing/settlement data to support activities such as reconciliation, research, and billing. In this context, the service is only relevant to acquirers who use SMS settlement. However, most acquirers who are registered/licensed in the UK use the Base II settlement process for clearing and would therefore use the TC33 CAS Advice reporting service for this purpose (if they chose to) rather than SMS Raw Data/Reports.[187]

4.27 Finally, we would note that Visa's SMS Raw Data/Reports service is not widely used for card payments in the UK, because the service is only relevant to acquirers who use (SMS) settlement. In particular, most POS SMS transactions in the UK do not relate to card-based payments. Rather, they relate to ATM withdrawals or Visa Direct transactions. Indeed, and as noted above, 3/10 acquirers noted that they need this service for Visa Direct including because Visa Direct is "*mandated for gambling merchants*" and they "*would be unable to service gambling merchants without this service*".[188] However, Visa Direct is only mandated for gambling merchants in respect of payouts that need to be made to the same Visa credential that was used to pay into the gambling site/app using a Visa Direct Original Credit Transaction ('**OCT**') in order to avoid fraud/money laundering.

There is countervailing buyer power with regards to Visa's optional services

4.28 The IR does not adequately represent the degree of buyer power that many clients have in its provisional conclusions.

4.29 In relation to Category 1 services, the IR considers that, overall, "*acquirers appear to have limited countervailing buyer power*".[189] However, [✂] :

(a) [✂] [190]

(b) [✂] [191] [✂]

---

186 IR, Annex 4 para 4.190, 4.191 and 4.194.
187 *See* Visa Europe's [✂].
188 IR, Annex 4 para 4.190.
189 IR, para 4.171.
190 [✂]
191 [✂]

(c) The IR recognises that one acquirer was able to "*obtain funding*" for Mastercard's Identity Check. It then goes on to explain that [✂] .[192]

4.30 By the IR's own metric, [✂] . The IR has not adequately considered this in its analysis of buyer power and competitive constraints in relation to Category 1 optional services.

4.31 In relation to Category 2 services, the analysis in the IR does not [✂] and does not recognise that [✂],[193] [✂] .[194] By the PSR's own metric, this shows a degree of buyer power for [✂], which the IR does not consider and therefore does not reflect in its analysis of competitive constraints.

4.32 Finally, in relation to Category 3 services (specifically, VSS), the IR finds that "*none of the acquirers told us that they have been able to secure discounts, rebate or delays to proposed fee increases* [for this service]".[195] There have not, however, been any [✂] and this fact has not been reflected in the IR's provisional findings.[196]

The position of alternative providers of optional services

4.33 The IR states that Mastercard and Visa are "*in a stronger position than alternative providers of optional services*" because they provide a 'one-stop shop' for core and optional services. The IR does not provide any evidence to support this statement. While there may be some 'convenience' benefits for acquirers in purchasing optional services from the same service provider, this does not mean that card scheme operators are overall in a "*stronger position*" relative to alternative providers. We also note that the IR does not seem to have considered the role that service aggregators can play for acquirers and the constraint this exerts on schemes.

4.34 Alternative providers can provide relative benefits to acquirers, including by:

(a) Differentiating their services, through targeting specific use cases, branding, a specific innovation, or a combination of these. Alternative providers can do this as acquirers have a variety of business models and priorities.

(b) Being an acquirer's preferred provider of certain services. All else equal, some acquirers may have a preference towards diversifying their provider base, and the value of convenience benefits may be relatively low for acquirers with significant transaction value/volume.

4.35 Furthermore, alternative providers may also have advantages when compared with Visa and Mastercard as their specialty focus makes them able to be more flexible to experiment such as with regards to different business models.

---

192 [✂]

193 [✂].

194 *See* IR Annex 4, para 4.203, 4.206 and 4.207. Evidence submitted by acquirers [✂].

195 IR, Annex 4 para 4.227.

196 *See*, for example, [✂].

5. Technical Annex 5: Concerns with the PSR's assessment of Visa's transparency to clients on fees and fee changes

5.1 As set out in our Response, we continue to focus on improving transparency of communications with our clients and their overall experience. The IR does not sufficiently reflect this.

5.2 Technical Annex 5 sets out Visa's main concerns with the IR's assessment of service quality and transparency. In particular:

(a) **The IR's approach to evidence gathering is not systematic, appears to be driven by anecdotal evidence and is biased towards negative feedback.**

(b) **The evidence presented in the IR does not support the provisional findings in the IR with regards to Visa's customer communications, including because there are generalised conclusions that do not account for the significant variations between the two schemes' interactions with their acquirer clients.**

(c) **The IR does not reflect the evidence presented to the PSR on the significant initiatives Visa has taken [197] (including in recent years) to simplify and improve clarity of messaging for clients, including by responding meaningfully to acquirer feedback.**

(d) **The evidence presented in the IR does not support the provisional finding that transparency is "*below the standard expected in a competitive market*".**

5.3 We discuss these points in further detail below. As an overarching point, good client relationships, transparency, clear communication and continuous improvement of users' experience are core tenets of Visa's business. An international organisation as large as Visa's inevitably receives a mix of feedback from clients in respect of our best intended approaches towards communication and messaging.

Issues concerning the approach in the IR to gathering evidence from acquirers

5.4 The IR explains that the PSR has "*gathered a range of qualitative and quantitative evidence*" from acquirers using "*both* [its] *formal powers and informal questionnaires*".[198] The IR does not, however, include information on the specific questions nor responses received from acquirers. We set out below why the PSR's approach to evidence gathering is not appropriate for several reasons.

5.5 Firstly, on the evidence presented in the IR, the PSR does not appear to have collected evidence in a structured way, for example, by undertaking a survey of acquirers and merchants using standardised, best practice survey techniques. The benefits of a systematic approach are widely recognised in regulatory settings (including to avoid any risk of bias, which is particularly important in the context of qualitative data).[199] Indeed, the PSR has previously adopted this type of approach in its work on the card acquiring market review.[200] Visa similarly adopts this type of approach when gathering client feedback,[201] as set out in further detail below.[202]

197 *See* [✂].

198 IR, paras 7.2 to 7.4 and 7.37.

199 For instance, the European Commission's (EC) 'Better Regulation' toolbox describes that *"*[q]*ualitative data, more than quantitative, is extremely prone to bias, and systematic analysis helps prevent this"*. See: European Commission, 'Better regulation toolbox 2023, Chapter 7 – Stakeholder consultation', page 483.

200 Specifically, the PSR's acquiring market review involved a merchant survey where merchants were asked to rate various customer service dimensions, including communication with their acquiring provider. For instance, *see* QC12 and C16 of the merchant survey questionnaire for the PSR market review.

201 *See* [✂].

202 See para 5.18-5.19 below.

5.6 Secondly, and in light of the above, the IR's analysis appears to focus inappropriately on negative feedback. Specifically, the IR includes anecdotal presentations of 'case studies' focused on individual cases (e.g. "*an acquirer said…*"), which do not show a balanced view and may in fact represent the worst, albeit less frequent, examples of customers' experiences.

5.7 Thirdly, the IR does not sufficiently assess the qualitative and quantitative value of the evidence presented. Specifically, the IR does not explain the share of respondents affected by clearly defined issues, consider whether certain types of respondents were more affected than others by particular conduct,[203] assess the relative severity of issues, consider how acquirers' experiences of any particular issues have evolved over time, and/or distinguish between 'edge cases' and more prevalent challenges.[204] Furthermore, it is not clear from the evidence and analysis presented in the IR what period of time the "*issues acquirers raised*" relate to,[205] and therefore whether these issues may have improved and may no longer be present today.

5.8 In addition, the IR explains that acquirers indicated they "*have to*" purchase optional services to understand behavioural fees, otherwise they "*cannot correctly attribute them to the merchants responsible for triggering them*".[206] However, Visa's behavioural fees are designed in a way that facilitates acquirers to identify the problematic behaviour and are incentivised to improve this behaviour. For those clients that require additional assistance, Visa offers a range of support via our Client Services team, which provides ongoing support for client issue resolution and support on any general queries, as well as providing strategic engagement with Visa experts to help clients improve outcomes. Clients can also choose to purchase optional reporting services if these are valuable to their business. The IR recognises that "*evidence from acquirers sometimes conflicted with statements from the schemes*".[207] However, the IR does not consider this adequately in its assessment/analysis and goes on to state that "*this difference in understanding seems likely to lead to undesirable outcomes for service users*".[208] The IR does not provide any basis for this assertion.

5.9 As a result, the IR makes broad generalisations about the high proportion of acquirers experiencing "*difficulties*" (when it could be expected that, given the complexity of the payment sector and the diversity of acquirer business models, most acquirers may experience some isolated operational challenges over a long enough timeframe).[209]

5.10 The IR then goes on to refer to the "*prevalence of these issues in the acquiring market as a whole*" as part of its provisional conclusions.[210] However, given the limitations in the PSR's data gathering approach (as explained above), the PSR's evidence base cannot be used to draw conclusions about the experience of acquirers as a whole (or for the majority of acquirers).

---

203 For example, some acquirers' may have operational and/or commercial structures that may affect their ability to identify triggers for behavioural fees.

204 For example, the IR explains that "*several*" acquirers said they can face "*difficulties preparing for new or modified behavioural fees within the implementation periods* [set by the schemes]" in part because schemes do not provide "*adequate information*". The IR acknowledges that some acquirers received temporary waivers from both schemes under these circumstances to allow them time to make the required technical changes. (See IR, para 7.48-7.49). However, the IR does not consider this adequately in its analysis, and does not consider what would constitute "*sufficient*" notice or "*adequate*" technical information

205 The PSR explains that it has "*collected evidence from issuers and acquirers about their experiences with Mastercard and Visa*" and subsequently "*followed up on some of the issues acquirers raised, to better understand the impact of these issues*" (IR, para 7.2). However, there is no information on the period that this evidence relates to.

206 IR, para 7.45.

207 IR, para 7.70.

208 IR, para 7.70.

209 See, for example, IR paras 7.71,7.97 and 7.120.

210 IR, paras 7.138 and 7.140.

5.11 Finally, the IR has developed its assessment almost entirely based on acquirer submissions and there is no evidence of the PSR asking merchants directly about their experiences (whereas, in the card acquiring market review, the PSR conducted a systematic merchant survey).[211] As a result, the IR comments extensively on the impact on and experiences of merchants without any insight into the critical role that acquirers play (or should play) in providing information to merchants.

5.12 As a result of its unsystematic approach to evidence gathering, the IR arrives at generalised conclusions without presenting any systematic supporting evidence or analysis.[212]

Issues concerning the IR's provisional findings with regards to Visa's communications

5.13 The IR considers that it has "*observed*" a range of "*poor outcomes*" associated with the provision of information by Mastercard and Visa to acquirers.[213]

5.14 However, (and in addition to the lack of systematic evidence gathering as explained above), the IR draws conclusions that are stronger than the evidence that it has provided to support them. For example, the IR first considers that the evidence indicates acquirers "*sometimes face difficulties*" with clarifying information from the schemes[214] and that "*at least some acquirers*" encountered difficulty in clarifying information with scheme staff.[215] The IR, however, then concludes that "*acquirers often face difficulties clarifying information with the schemes*".[216] The evidence set out in the IR does not support this conclusion.

5.15 Further, while the IR makes general conclusions with regards to both Visa and Mastercard, it does not appear to account for the differences in experiences that acquirers have with each scheme based on acquirer feedback set out in the IR.

5.16 For example, several of the acquirer concerns that are described in the IR appear to be more applicable to Mastercard. This includes the acquirer experiences described by the IR in relation to:

(a) Issues with the **quality of information on mandatory and optional fees** which are, in large part, based on observations related to Mastercard. For instance, every example of the financial costs that acquirers have borne due to issues with mandatory and optional fees pertains to Mastercard's services.[217] Similarly, the only examples included in the IR regarding insufficient support to understand these fees are regarding Mastercard.[218] The IR also states that acquirers have provided examples of where they had unintentionally opted into services supplied by Mastercard, whereas no acquirers had submitted examples of this for Visa.[219] Notably, the majority of the examples relating to mandatory and optional fees are experiences with Mastercard.

(b) Issues with **behavioural fees**, which appear to be less severe for Visa relative to Mastercard. For example, where acquirers requested additional data on behavioural fee triggers from schemes, the IR describes instances of Mastercard asking clients to purchase

211 *See* the PSR website for Consultation on our proposed approach to the merchant survey, MR18/1.4.
212 For example, the IR claims that acquirers experience "*consistent*" difficulty with understanding behavioural fees but does not present any data that evidences this alleged "*consistency*" (e.g. what share of acquirers who were systematically surveyed faced any given type of issue, whether these issues were experienced as one-offs or repeatedly over time, etc).
213 *See*, for example, IR para 7.139.
214 IR, para 7.101.
215 IR, para 7.119.
216 IR, para 7.139.
217 IR, paras 7.80 and 7.81.
218 IR, para 7.80.
219 IR, para 7.84, fn 620.

additional reporting or telling clients that the data they require could not be provided.[220] In contrast, the IR includes examples in which an acquirer describes Visa providing detailed data "*on a goodwill basis*" [221] and one in which an acquirer notes that "*in some cases Visa provides supplementary information to support passing fees onto its merchants*". [222] The annual cost estimates provided in relation to Visa are also significantly lower than the cost estimates provided in relation to Mastercard.[223]

(c) Issues with **clarifying information** that acquirers receive from their account manager at Mastercard or account executive at Visa. Specifically, the IR notes that one acquirer received vague and inconsistent information from different Mastercard departments, and that these issues have become more frequent in recent years because Mastercard has made its fees 'increasingly complicated'.[224] The IR does not present equivalent examples for Visa.

5.17 Despite these apparent differences in both the quality of the acquirers' experiences as well the frequency with which these issues tend to arise, it does not appear that the IR has sought to distinguish the acquirer experiences with the different schemes. Instead, the IR includes generalised conclusions that are applied to both schemes, whereas the evidence on specific experiences with Mastercard cannot be used to support conclusions with regards to Visa.

Visa's evidence on its investments to improve the experience for acquirers, including responding to acquirer feedback

5.18 Visa commits significant time and resources to improving our client relationships, including by providing our clients with dedicated support to address the issues and questions they have. Our engagement with our acquiring clients is largely very positive. For instance, a recent client satisfaction survey found that [✂] UK acquirers rated Visa at 7/10 or better and [✂] of UK acquirers rated Visa at 9/10 or better. [225]

5.19 These client surveys are designed to collect objective client feedback in a systematic manner and to inform Visa's efforts to improving service quality, and there is no reason for clients to overstate their levels of satisfaction.

5.20 However, the assessment in the IR does not sufficiently reflect the evidence submitted by Visa, such as these survey results, and appears to focus more on anecdotal evidence submitted by some acquirers to inform its overall assessment. For instance, in relation to acquirer experiences in obtaining clarifying information, the IR acknowledges how "*schemes have described various teams they employ to support acquirers with their queries*" but "[n]*otwithstanding this, evidence shows that at least some acquirers' encountered difficulties in clarifying information with scheme staff*". [226] The IR then arrives at the generalised (negative) conclusion that, as noted above, "*acquirers often face difficulties clarifying information with the schemes*".[227] However, there are no indications that the IR has fully considered analysis submitted by Visa in relation to client query resolution which indicates largely positive acquirer experiences.

---

220 IR, Tables 4 and 5.
221 IR, Chapter 7 Table 5.
222 IR, Chapter 7 Table 4.
223 IR, para 7.47.
224 IR, para 7.106.
225 *See* [✂].
226 IR, para 7.119.
227 IR, para 7.139.

5.21 Specifically:

(a) The IR acknowledges that [✂] of Visa's acquirer clients rated it at least a 7 out of 10 when asked whether they agree that Visa *"effectively resolves their service and support requests"* for FY 2023,[228] and that analysis conducted by Visa on a sample of acquirer queries showed that [✂] of respondents had their queries resolved either sooner than expected or as quickly as they would expect. [229] However, despite these data points, the IR places greater weight on acquirers' anecdotal statements to conclude that acquirers often face difficulties clarifying information with the schemes.[230]

(b) The IR also acknowledges Visa's analysis of response times on a sample of acquirer queries, noting that [✂] of the queries analysed had been resolved within [✂] days.[231] However, the IR disregards this evidence, based on the assumption that *"acquirers' reports of difficulty resolving issues likely relate to more complex questions, and may exclude more minor queries*" while the Visa sample contained *"query types that can be more quickly resolved… as well as more complex queries which may require a specialist team"*.[232] However, the IR overlooks data in the same Visa submission which indicates that [✂] of the complex queries included in the sample were also resolved within [✂] days.[233]

5.22 The IR notes that some acquirers described recent improvements that the schemes have made, including assigning dedicated technical support staff to their account.[234] The IR also recognises improvements in Visa's Net Promoter Score ('**NPS**') scores over time, as well as operational changes that Visa has made to improve its service following client feedback. [235] It is therefore possible that the IR's analysis is focused on issues that are no longer current. For instance:

(a) Visa has recognised that [✂],[236] and has therefore already taken steps to rectify situations that the IR references, such as one acquirer's difficulty with one fee change which went through deferrals and amendments.[237]

(b) Visa now [✂], [238] and has therefore already implemented changes to address instances such as those referenced in the IR regarding insufficient notice to acquirers.[239]

5.23 The IR, however, places no weight on this evidence and instead relies on the anecdotal evidence it has collected from acquirers to conclude that outcomes for acquirers *"are below the standard expected in a well-functioning market",*[240] and there has been *"little or no link to changes in service quality"*.[241] This places an inappropriately low significance on the fact that Visa's client feedback scores have improved over time and that it has implemented significant changes following client feedback. The evidence relied on in the IR is therefore not representative of the reality of the market,

---

228 IR, para 7.112.
229 IR, para 7.115.
230 IR, para 7.139.
231 IR, para 7.117.
232 IR, para 7.126.
233 This is using the PSR's own implied definition of complexity in the IR, which classes a query as complex if it *"require*[s] *a specialist team"*. This maps to the 'L3' categorisation in [✂].
234 IR, para 7.108.
235 IR, paras 7.23, 7.59 and 7.117.
236 *See* [✂].
237 IR, Chapter 7 Table 7.
238 *See* [✂].
239 IR, para 7.49.
240 IR, para 7.140.
241 IR, para 1.4.

and objective data that the market is working well seems to have been given an unduly low significance, resulting in mistaken conclusions.

Issues concerning the IR's provisional finding of transparency being 'below the standard expected in a competitive market'

5.24 The IR provides insufficient evidence to support its provisional conclusions that acquirers "*often experience difficulties*" relating to the information they receive from schemes, and that these issues are *"sufficiently material as to create poor outcomes"* [242] that are *"below the standard expected of a well-functioning market"*. [243]

5.25 Firstly, the IR has not established an appropriate benchmark to define what constitutes a *"well-functioning"* market, making it impossible to compare its findings against a reasonable standard.

5.26 Secondly, the analysis in the IR does not demonstrate that the "*difficulties*" experienced by acquirers are "*material*" or that they apply to "*the acquiring market as a whole*". Specifically, the IR considers that the issues experienced by acquirers may "*lead to a range of negative impacts*" that, in turn, are "*sufficiently material as to create poor outcomes*" for both acquirers and merchants.[244] The IR measures the materiality of these negative impacts with reference to the following three measures:[245]

- **(a)** **The share of the UK acquiring market affected by the issue.** The IR explains that "*the greater the proportion of the market affected, the more likely the issues* [are] […] *material*".

- **(b)** **The estimated financial cost of the issue.** The IR explains that "*greater financial costs potentially indicate an issue is more material*" and has collected some estimates of financial cost from acquirers to support its analysis.

- **(c)** **Decisions to escalate the issue.** The IR considers that "*decisions to escalate issues* [are] *supportive of those issues having a greater impact*".

5.27 However, <u>each</u> of the measures identified in the IR suffers from fundamental flaws. Specifically:

- **(a)** **The share of the UK acquiring market affected by the issue.** Given the lack of systematic evidence gathering (as explained above), the IR draws general conclusions from non-general evidence. For example, the fact that an acquirer raised one particular issue with the PSR (e.g. in relation to a specific behavioural fee) does not mean that this issue affected all of its UK transactions involving a Visa card. Indeed, the IR does not establish that the single cited issue is representative of that acquirer's experience with respect to other fees or its general experience with Visa. Therefore, the references to market share throughout the IR[246] do not provide an appropriate basis for measuring the extent of any specific, and isolated, impact identified by the IR.

- **(b)** **The estimated financial cost of the issue.** As explained above,[247] the PSR has not provided Visa with any third-party responses including on the estimates of financial cost

---

242 IR, para 7.138.
243 IR, para 7.140.
244 For example, acquirers being unable to pass fees on to merchants accurately, inaccurate forecasting and misbilling. See, IR, para 7.37 (fourth bullet).
245 IR, para 7.37.
246 The PSR relies on this rationale for materiality in its assessment of scale of impact in paras 7.71, 7.97, 7.120, and 7.131.
247 *See* para 5.26 above.

submitted by acquirers. Given the lack of systematic evidence gathering (as explained above), it is likely that the estimates provided by acquirers are not consistent and are therefore unsuitable as measures of the potential impact of any issue. While this is recognised in the IR,[248] it continues rely on these acquirer estimates throughout its analysis.[249]

(c) **Decisions to escalate the issue.** In principle, a decision to escalate an issue could be used to indicate the importance of an issue to a client. However, the IR explains that "*in practice, most acquirers tended to escalate issues with the schemes*" which suggests that the IR considers not only genuine escalation but also 'business as usual' interactions (that Visa considers to be part of open communication and good relationship management). It follows that a 'decision to escalate an issue' is an inadequate indicator of relative materiality. At most, it suggests client willingness to reach out to schemes regarding any issues as part of ongoing client engagement (including those issues that may be 'small', 'mundane' or 'less material').

5.28 Overall, the IR has not identified a reliable measure to assess the materiality of the negative impacts it purports to have identified. Despite this, the IR relies on these measures, and even goes on to suggest that the analysis may understate the costs to acquirers.[250] There is no basis for this.

248 The PSR explains that it has considered the "*apparent limitations*" of estimates provided by acquirers. These include missing data, estimates measuring different things in different ways, estimates not being specific to the UK, and estimates not controlling for acquirer size. The PSR recognises that the impact of these limitations is in some cases unclear and could lead to under/over-estimates.

249 The PSR relies on this rationale for materiality in its assessment of financial costs in paras 7.73, 7.99, 7.122 and 7.132.

250 IR, para 7.140.

6. Technical Annex 6: Issues concerning the PSR's proposed remedies

6.1 We share the PSR's goal of ensuring the UK retains its status as a thriving and innovative payments ecosystem, with positive outcomes for merchants and consumers; and believe that this will ultimately support the wider benefit of sustained economic growth in the UK. It is difficult for stakeholders to understand the goal of each of the wide range of remedies proposed in the IR, or how they, individually or collectively, drive towards resolving any of the issues identified.

6.2 As set out in our Response, we stand by the themes we have referred to in earlier engagement with the PSR. We would welcome the opportunity to engage more on these points and to work together to evolve and grow the market so that it can further contribute to the UK's economic health, as it has done in the past. In this spirit, and while we appreciate that the IR is the start of a conversation with the sector (with the PSR due to consult further on remedies), Technical Annex 6 below sets out Visa's specific concerns with the remedies proposed.

6.3 The IR states that the PSR provisionally considers that it may be appropriate to implement a range of remedies, including: (i) measures to reduce complexity and improve transparency; (ii) regulatory financial reporting ('**RFR**'); (iii) mandatory consultation and notification requirements; and (iv) pricing methodology and governance (which concerns both the substantial pricing outcome and the process). Before addressing each proposed remedy in turn, Visa has a number of significant concerns with the PSR's assessment on potential remedies:

(a) The proposed remedies do not promote the PSR's statutory payment system objectives and appear inconsistent with the regulatory principles set out in FSBRA. Indeed, the IR does not consider the likely impact associated with implementing the proposed remedies including a range of likely adverse effects on the payment landscape in the UK.

(b) It is unclear from the IR what powers the PSR intends to use to implement the proposed remedies, and it is questionable whether the PSR has the power to implement all of the proposed remedies.

6.4 As an additional broader point, we note that the IR does not consider the extent to which ongoing regulatory interventions within the sector, such as the ongoing work on developing the New Payments Architecture, is already addressing, or could address going forwards, the issues that the IR has identified. This is something that a well-designed package of remedies should take into account to ensure that interventions are not duplicative and do not impose a greater regulatory burden than the minimum necessary to achieve the intended objectives.

Issues concerning the findings in the IR and their link to the proposed remedies

6.5 As further explained below, the actions that the PSR is proposing to take are novel, at odds with the approach taken by other regulators, will be highly disruptive to Visa's business operation in some cases, and are highly likely to have serious adverse effects on the UK payments landscape. It is well established that intrusive regulatory intervention, in particular any remedies which seek directly to control the outcomes of a business process, including the terms and prices for providing goods and services, requires very careful consideration.[251] As recognised by the Financial Conduct

[251] This principle is embedded in the Better Regulation Framework, which states that, in the context of regulatory impact and options assessments, "*the level of analysis should be proportionate to the problem that is being addressed and reflect the scale or impact of the measure*" (para 3.10). Similarly, the Competition Appeal Tribunal ('**CAT**') noted in *BAA v Competition Commission* [2012] CAT 3, para 20(7), that: "*In applying both the ordinary domestic rationality test and*

Authority ('**FCA**') and the Competition and Markets Authority ('**CMA**'), such intervention could lead to "*harmful or even anticompetitive* [outcomes]*, for example, by limiting innovation*".[252] In these circumstances, the PSR must carefully re-examine whether it has gathered the necessary evidence and met the evidential threshold to establish the existence of harm that would justify imposing measures intended to remedy such putative harm (especially in light of the serious adverse impacts that the remedies could have in some cases, of which examples are provided in the subsections further below). As explained in Technical Annexes 1 to 5, we believe that the IR falls short of this (rightly) very high standard.

The proposed remedies and the PSR's statutory payment systems objectives and regulatory principles

6.6 The PSR is required, when discharging its general functions, to act in a way which advances one or more of its payment systems objectives (so far as is reasonably possible) and to have regard to the regulatory principles in section 53 of FSBRA (among other things).[253] The PSR has also indicated that, when performing any of its other functions under FSBRA, such as the imposition of a specific direction or requirement, it will also have regard to its statutory objectives and its regulatory principles (among other things).[254]

6.7 As further explained below, it is apparent that some of the proposed remedies, including but not limited to pricing methodology and governance, mandatory pricing consultation and notification requirements, and reductions of the number of services, will likely have negative implications on effective competition, innovation in payment systems, and the interests of service users. It is unclear how the other remedies would advance the PSR's competition and innovation objectives. It is also doubtful whether the proposed remedies would advance the service-user objective, which requires the PSR to work towards ensuring that payment systems are operated and developed in a way that takes account of the interests of all existing and future service users, but not of one group of service users over another. As such, Visa's view is that the proposed remedy package put forward by the PSR does not advance any of the PSR's payment systems objectives.

6.8 Further, the PSR does not seem to have had regard to the regulatory principles in section 53 of FSBRA when considering its proposed remedies. The proposed remedies could have significant impacts on Visa's ordinary business operations, including re-organising the mechanism through which Visa reports its finances, hindering Visa's ability to draw on its experience and institutional knowledge and take into account other interests when determining pricing, restricting Visa's ability to respond to market conditions and the needs of service users in an agile way, and requiring a potential drawn-out process that is duplicative to the efforts already undertaken. Visa could instead devote these resources to pursuing innovation and delivering better value for service users.

6.9 Overall, Visa considers that the proposed remedies would dampen incentives to invest in resilience, security and innovation, reduce dynamism of the sector, and deter new market entrants (we provide

---

the relevant proportionality test under [A1P1]*, **where the** **[Competition Commission]** **has taken such a seriously intrusive step** as to order a company to divest itself of a major business asset like Stansted airport, **the Tribunal will naturally expect the CC to have exercised particular care** in its analysis of the problem affecting the public interest and of the remedy it assesses is required*". (emphasis added)
See further *Tesco plc v Competition Commission* [2009] CAT 6, paras 111 and 124, where the CAT held that the Competition Commission's proposed intervention did not "*fully and properly assess and take account of the risk …* [of] *adverse effects for consumers … including by leaving demand "unmet"* and that "*it was impermissible for the Commission to assume without proper investigation and consideration of the issue*".

252 Financial Conduct Authority and the Competition and Markets Authority on behalf of the UK Competition Network, "Helping people get a better deal: Learning lessons about consumer facing remedies", page 38.

253 See FSBRA, sections 49(1) and 49(3); PSR Powers and Procedures Guidance, para 3.5; and IR, para 2.29.

254 See PSR Powers and Procedures Guidance, para 3.5; and IR, para 2.29.

some examples further below in this technical annex). As such, if the proposed remedies package were applied as currently set out in the IR, it would clearly impose a significant burden on Visa, and risk worse outcomes for service users, in a way that would not be proportionate to the purported benefit that could result from the imposition of the burden (and thus counter to the principle of proportionality set out in section 53(b) of FSBRA). Further, it is difficult to reconcile the likely impact of the proposed remedies package with the desirability of sustainable growth in the economy of the UK in the medium or long term (as set out in section 53(c) of FSBRA).

The legal bases for implementing the proposed remedies

6.10 Further, the IR does not explain how the PSR plans to implement the proposed remedies. In order to adequately consult on its proposals, the PSR needs to explain what it proposes to do, including which powers it contemplates exercising and providing evidence as to the likely impact of those measures, with sufficient clarity to enable consultees meaningfully to consider the proposals. At present, Visa is unable to understand the legal basis on which the PSR intends to implement the proposed remedies. Visa expects the PSR to set out details of the proposed remedies, including the powers on which it is relying, in a further consultation setting out its "*further detailed work on the design of potential remedies*".[255] Visa fully reserves its rights in this regard, including but not limited to its right to make further representations in relation to any remedies.[256]

Issues concerning the PSR's proposed remedies

6.11 Below, we set out comments on each proposed category of remedy in turn, including by reference to the high-level guiding factors set out in our Response and in particular the need to promote growth, competition and innovation.

Complexity and transparency

6.12 Following its provisional finding that scheme and processing fees are overly complex and lacking in transparency, the PSR has proposed six remedies.[257] Five of these remedies are (in summary) requirements for: detail on invoicing of behavioural fees; labelling of optional services; provision of clear information on how scheme and processing fees work; creating a developed taxonomy of scheme and processing fees; and improving the ways in which information is made available through schemes' portals. The sixth remedy would involve requiring card schemes to reduce their number of services.

6.13 While the IR does not provide a legally sufficient basis for the imposition of these remedies, Visa agrees that some of these could represent a positive step forward. As we note in our Response, the PSR led the way with its card acquiring market review starting in 2018, emphasising the importance of transparency to merchants in that review, and there is an opportunity to build further on this. Visa's position is that a form of the measures outlined in the first five remedies could in principle be implemented, if appropriately scoped in a manner which is proportionate to the evidence which the PSR has available to it.

255 IR, para 8.6.

256 The IR expressly states that "[b]*efore implementing any remedy package we would consider our most appropriate tool to do so, potentially giving one or more directions or imposing a requirement under FSBRA*" (IR, para 8.48) and only alludes to using the PSR's powers of direction and powers to give requirement under sections 54 and 55 of FSBRA (IR, para 2.28).

257 IR, paras 8.31-8.32.

6.14 Notwithstanding this, we observe the following in relation to the remedies within this group:

(a) Alternative approaches to product design, pricing and client engagement are part of the competitive dynamic between Visa and Mastercard, and a standardised "*taxonomy*" of scheme and processing services and fees could reduce the extent of competition between the two schemes and dampen incentives for innovation with clear adverse outcomes for end users.

(b) Optional services are "*complementary*" to core services and clients are "*under no obligation to purchase these services* [that] *are not strictly necessary for* [accepting] *card payments*".[258] It would therefore be inappropriate to require schemes to "*demonstrate*" that a service is optional with reference to the existence of third-party alternatives as the IR seems to suggest.

6.15 Notwithstanding Visa's serious doubts about the PSR's underlying analysis as set out in Technical Annex 5, we have significant concerns regarding the sixth remedy, as set out below.

6.16 The sixth proposed remedy is a requirement for card schemes to reduce the number of services they provide, either in the form of a broad obligation to demonstrate steps being taken over time to reduce the number of services, or precise obligations to reduce the number of services by a specified number or percentage.[259]

6.17 The logic of this proposal is hard to understand. The proposed remedy does not recognise that Visa offers a wide range of services to meet the evolving and often bespoke needs of our clients and other ecosystem participants, who represent a wide range of organisations operating not only in the UK, but also in a range of other markets/jurisdictions. Many of these organisations have bespoke requirements in line with their commercial objectives and business needs, and depending on the technologies that they choose to use and support.

6.18 Visa is concerned that such a requirement is likely to result in a situation which has the opposite of the PSR's intended effect. Instead of increasing clarity and transparency over the services available to industry participants, the requirement would instead cause Visa to offer bundled services to its members, thus reducing choice and functionality available to clients (as well as reducing, rather than increasing, transparency). In particular, if it is necessary to reduce the overall number of services to clients, this is likely to lead to a situation where clients are required to choose between fewer, ready-made packages of services (i.e. bundled services) that are fundamentally less tailored to their individual requirements/needs and contribute to the recovery of costs for services that they do not use. Even if the proposed remedy was not implemented in the way expressed in the IR and was instead limited to, for example, a requirement for what we understand the PSR is terming 'fee simplification', this would hinder fee transparency and reduce the ability of our clients to accurately invoice their clients, with a similar impact on acquirer and merchant choice as with bundled services. Indeed, acquirers and merchants would be less able to exercise choice as to whether they use an optional service if they are not able to accurately identify the fee associated with a particular service and determine the overall value of that service to their business.

6.19 There are two main concerns with this.

6.20 Firstly, this is highly likely to diminish competition, principally through the reduction of non-price competition. For example, providers of alternative services will be less inclined to compete on their non-core services if these are simply included as part of the core service(s). In addition, the

[258] IR, Annex 4 para 4.3.
[259] IR, para 8.32.

requirement is also likely to reduce the extent of non-price competition among Visa's clients and other ecosystem participants, who use the wide range of services offered by Visa to meet their commercial objectives and business needs (including by differentiating their service offering to end users). As the PSR is aware, broader regulatory and competition policy is generally sceptical of bundling, given that it tends to reduce users' choices and runs the risk of users having to purchase services they do not want. It is hard to see how this can be in the interests of service users when contrasted with the current approach which means that users do not need to take, or pay for, more services and functionalities than they want.

6.21 Secondly, and relatedly, imposing a requirement which leads to the bundling of services (or fees) would be contrary to the general approach adopted in the UK and in the European Union. There are a number of requirements in different financial services sectors which are aimed at reducing cross-selling and bundling of services and increasing transparency where such cross-selling or bundling occurs, so that recipients can see which services are being paid for. For example, at the European level (and as adopted in the FCA's rules), where investment firms offer an investment service together with another service or product as part of a package or as a condition for the same agreement or package, they are required to inform the client whether it is possible to purchase the different components separately, and they must provide separate evidence of the costs and charges of each component.[260] There are similar rules relating to unbundling and transparency around bundled products in relation to insurance products.[261] Given that regulatory policy has consistently recognised the dangers of bundled products (especially in relation to end users), the PSR should not introduce a remedy which inevitably forces card schemes to move in this direction.

6.22 In addition, a requirement to reduce the number of services could reduce schemes' incentives to innovate and develop new solutions in response to bespoke requests from clients or emerging (but relatively small) business needs, particularly if such services were less likely to generate immediate revenue. However, such innovation can be important for those businesses, can provide the basis for experimentation and diverse innovative solutions, and can ultimately result in broader adoption and contribute to enhanced resilience, ecosystem security and a better payment experience. By way of example:

(a) Visa has recently developed alternative ways to access our core network using APIs and cloud-based approaches in response to requests from challenger banks and fintechs. While most clients continue to use the legacy access service, there is increasing interest from established players to use these alternative solutions; for example, to reduce operational (data centre) costs or in response to regulatory requirements (as back up to increase resilience).

(b) Visa has recently introduced new types of authorisations to support certain types of merchants resolve unique frictions in payments. For example, extended authorisations are intended to support merchants dealing with extended fulfilment timelines (often associated with unique logistical challenges such as shipping) by reducing the need to re-authorise transactions after the expiry of the initial authorisation.

---

260 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast) ('**MiFID II**'), article 24(11), and COBS 6.1ZA.16R in the FCA Handbook. Further, the FCA rules provide for additional protections in relation to bundled products, including requiring the firm to undertake an assessment of the suitability and appropriateness of the overall bundled package for the client (*see* COBS 9A.2.16R and COBS 10A.2.2R), which further emphasises the FCA's concerns around the negative effects bundled products on the interests of service users.

261 See for example COBS 6.1ZA.16AR, COBS 6.1ZA.16BR and ICOBS 6A.3.1.

6.23 Overall, particularly in the arena of sophisticated B2B services, the PSR should not force market participants to structure their offering in a way that results in less choice for customers and end users, creates negative outcomes for service users, and would be inconsistent with good competition policy and action taken by peer regulators. Given the dynamism which characterises the payments market in the UK, the future assembly of service features is likely to continue to evolve, and regulation that forces or assumes a certain service architecture carries a very high risk of unintended harm and would not be conducive to promoting growth in the UK.

Regulatory financial reporting (RFR)

6.24 This remedy would require Visa to provide regulatory financial reporting of its UK financial information and performance to the PSR on an ongoing basis.[262] Visa has four primary concerns with this proposal. These relate to: (i) the lack of justification for the remedy; (ii) the purpose for which the PSR has proposed RFR; (iii) the disproportionate burden which such requirements would impose on Visa; and (iv) the impact of such proposals on the PSR's Supervision, Compliance and Monitoring ('**SCM**') division's work on its approach to supervision.

6.25 As a preliminary comment, while the scope of information that may be required by the PSR under RFR is not defined in the IR, it appears to be contemplating requiring information which is potentially both very detailed and very broad. In particular, the IR contemplates requiring Visa to prepare and provide reports "*comprising profit and loss and balance sheet information in relation to* [its] *UK activities*",[263] which the IR notes to mean "*the full UK activities of … Visa, including all international and cross-border transactions (including FX conversion revenues) and activities with a UK nexus)*".[264] We infer from this that the PSR is only contemplating requiring the provision of information which relates to international or cross-border transactions with a UK nexus (rather than all international and cross-border transactions). Visa maintains the position that the PSR's powers to require information or documents extend only to information or documents which are relevant to a designated payment system that operates exclusively in the UK or, where a payment system operates both in and outside the UK, to the extent that it operates in the UK. As such, any RFR which requires information relating to non-UK data would be outside the scope of the PSR's powers to request.

6.26 Notwithstanding this preliminary comment, Visa's primary concerns are as follows.

6.27 Firstly, Visa's main concern is that there is no reasonable justification for imposing RFR in this particular case. Most importantly, as explained in Technical Annexes 2 and 3 above, the PSR has not established that Visa's profitability indicates any harm being done to the market or market participants, nor any potential harm that might warrant the collection of additional information.

6.28 Secondly, Visa is concerned by the IR's specific comment that, if it had additional information, it may have considered proposing a price cap or a form of price control.[265] This implies that the PSR is proposing RFR as a means to obtain information it believes it needs, but currently does not have, in order to justify imposing a price cap. As set out further below, the PSR does not have the power to introduce price control measures unless it is seeking to exercise its competition powers following a market investigation reference (under s.59 FSBRA read with Part 4 of and Schedule 8 to the Enterprise Act 2002), or is addressing a contractual complaint made under s.57 FSBRA, neither of which is applicable here. Therefore, collecting information from Visa in order to assess whether to

262 IR, para 8.10.
263 IR, para 8.11.
264 IR, para 8.13.
265 IR, para 8.9.

impose such a remedy using sections 54 and 55 of FSBRA (‘**s.54/55 FSBRA powers**’), which do not give the PSR the power to impose that remedy, would amount to an improper purpose.

6.29 Thirdly, producing information of the type contemplated by the IR would be extremely burdensome for Visa and disproportionate, particularly given the absence of a clear finding of harm. As the PSR itself recognises, such a requirement would “*require investment and changes to the card scheme’s processes*”,[266] would take significant time to put in place (the PSR itself notes that it “*may take up to two years for RFR to be fully implemented*”),[267] and there are significant challenges in producing the sort of information contemplated by the RFR remedy.[268] As such, the regulatory burden which would be imposed on Visa by this remedy would entail very significant time and resource commitments, which would also distract from its day-to-day running of the business and longer-term strategic projects (including the development of innovations, which as noted in Technical Annex 3 above, have significant direct benefits for end users and the wider UK economy). Considering this substantial regulatory burden in light of the lack of reasonable justification for requiring RFR, it is clear that imposing this remedy would be highly disproportionate to any potential benefit the PSR envisages obtaining. Accordingly, to impose an RFR remedy would amount to the PSR deviating from the regulatory principle of proportionality and from the principle of the desirability of sustainable growth in the UK to which the PSR is required to have regard (as discussed above in this technical annex).

6.30 Fourthly, Visa is concerned by the interplay between this proposed RFR remedy and the PSR’s wider work on developing its supervision regime. As the PSR notes, “*an RFR remedy for this market review has the potential to overlap with, or complement, the PSR’s ongoing consideration of an appropriate form of regulatory financial reporting for designated payment systems*”.[269] Visa is concerned that, notwithstanding the PSR’s recognition that it “*would need to take appropriate steps to ensure the two forms of reporting, if implemented, operated in an efficient way*”,[270] implementing RFR in the context of this market review risks leading to a confused and potentially duplicative set of reporting obligations to the PSR. As Visa noted [✂], the PSR needs to proceed with the development of its approach to supervision gradually and with caution.[271] Without a coherent and practical framework to give structure to the PSR’s approach to supervision, it is difficult to see how the PSR will avoid unintended consequences, duplication and unnecessary regulatory burden. The objectives of the PSR’s supervision team are also closely aligned to the apparent objective behind the RFR remedy, namely to obtain data and information to inform the PSR’s decision-making. Therefore, adding an additional element of RFR outside the scope of that work, before a clear supervision framework has been established, risks worsening these potential problems with the supervisory regime.

6.31 Finally, as noted in Technical Annex 2, the submitted fully-loaded UK P&L is a more reasonable reflection of Visa’s UK profit margins than Visa’s global accounts. However, our engagements over the past year have surfaced the challenges of estimating profitability and that results are highly sensitive to methodologies and assumptions. It is therefore unclear how RFR will assist in the PSR’s analyses as it too will be subject to these same challenges and sensitivities.

---

266 IR, para 8.12.
267 IR, para 8.49.
268 IR, para 8.8.
269 IR, para 8.14.
270 IR, para 8.14.
271 [✂]

Mandatory consultation and timely notification

6.32 The IR also considers remedies in relation to "*mandatory consultation and timely notification*" requirements. These include: (i) a requirement to consult acquirers on all fee changes before they have been approved internally; (ii) a requirement to report to acquirers and the PSR on how acquirer feedback has been taken into account in the development of fee policy; and (iii) a formal requirement not to implement fee changes until a specified period of time has passed.

6.33 The mandatory consultation remedy would, as far as Visa is aware, be without precedent in the regulation of comparable sectors. For example, we are not aware of any legal or regulatory obligation imposed on the operators of other types of financial market infrastructure, such as trading venue operators (including recognised investment exchanges) and central counterparties, to consult participants on changes to fees or other costs. More broadly, in other (not comparable) regulatory regimes, price publication is generally only required in circumstances where the relevant regulated entity is a monopoly (and especially where it is a vertically-integrated monopolist that might otherwise have the ability and incentive to provide its own business with preferential access to upcoming market-affecting price changes). Price publication is also sometimes used as a transitional regulatory rule during a period of liberalisation, to make anti-competitive price discrimination by a former monopolist easier to see. Neither of those situations is comparable to the competitive market in which Visa operates (as discussed in Technical Annex 1). As such, a requirement for prior consultation of acquirers on fee changes, and more broadly any requirements for price publication by competitors in a competitive market, would be unprecedented.

6.34 There are good reasons why such requirements have not been imposed previously, in particular the significant distortions of competition that would be caused. A consultation system would risk having a PSR-mandated price-signalling effect within the industry, positively requiring Visa to provide public details of not yet finalised pricing proposals to the market, including its competitors. This could enable other participants (including direct competitors) to anticipate (and, conceivably, simultaneously mirror or otherwise respond to) upcoming pricing changes. This could create a risk of softened price competition, leading to more homogeneous or aligned pricing across the industry. It is for this reason that competition authorities have consistently discouraged market interventions which create artificial price-signalling mechanisms.

6.35 All of these negative consequences are amplified by the risk of geographical distortions being introduced between the UK and other countries/regions, given that Visa launches many of its products on a global or regional basis. For example, under the proposed requirement for mandatory consultation in the UK, a service introduction applying globally or regionally may be delayed in the UK relative to other countries because of the need to consult on the service and its pricing.

6.36 In addition to the negative consequences of imposing such a requirement, there are serious questions about the extent of any potential upside of the remedy. On the PSR's own analysis (which Visa disagrees with, as set out above), acquirers may be unlikely to give proper consideration to the proposals if they will simply pass the costs through to merchants. Further, this would create a material risk of free-riding, in that it would enable acquirers to contribute to a situation where they recognise the benefits of changing fees (for example, to further Visa's ability to innovate), yet are able to allow other stakeholders in the UK or international payments ecosystem to pay for those system-wide benefits (potentially with an associated mark-up). Coupled with the fact that running such consultations would require a significant amount of time and resources from both Visa and our clients, imposing a consultation requirement risks becoming a costly, low value-add and formalistic administrative exercise, which could in fact be actively harmful within the market.

6.37 Notwithstanding that it remains unclear what services and what information the PSR expects to include in any consultation requirement, similar to the effect of the pricing methodology and governance remedy, mandatory consultation (and also a requirement to wait a specified amount of time before introducing any fee change) would have a negative impact on Visa's ability to respond to changing market conditions in an agile manner (especially, say, in response to significant economic and geopolitical shocks such as the recent Covid-19 pandemic).

6.38 Further, depending on how the precise rules around Visa's obligations in response to any such consultation are implemented, there is a danger that it could amount to a form of price regulation. If, for example, Visa was required to demonstrate that it had responded to, and/or reflected, acquirer feedback in its post-consultation pricing decisions, this could even become a de facto externally-imposed restraint on the prices which Visa was able to set, with the attendant *vires* issues set out further below.

6.39 Finally, if a requirement to consult on a pricing decision were combined with a system of mandatory cost-based pricing, the proposal would entail Visa having to disclose critical information about costs to the public (including, by implication, to competitors), which would otherwise remain private. Publicising cost elements in this manner raises material competition concerns, given the disclosure of pricing inputs it entails, and the softening of price competition which inevitably follows. Seeking to impose such a requirement would therefore be contrary to good public policy (as also applied by competition regulators). It could further create security and resilience concerns if the cost information would reveal additional information about the way in which Visa secures its network.

6.40 Overall, this proposed remedy would have harmful effects on competition and market dynamics, as well as being very burdensome for industry participants, without generating valuable outputs. As such, it appears as though the PSR has not considered the disproportionate impacts this remedy would have on the wider competitive landscape, when compared to the issues it is supposed to address. Such a remedy would therefore run counter to the principle of proportionality, set out in s.53(b) FSBRA, to which the PSR is required to have regard.

Pricing methodology and governance

6.41 The scope of the IR's proposed "*pricing methodology and governance*" remedy is unclear in the IR. It appears to have two aspects:

(a) A substantive requirement, which would require Visa to prepare and "*in general*" follow a pricing methodology setting out "*principles or outcomes*" for "*UK pricing decisions*" that will be subject to approval (or non-objection) by the PSR, with one of the potential "*principles or outcomes*" being that "*all decisions relating to core scheme and processing services should be based on cost*"[272] (including a proposal for an immediate requirement on an interim basis that Visa and Mastercard *ensure* that any price increases are by reference to demonstrable increases in costs).[273]

(b) Procedural requirements, which includes a UK-specific governance structure within Visa for "*UK pricing decisions*" with regular reporting to the PSR.[274]

272 Other "*principles or outcomes*" may include: decisions relating to optional services should include clear evidence of why a service is considered optional (IR, para 8.19); and prices must be determined with a view to ensuring adequate consideration of the interests of service users. (IR, para 8.20).

273 IR, para 1.30.

274 IR, para 8.19 and 8.20.

6.42 The proposed remedy gives rise to numerous issues:

(a) This remedy could significantly dampen competition, innovation and ultimately the interests of service users of payment systems. Visa is concerned that the proposed remedy was proposed with little recognition of the gravity and the adverse impacts on Visa, its service users and the broader payments landscape.

(b) The proposed "*principle*" that any pricing decisions could only be cost-based is unjustified.

(c) The PSR has no reasonable basis for suggesting this remedy.

(d) The substantive requirement for a pricing methodology, particularly one which must be approved (or not objected to) by the PSR, amounts to unlawful price control by the PSR.

6.43 Firstly, a pricing methodology and governance requirement would likely dampen innovation to the detriment of services users and distort competitive outcomes in the markets.

(a) The proposed remedy would significantly restrain Visa's ability dynamically to respond to changes in the competitive landscape, for the benefit of service users. This applies for example to allowing Visa to amend its pricing and pricing strategy in response to ordinary course changes in market conditions or more significant economic and geopolitical shocks (such as the recent Covid-19 pandemic or other financial and geopolitical events). Both the rigidity of a pricing methodology, and any ad hoc departure from it, could pose risks to the UK's financial stability.

(b) Given the range of services that Visa provides, a rigid pricing methodology would be inappropriate and impractical as it would not be capable of reflecting the diversity of Visa's services or associated commercial or pricing models.

(c) The IR proposes only to intervene in Visa and Mastercard's price-setting, while leaving other players free to set their prices at competitive profit-maximising levels. This disparity would lead to an uneven playing field between different operators and artificial outcomes that distort competition in the market. This model of price regulation has rarely been used by regulators, precisely because requiring cost-based pricing in a market characterised by dynamic competition runs a very high risk of distorting competition to the detriment of all stakeholders. Both the FCA and the CMA recognise that such outcome-control remedies could directly override market signals and be anti-competitive. This course of action would be inconsistent with the PSR's competition objective. The requirement for cost-based pricing would create misaligned incentives for card schemes to promote and adopt innovation. It would discourage value creation for customers and disincentivise efficiency improvements by card schemes that reduce costs to the benefits of service users.

6.44 Secondly, a cost-based pricing requirement is unjustified, disproportionate and likely to give rise to multiple unintended consequences. This is the case for multiple reasons:

(a) There is no justification for requiring Visa to adopt a cost-based pricing provided in the IR. The IR provides no positive explanation as to why pricing for a card scheme should be tethered to cost above all those other inputs that may – legitimately – go to pricing. As explained above, the PSR's focus on cost-based pricing is misguided and is based on a fundamental misunderstanding of Visa's business and the UK payments landscape. In particular, it does not recognise that Visa does not offer a commodity service and that its fees fund the significant costs and risks of delivering security, resilience and innovation for the benefit of end users. On the contrary, the suggested approach seems to imagine Visa as a provider of 'plumbing' for payments in the UK, which is a view that is difficult to reconcile with the investments, innovation and value delivered by Visa, in the context of a dynamic payments landscape, as evidenced thoroughly in Visa's submissions to the PSR. There is no basis in economic theory or literature to require cost-based pricing in markets characterised by significant innovation, and the consequence of restricting pricing in these types of markets in terms of reducing incentives for investment and innovation is well-documented.[275] Indeed, cost-based price controls are recognised to be a last resort and their application has been largely restricted to markets involving commodity products and previously state-owned monopolies.

(b) The only justification provided for cost-based pricing in the IR is by reference to other concepts such as 'value', which the PSR asserts is "*abstract and often ambiguous*" and that it is "*integral to the effectiveness of any proposed pricing methodology*" to avoid referring to "*ambiguous*" concepts.[276]

(i) Visa rejects any suggestions that the value it considered in the course of pricing decisions is "*abstract and often ambiguous*". As demonstrated above, Visa's payment systems and services provide clear and direct benefits to UK end users. Its services are utilised by acquirers and other end users because they provide commercial benefits at reasonable, competitive prices. Pricing based in part on the value of a service is neither abstract nor ambiguous – it is the essence of competition.

(ii) Regulators commonly refer to value when assessing the appropriateness of prices. Most recently, the FCA's consumer duty requires firms to perform value assessments in relation to relevant products in order to demonstrate that the amount paid by a retail customer for the product is reasonable compared to the benefits.[277]

(c) The IR itself recognises the difficulty of assessing what constitutes a cost change for the supply of scheme and processing services to an acquirer in isolation, and does not draw firm conclusions on those matters. The IR acknowledges that a large portion of Visa's costs are common and relate to Visa's global scheme and platform.[278] As submitted above in relation to RFR, imposing a burden on Visa to identify "*costs*" for the relevant UK operations would be extremely burdensome for Visa and would be disproportionate.

(d) A requirement that any future Visa (and Mastercard) pricing decisions be cost-based would entrench one pricing model – built at one particular time – and preserve that in aspic, with only cost-based changes permitted. This could be deeply distortive and likely to give rise to multiple unintended consequences and perverse incentives. For example, the requirement for cost-based pricing would create misalignment in incentives for card schemes to promote and adopt innovation. It would curtail Visa's incentive to innovate and improve the quality of its offering, discouraging value creation for customers and disincentivising efficiency improvements by card schemes to reduce costs to the benefits of service users. In addition, this model of pricing regulation has rarely been used by

275 See for example Cabral, L. M. B. and M. H. Riordan, 1989, "Incentives for cost reduction under price cap regulation", *Journal of Regulatory Economics*, 1, pp. 93 – 102 which shows that regulation can severely dampen investment incentives by reducing the ability of innovators to capture returns from their investments. See also Averch, H. and L.L. Johnson, 1962, "Behaviour of the Firm under Regulatory Constraint", *American Economic Review*, 52:5, pp. 1052 – 1069.

276 IR, para 8.22 and footnote 701.

277 FCA Handbook, PRIN 2A.4.

278 IR, para 6.136(b).

regulators, precisely because requiring cost-based pricing in a market characterised by dynamic competition runs a very high risk of distorting competition to the detriment of all stakeholders.

6.45 Thirdly, the analysis in the IR does not reveal a reasonable basis for intervening in Visa's price-setting. As noted above, the IR's analysis of profitability and fees suffers from a number of errors and the PSR has not established with sufficient evidence that there is a lack of effective competitive constraints on the acquiring side.

6.46 In any case, the IR itself acknowledges that it could not, on the available evidence, reach a firm conclusion on the existence of unduly high prices or excessive profits. As explained above (and further below), regulatory intervention on price-setting could lead to harmful or even anti-competitive outcomes, and the PSR has not assessed the potential consequences that such intervention might have on outcomes for UK merchants and consumers. In the absence of any robust conclusion on the harm of the current pricing or price-setting process, the PSR has no justifiable basis to introduce remedies that would substantially restrain Visa's ability to set its prices as part of its ordinary course of business.

6.47 The IR suggests that the PSR is primarily focused on improving the "*decision-making <u>processes</u> around pricing*"[279] and that the remedy aims to ensure that "*decisions were taken in a suitable <u>way</u>*".[280] This signifies that the PSR is only concerned with the procedural aspects of pricing decisions. However, the remedy includes substantive requirements that would directly control the level of price that Visa could set, as further explained above. It is unclear why these requirements are necessary if the focus is on "*process*", as the IR appears to suggest.

6.48 The IR also does not set out a clear articulation of why interventions on the procedures Visa uses to make pricing decisions would result in better outcomes (nor specify the detriment that might be addressed), only stating that: *"requiring the schemes to take their pricing decisions in a more consistent and formalised way would mitigate the detriment we are seeing"*[281].

6.49 Finally, the PSR does not in any case have the power to regulate prices in the manner proposed. As explained below, the PSR does not have the power to regulate or control prices using its s.54/55 FSBRA powers. If implemented, this remedy would enable the PSR to block a price change, either by rejecting or refusing to indicate non-objection to a pricing methodology or finding that Visa has failed to adhere to the stated methodology. A requirement for price changes to be cost-based would have the effect of fixing the prices for scheme and processing services at the present level, subject only to any changes in cost and could not legally be done under either of these sections.

6.50 In summary, the remedy runs counter to the PSR's payment system objectives and regulatory principles, with potentially significant adverse impacts on the payments landscape. Notwithstanding this, the PSR has no legal power or reasonable basis to impose the pricing methodology and governance remedy as proposed.

Explicit price cap

6.51 The IR does not propose an explicit price cap, and recognises that a price cap (based on the evidence set out in the IR) would not be consistent with the PSR's statutory objectives.[282] We agree that an explicit price control remedy would not be appropriate.

---

279 IR, para 8.16.
280 IR, para 8.17.
281 IR, para 8.16.
282 IR, para 8.45.

6.52 However, we are concerned by suggestions in the IR that the PSR would consider doing so in the future and that it could have reached the opposite view,[283] especially given that the PSR does not have powers to implement such a remedy under s.54/55 FSBRA powers. [284] We therefore comment on this potential remedy below.

6.53 A price cap would have detrimental effects on service users: Visa's fees fund crucial investment in security and resilience measures to maintain Visa's high quality network and service in the face of emerging threats, and investments in innovations and new services which benefit all service users – including merchants – as explained in Technical Annex 3 above. A price cap which served to reduce Visa's fees would directly lead to lower investment, potentially putting at risk many or all of the positive outcomes associated with the use of Visa cards.

6.54 Even if a price cap did not reduce Visa's fees when initially introduced, a risk would be introduced by severely limiting Visa's ability to invest in its platform and to respond to the (strong) competitive dynamics in the market, for example through making investments in innovation and other service improvements, or to maintain and improve service quality in response to threats to security and resilience. From a policy perspective, the well-established risk of price caps is not only to artificially limit the return on prior investments, but to impair the incentives for future investments that might have resulted in significant benefits and value to the entire ecosystem, such as the token of the future.

6.55 Additionally, as Visa submitted in detail in its response to the PSR's cross-border interchange market review interim report,[285] the PSR does not have the power to impose a price cap or otherwise impose any price control measures utilising s.54/55 FSBRA powers. To summarise:

(a) The s.54/55 FSBRA powers contain no reference to fees or charges and are concerned with entirely different matters relating to the operation of payment systems. The absence of reference to fees or charges in sections 54 and 55 of FSBRA stands in contrast to the explicit reference to fees and charges (including the power to specify a maximum fee or charge) in section 57 of FSBRA. Section 57 of FSBRA is the only power under the regulatory provisions of FSBRA which confers on the PSR a power with respect to fees or charges.

(b) This interpretation is supported by the legislative history, including HM Treasury's response to the consultation paper [286] ('**the HMT Consultation Response**') which preceded FSBRA. In short, HM Treasury was clear in its response that the PSR would have "*a power to exercise ex-ante price-setting*" and a power "*to set the price charged by the operator or indirect access provider for membership of the scheme or indirect access to the system*".[287] But HM Treasury was clear that these powers would be available as an aspect of the PSR's "*power to amend commercial agreements*" (i.e. what became section 57 of FSBRA), and not as an aspect of its powers to give directions or impose requirements (i.e. what became sections 54 and 55 of FSBRA).[288]

---

283 The PSR suggests that "*whilst we do not consider a price cap appropriate for now, we would consider doing so in the future, either on the basis of existing information or improved information as might be available were we to implement remedies following this market review.*" (IR, para 8.46). In the context of RFR, the IR also suggests that, had the PSR had access to more accurate information, it may "*pursue remedies to address the concerns we have identified on a more direct basis. Such remedies may have included a price cap or a form of price control*" (IR, para 8.9).

284 For the purposes of this response, Visa assumes that the PSR is considering using s.54/55 FSBRA powers to implement the proposed remedies.

285 For the avoidance of doubt, Visa does not waive any claim to confidentiality with respect to Visa's response as submitted to the PSR.

286 HMT, "Opening up UK Payments: response to consultation", October 2013.

287 HMT Consultation Response, Para 2.82.

288 HMT Consultation Response, Para 2.80 and 2.82.

(c) A decision made pursuant to s.54/55 FSBRA powers is subject to more limited appeal rights and procedural safeguards, when compared to section 57 of FSBRA. Exercise of the PSR's powers under section 57 of FSBRA is subject to a full-merits appeal i.e. where the CMA can intervene on wide-ranging grounds and substitute its own decision for that of the PSR.[289] This reflects the fact that a decision impinging on pricing is a particularly intrusive form of regulatory intervention that should be subject to a higher level of scrutiny, mirrored in regulatory price-setting in other sectors. By contrast, decisions under sections 54 and 55 are limited to challenge by way of judicial review before the Competition Appeal Tribunal ('**CAT**') or the Administrative Court.[290]

(d) It is also a well-established principle of statutory construction that general provisions in a statute do not override specific provisions, especially if the exercise of a general power would allow constraints on the exercise of the specific power (such as appeal rights) to be circumvented. Interpreting s.54/55 FSBRA powers to confer a power to set prices would be against this principle.

6.56 This conclusion is also supported by the regime under the Enterprise Act 2002 ('**EA02**'). The PSR has concurrent competition powers, including under section 59 of FSBRA, read with the EA02, which it has (rightly) not considered to be appropriate in the present context. The subject of any decision under the EA02 is protected by procedural safeguards.[291] Parliament cannot have intended that s.54/55 FSBRA confer a power for the PSR to regulate prices; these powers cannot be used to circumvent different statutory procedures and appeal rights that are attached to remedies imposed through the EA02 regime or under section 57 of FSBRA.

6.57 Visa understands that the PSR currently has no intention to impose an explicit price cap under s.54/55 FSBRA powers. Visa therefore does not set out at length why such a price cap would also be deeply damaging to innovation, competition and the interests of services users, and fully reserves its position with regard to any price cap on Visa's fees or charges that the PSR may propose in the future.

Further engagement on remedies

6.58 As set out in our Response, we look forward to working with the PSR to evolve and grow the market to enable it to contribute to economic health as it has done in the past, and as part of this we would welcome future engagement with the PSR on the objectives of any remedies.

---

289 FSBRA, sections 76(6), 76(7) and 79.

290 FSBRA, sections 76(1), 76(3)-(4) and 77(4).

291 A market investigation is to be conducted by the CMA, a specialist body for competition issues, and not by the PSR. The CMA is required to prepare and publish a report within 18 months of a reference from the PSR (EA02, section 137). If the CMA has identified an adverse effect on competition as defined under section 134(2) of EA02, the CMA has to consider whether remedies are appropriate, and the available remedies are set out in Schedule 8 of EA02. A decision by the CMA as part of a market investigation is subject to review by the Competition Appeal Tribunal (***CAT***) on a judicial review standard (EA02, section 179).

7. Technical Annex 7: Summary of legal assessment of the PSR's findings and proposed remedies

7.1 As set out in our Response, Visa believes that the success of the UK payments sector is underpinned by stable, proportionate and consistent regulation. We welcome dialogue with the PSR to achieve this but, regrettably, we do not think that the IR reflects or achieves this.

7.2 We do not believe the IR adequately establishes and evidences harms to UK acquirers and merchants which require resolution. In particular, the evidence cited in the IR does not support a provisional finding that Visa faces insufficient competitive constraint from acquirers and merchants which results in prices and profit margins that are *likely* higher than a competitive level. Overall, there are rightly very high standards that need to be met for regulatory intervention which have not been met in the IR.

(a) **The IR fails properly to take into account and place sufficient weight on evidence which shows that Visa is already constrained by a range of established and growing alternative payment methods, and this constraint will only increase in the future as UK payments increasingly take place on non-card-based payment methods such as Open Banking, A2A-funded digital wallets and BNPL.** Visa's business documents on the PSR's file show that Visa recognises that its pricing and innovation efforts are constrained and driven by the threat from alternative payment methods, and that Visa has responded competitively to this threat including through acquirer-facing pricing initiatives in the UK and in its innovation efforts. The significance of this threat is further evidenced by feedback from acquirers, two-thirds of whom note that they must already offer payment methods other than Visa (and Mastercard) or risk losing existing and potential UK merchant customers. Acquirers consulted by the PSR also noted that they expect the trend to be a shift away from cards, with the potential for Open Banking to be a strong competitive threat in the future. This evidence of significant current, dynamic and potential (future) competition goes directly to the IR's assessment of competitive constraints Visa faces with regards to its acquirer-facing pricing and non-price strategies, and it was therefore necessary for it properly to be taken into account in the IR's provisional findings.

(b) **The IR does not evidence that Visa's fees are, or are likely to be, higher than a competitive level.** A finding that fees have increased does not justify regulatory intervention of the kind proposed in the IR without first undertaking a detailed and evidence-based assessment of whether Visa's fees are justified. The PSR has not undertaken such an assessment. In addition, the IR relies on a flawed econometric analysis which, when placing greater weight on a specification that avoids extraneous control variables, indicates that Visa's acquirer fees have [✂]. In addition, the PSR's econometric analysis does not reflect the improvement in service quality over time.

(c) **The IR's reliance on Visa's % EBIT margins is misguided and, in any event, does not show that Visa's margins are, or are likely to be, higher than a competitive level.** The IR fails to recognise that Visa does not provide a commodity service and operates in a dynamic and competitive payments landscape characterised by significant non-price and innovation competition. A narrow focus on % EBIT margins fails to take into account the significant ongoing investments Visa makes to improve the payment experience for end users and does not consider whether Visa's margins reflect a reasonable return for Visa's innovation efforts. In addition, the IR relies on a selective set of comparators that cannot reasonably be described as the 'best available' or even 'sufficiently similar' to Visa's business (i.e. eftpos and OFX) or require adjustments to ensure that the margins' comparison is on a like-for-like basis (i.e. PayPal).

(d) **The IR's assessment of competitive constraints for optional services is flawed.** The IR fails to adequately consider that acquirers and merchants can choose whether, and from whom, to purchase optional services. A lack of direct or reasonable third-party alternatives is not – contrary to the IR's assumption – evidence of a lack of sufficient competitive constraint. In addition, the acquirer feedback relied on in the IR suffers from a number of flaws and does not provide a sufficient evidential base to make any legally sound conclusions on whether Visa faces insufficient competitive constraints with regards to its optional services.

(e) **The IR's provisional findings with regards to Visa on material issues relating to fee transparency and complexity are not supported by the evidence cited in the IR.** The IR fails to adopt a systematic approach to assessing whether Visa's communications with clients regarding fees are unclear and opaque. Rather, the IR relies on biased and anecdotal evidence which is not capable of supporting the general conclusions set out in the IR nor the provisional finding that Visa's communications fall below the standard expected in a competitive market. Furthermore, the IR largely ignores evidence on the PSR's file which shows that Visa has (and continues to) make significant investments to improve transparency and customer satisfaction vis-à-vis its communications on fees.

7.3 Rather, evidence available to the PSR shows that the market is working well for all end users, including both UK merchants and consumers.

(a) **Visa's fees are competitive.** As the IR recognises, the fee levels associated with Visa (and Mastercard) are lower than the fees associated with popular alternative payment methods in the UK such as American Express, PayPal and BNPL, and Visa fees represent a very small fraction of overall merchant acceptance costs for Visa (and Mastercard) cards. This pricing pattern is consistent with evidence that Visa is already constrained by a range of alternative payment methods, including in the fees charged to acquirers.

(b) **Visa's fees are justified and necessary to support Visa's significant ongoing investments to improve the payment experience - exactly consistent with the PSR's statutory objectives. These investments generate material benefits for its customers and end users which outweigh the cost of accepting a Visa card.** For example, Visa's significant investments in the security and resilience of VisaNet has ensured that payments on the Visa card rail continue to operate at 99.999% processing quality and that fraud incidents occur in less than 0.3% of transactions involving a UK issuer. Similarly, Visa played a central role in the development and rollout of contactless payments and tokenisation. The expert economic consultancy [✂] estimates that the total net benefit for UK merchants from Visa's investments in contactless and tokenisation technology will be at least approximately [£9-11] billion between 2017 and 2027. The social return from these innovations significantly outweigh Visa's private return, as well as generating wider innovation by other players in the ecosystem. In addition, merchant feedback from customer surveys commissioned by Visa in the ordinary course of business indicates that quality of service and outcomes (e.g. security, reliability, resilience, innovation) have improved over the last few years.

(c) **Visa's margins are likely comparable to the margins of other payment methods (including the PSR's own comparator PayPal) when accounting for differences**

between four-party and non-four-party payment models. A like-for-like comparison of Visa's profitability with other payment methods, including PayPal, requires adjustments to reflect that Visa operates a four-party payment model. Visa's model involves effectively 'outsourcing' the significant costs of managing the direct relationship with end users to third parties (which other payment methods do not typically 'outsource') and therefore generating revenue only with respect to fees charged to issuers and acquirers. The lower revenue generated by four-party models results in higher profit as a percentage of revenue than non-four-party models. [✂].

7.4 In light of the above, and in particular the significant benefits that Visa's investments bring to end users including UK merchants, the PSR should carefully consider whether a narrow focus on fees and profitability and the impact of any regulatory intervention on, for example, incentives to innovate is consistent with its statutory objectives and principles, given the likelihood that this would lead to less (or slower) innovation. This is demonstrated by the slower pace of development and innovation by domestic card schemes that charge lower fees, with these domestic schemes having introduced innovations significantly later than Visa and Mastercard and even then only following the innovations made by players like Visa and Mastercard.

7.5 Without prejudice to our concerns with the provisional findings in the IR, we want to engage constructively with the PSR on remedies. In this spirit, we set out below our specific and key concerns with the remedies proposed in the IR.

(a) **Complexity and transparency.** While the IR provides a legally insufficient basis for the imposition of these remedies, Visa agrees that some of these could represent a positive step forward. However, Visa has significant concerns with the sixth remedy which requires Visa to reduce the number of optional services it provides to customers. Such a remedy risks contravening the PSR's statutory objectives and principles given that Visa would effectively be required to bundle services, leading to a perverse situation where acquirers have less (not more) choice as well as dampening competition between and innovation by service providers. Visa is concerned that even a remedy which requires what we understand the PSR is terming 'fee simplification' is likely to have a similar effect in terms of reducing customer and end user choice.

(b) **Regulatory Financial Reporting (RFR).** Visa is concerned by suggestions in the IR that the PSR is seeking to impose this proposed remedy for the purposes of considering whether to impose a 'hard' price control remedy in the future. The PSR does not have the power to impose any price control measures utilising its powers under sections 54 and 55 FSBRA to impose general and specific directions and requirements. Therefore, collecting information from Visa with a view to potentially setting a 'hard' price cap in the future would amount to an improper purpose. It would also be a deviation from the regulatory principle of proportionality and promoting growth in the UK to impose such an extensive remedy – requiring very significant time and resource commitments – in circumstances where the IR has not evidenced that Visa's fees and profitability are 'likely' to be higher than a competitive level.

(c) **Mandatory consultation and timely notification.** To the best of Visa's knowledge, a requirement to consult acquirers on all fee changes before they are approved internally would be without precedent in the regulation of comparable sectors, and there are good reasons why such a requirement has not previously been imposed by any other UK regulator. It is well accepted that publicising future pricing intentions would cause significant distortions to competition. Indeed, price-signalling would enable other players to anticipate (and potentially simultaneously mirror) upcoming pricing changes, which risks softening both price and non-price competition and leading to more homogenous pricing across the UK payments landscape. This remedy therefore risks contravening the PSR's statutory objectives and principles, and in particular risks contravening the proportionality principle given that the potential benefits (if any) of such a remedy are unlikely to outweigh the significant distortion to the market and the significant cost and time for both Visa and acquirers. We would also highlight the 'compounding' effect of some of the PSR's proposed remedies, with pricing methodology, governance, consultation and notification collectively implying a substantially longer process for Visa to deploy new services in the UK, with adverse consequences for competition and innovation.

(d) **Pricing methodology and governance.** While the precise scope of this proposed remedy remains unclear, any requirement that Visa follow a pricing methodology for all UK pricing decisions which is subject to approval (or non-objection) by the PSR is not justified by the IR's provisional findings. Intervening in setting prices is one of the most intrusive forms of regulatory intervention, and it is insufficient to impose such a remedy based on the flawed and inadequate evidence set out in the IR. In any event, the PSR does not have the power to regulate or control prices using its s.54 and 55 FSBRA powers. This remedy also risks contravening the PSR's statutory objectives by dampening competition and innovation, and therefore significantly undermining the value currently derived by all users of Visa's payment system. This applies, in particular, to any suggestion that prices should only be set with reference to the cost of providing a service, which is based on a fundamental misunderstanding of Visa's business. Visa does not provide a commodity service, and instead competes on a wide range of price and non-price factors including through significant investments in innovation.

7.6 We believe that these comments reflect our support for stable, proportionate and consistent regulation, and our wish to ensure that the UK payments sector continues to show real innovation, competition and dynamism. We value the ongoing opportunity to work together to evolve and grow the market to allow it to contribute to economic health as it has done in the past. We look forward to working with the PSR to deliver this outcome.

Assessment of Visa's "full chain" margins

[✂]

1. EXECUTIVE SUMMARY

1. The Interim Report (**IR**) relies on a comparison between Visa's EBIT margins as a percentage of revenue (***% EBIT margins***) and the % EBIT margins of eftpos, OFX and PayPal, to reach its provisional conclusion that Visa's margins are 'likely higher' than a competitive level and that the market may therefore not be working well for UK acquirers and merchants. This annex explains why a comparison of % EBIT margins across different payment schemes needs to account for differences between four-party and non-four-party business models. The discussion complements Technical Annex 2 which sets out Visa's view that – with regards to the IR's chosen comparators – eftpos and OFX are inappropriate comparators and that while PayPal is a more suitable comparator, any comparison between Visa and PayPal must be conducted on a like-for-like basis.

2. As explained in further detail in this annex, the IR's approach of comparing % EBIT margins between Visa and PayPal does not allow for a like-for-like comparison and risks leading to a misidentification of harm to end users. This annex further shows that, when assessing Visa's margins on a like-for-like basis, i.e., looking at the 'full chain' value assuming that Visa were to operate a non-four-party payment method, Visa's margins would be similar to the margins of other payment methods including PayPal and American Express, and materially lower than the margins of Diners. Taken together, this raises doubts as to whether the IR's profitability assessment can be relied on to make economically sound findings on whether Visa's fees are – or are likely to be – higher than a competitive level.[1]

3. This annex is structured as follows: Section 2 explains Visa's concerns with the approach taken in the IR; Section 3 presents an empirical analysis of Visa's full chain margins; and Section 4 sets out our conclusions. Further details on the full chain margins calculations are provided in the Appendix.

2. CONCERNS WITH THE IR'S COMPARISON OF % EBIT MARGINS ACROSS FIRMS WITH DIFFERENT BUSINESS MODELS

4. The IR's provisional findings that Visa's scheme and processing fees are likely to be above a competitive level rely on a comparison of Visa's % EBIT margins against the % EBIT margins of a set of comparators, namely eftpos, OFX and PayPal. Technical Annex 2 sets out Visa's view that eftpos and OFX are inappropriate comparators, that PayPal is a more suitable comparator but must be compared with Visa on a like-for-like basis, and that it is not appropriate to ignore American Express and Diners as comparators.

5. A further key issue is that the IR's comparisons do not account for the differences between the business model of Visa's four-party payment scheme and non-four-party business models of alternative payment methods, such as PayPal and American Express. This difference in business models is of key importance for evaluating % EBIT margins:

1 We note that our analysis does not imply that Visa's margin can only be compared against other payment systems. Rather, it shows that a comparison between Visa and other payment schemes must take into account differences in their business models.

[✂]

- Four-party scheme operators (i.e., Visa and Mastercard) invest in the technology that enables transactions to take place, but they do not manage the direct relationship (e.g., customer service and managing customer credit risk) with end users. These user relationships are managed by third-parties, namely, issuers and acquirers.
- Four-party scheme operators therefore generate revenue and incur costs only with respect to services and fees to issuers and acquirers, and these fees are small compared to acquirers' and issuers' revenue from end users of payment services.
- By contrast, non-four-party payment scheme operators engage in the operationally cost-intensive activities necessary for managing the direct relationship with end users, and charge fees directly to merchants and consumers. They therefore retain the full costs and revenue generated from the provision of payment services to end users. In the four-party payment model, their revenue would correspond to the sum of acquirers' MSC revenue and issuers' net interest revenue.
- The lower revenue generated by four-party payment scheme operators like Visa can be expected to result in higher profits as a percentage of their revenue, whereas the higher combined revenue and costs of non-four-party payment models results in lower profits as a percentage of revenue.

6. Four-party and non-four-party payment systems would therefore generate different % EBIT margins even if they are both competitively constrained to the same extent. Comparing their margins is not comparing like-for-like.

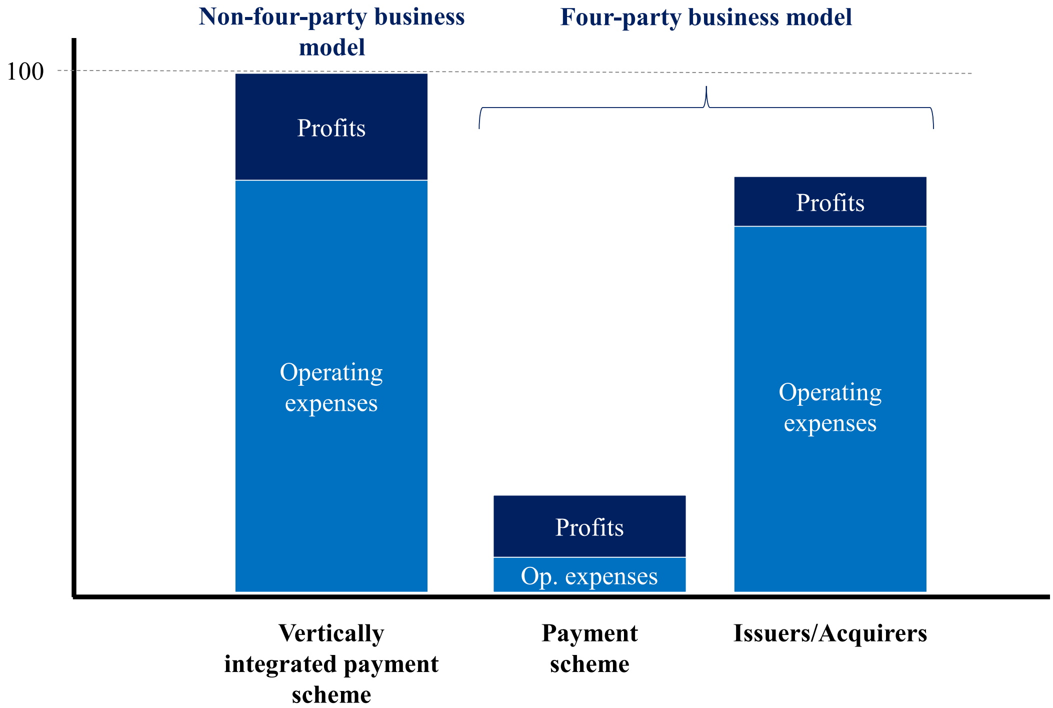
7. To demonstrate this, consider a hypothetical non-four-party scheme that is equivalent to the Visa scheme save for its business model, i.e., it generates the same revenues from end users and has the same costs leading to the same total absolute EBIT margins. **Figure 1** below provides an illustration of this hypothetical scenario. It considers the revenues and profits generated by a single, vertically integrated non-four-party scheme and compares this to the revenues and profits generated by a four-party scheme and the other stakeholders within the supply chain.[2]

8. In this example, the aggregate level of profits and revenues generated from end users (i.e., merchants and consumers) is *identical* under the two business models. However, as illustrated in **Figure 1**, the four-party system has a higher margin as a percentage of revenue because its business model involves delegating most of the revenues and costs to third-party acquirers and issuers.

2 For illustration purposes, this figure considers issuers and acquirers as vertically integrated in the four-party business model. Note that four-party payment schemes do not generate any revenues from end users, so the total revenues of the non-four-party payment scheme are equal to the sum of issuer and acquirer revenues in the four-party business model.

[✂]

Figure 1: Illustration of the concern with a comparison of % EBIT margins between four-party and non-four-party business model



Source:[✂] analysis. The heights of the bars replicate the analysis for 2022 in the subsequent sections. Scheme fees are excluded from the operating expenses of issuers and acquirers (third bar) as they are represented by the second bar (i.e., the payment scheme's revenue).

9. In this scenario, it would not be economically consistent to find that the % EBIT margins of the four-party payment scheme in **Figure 1** above are indicative of potential harm to end users when compared against the % EBIT margin of the non-four-party payment scheme. The end user outcomes are identical for both payment methods in this scenario, with the only difference being the business models of the two different schemes. The IR's focus on comparing Visa's % EBIT margins to those of a set of comparators including PayPal without adjustments to ensure that this comparison is carried out on a like-for-like basis, and with an insufficient assessment of downstream outcomes (e.g., in terms of the overall costs to end users), risks leading to incoherent findings.

10. A further unintended consequence of the approach taken in the IR is that it artificially promotes non-four-party business models over four-party models. One of the key principles of effective regulation is that it should be 'technologically neutral' and should focus on outcomes without discriminating in favour of one product, technology or business model over another. For example, Professor Jean Tirole, winner of the Nobel Prize for his work on optimal regulation,[3] noted that: *"Whatever regulation (or lack thereof) one advocates*

3 Professor Tirole's Nobel Prize was for "analysis of market power and regulation". See: https://www.nobelprize.org/prizes/economic-sciences/2014/summary/

[✂]

neutrality with respect to business organization should be the rule, so as to let the most efficient organizational forms emerge."[4]

11. In light of these observations, to assess end user outcomes, it is necessary to take into account a wide range of factors, including the total price paid by UK merchants and consumers (i.e., the MSC in the case of a Visa (and Mastercard) card), and to ensure that profitability is assessed on a like-for-like basis between four-party and non-four-party payment systems. The PSR otherwise runs the risk of mis-identifying harm to end users.

3. EMPIRICAL FULL CHAIN MARGINS ANALYSIS

12. By computing a full chain margin for the Visa scheme, we can compare Visa's % EBIT margins on a like-for-like basis with the % EBIT margins of other payment methods and mitigate the risks identified in the previous Section. This Section sets out an overview of our approach and results. Further details on our approach and our calculations are provided in the Appendix at the end of this document.

3.1. Overview of approach and data sources

13. To compute a full chain margin for the Visa scheme, we need to aggregate revenues and costs across all scheme participants (i.e., equivalent to a non-four-party payment scheme): issuers, acquirers, and Visa. When doing so, we need to avoid double counting transfer payments between scheme participants as revenues and costs. Specifically, Visa scheme and processing fee revenues are transfers from issuers and acquirers (recorded as costs by those participants), and interchange fees are transfers from acquirers to issuers (recorded as costs by acquirers and revenue by issuers).

14. To estimate the % EBIT margins of a hypothetical Visa non-four-party payment scheme, we use publicly available financial information to first estimate the 'full chain' revenues received from end users (i.e., merchants and cardholders), from which we then deduct the total costs incurred by acquirers, issuers and Visa (excluding any transfers they make to each other).

15. To estimate the revenues and costs of the issuing and acquiring arm of a hypothetical non-four-party Visa payment scheme, we rely on the published financial statements of "monoline" issuers and acquirers (i.e., firms whose primary focus is on a standalone issuing or acquiring business) in order to exclude a firm's broader (i.e., non-issuing or acquiring) business portfolio. We rely on Global Payments UK as the monoline acquirer, on the basis that it is the only monoline acquirer whose public financial reporting provides the detail required to conduct our analysis, namely, a breakdown of interchange and scheme and processing fee payments. We rely on Capital One as the monoline issuer on the basis that it is the largest monoline issuer and is therefore the most relevant monoline issuer to assess issuing costs of a hypothetical non-four-party Visa payment scheme. We have nevertheless

4 See Tirole, J. 2011. "Payment card regulation and the use of economic analysis in antitrust", Competition Policy International. https://www.competitionpolicyinternational.com/assets/0d358061e11f2708ad9d62634c6c40ad/Tirole-with-Cover.pdf

[✂]

run a sensitivity based on Vanquis Bank as the monoline issuer, being the only UK-based monoline issuer for which we have identified suitable data.[5]

16. To build up a consistent full chain margin, we need to sum the relevant revenues and costs across issuer, acquirer, and Visa on a consistent base of transactions. If, for example, Capital One accounts for a larger share of issuing than Global Payments' share of acquiring, it would not be correct to simply sum up the relevant revenues and costs between them. To account for this, we have rescaled the financial information of each of Global Payments UK, Capital One, and Visa to ensure that we use consistent data for our calculations, reflecting that each firm handles different volumes of transactions. As set out in more detail below and in the Appendix, we compare the interchange and/or scheme and processing fee amounts reported by each firm and then rescale their revenues and costs to be on a consistent basis.[6]

17. We present results for 2021 and 2022.[7]

3.2. Details of approach

18. **Revenues.** To avoid double counting revenues due to transfer payments between issuers, acquirers, and Visa, we consider only revenues from end users. Thus, we calculate the estimated 'full chain revenue' as the sum of the monoline acquirer's revenues from merchants and the monoline issuer's net interest revenue (over credit loss provisions) from cardholders. We specifically exclude the issuer's interchange revenue from the acquirer, as well as Visa's scheme and processing fee revenues from issuers and acquirers, because these are equivalent to transfer payments between the scheme participants.

19. The acquirer's revenue consists of 'Gross merchant service income', 'Equipment Leasing' and 'Other Commission Income', as stated in the Global Payments UK financials (see the Appendix for more details).

20. For the issuer's net interest revenues, we distinguish between credit and debit card issuing. We assume that the hypothetical non-four-party Visa scheme interest income from credit card issuing would be similar to Capital One's Credit Card Business and that the scheme would earn no interest income from debit card issuing. In estimating total net interest income for the hypothetical non-four-party scheme, we weight income from credit card issuing and the income from debit card issuing by the respective shares of credit and debit interchange from Visa cards in the UK. We approximate a hypothetical non-four-party Visa scheme's net interest income based on the following:

---

5 Neither Capital One nor Vanquis Bank are technically monoline issuers, but they publish separate accounts for their credit card divisions which we rely on in our analysis to assess the costs and revenue of a hypothetical monoline issuer.

6 Only the published financial accounts of Global Payments UK provide the necessary level of detail on interchange fees, scheme and processing fees and merchant service charges – which are consistent with each other - required for rescaling costs and revenues across the chain. Using Visa's and the issuer's costs as a percentage of revenue, we estimate Visa's and issuing costs consistent with the scheme and processing fees and interchange Global Payments paid so we can sum costs and revenues on a consistent basis.

7 2020 results are likely to be unreliable due to COVID impacting firms' revenue. 2023 is not included as data for the monoline acquirer (Global Payments UK) is not available for that year.

[✂]

- Step 1 is determining the net interest income of a credit issuer on a consistent basis with the acquirer's data. We compute the value of Capital One's 'net interest income' less its credit loss provision. We then divide this by Capital One's interchange income to determine profits from credit card lending per pound of interchange income. Finally, we multiply this figure by the acquirer's interchange payments.[8] This rescaling means that the profits from card issuing are assessed on a volume of transactions that is consistent with the volume of transactions handled by the monoline acquirer such that they can be added together on a consistent basis for the purposes of the full chain analysis (see the Appendix for further detail on the data used for these calculations).
- Step 2 is appropriately accounting for the mix of debit and credit issuing within the Visa scheme in the UK. This is necessary as debit cards do not involve a credit facility and so debit issuers do not earn net interest income. To account for this we multiply the rescaled net profits calculated in the first step by the share of interchange revenue on Visa credit card transactions acquired in the UK based on Visa data (which shows that credit card transactions make up less than half of the interchange fees acquirers pay).
- The resulting value following Steps 1 and 2 is consistent with the acquirer's revenues, i.e., they are calculated on a consistent basis, and both totals can be added to determine the total revenue the hypothetical non-four-party Visa scheme receives from end users for the card transactions that were acquired by the monoline acquirer.

21. **Costs.** We estimate Visa's, the monoline issuer's, and the monoline acquirer's costs based on the following:

1. **For scheme (i.e., Visa) costs:** we estimate Visa's scheme costs per pound of net revenue based on the ratio *Operating Expenses/Net Revenues*.[9] We then multiply this cost by our estimate of the total 'Scheme and Processing Fees' relating to card transactions acquired by the monoline acquirer to estimate scheme costs for the acquirer's transaction base.[10] This method captures Visa's costs associated with the card transactions acquired by the monoline acquirer (taking into account both acquirer and issuer side).

8 In estimating Capital One's net 'Net interest revenue' we rely on the line items 'Net interest revenue' and 'Provision (benefit) for credit losses' in the published accounts for its credit card business. The line item 'interchange fees' in Global Payments UK published accounts is used for the acquirer's interchange payments.

9 The relevant line items in Visa Global's accounts are 'Net revenues' and 'Total operating expenses'.

10 Global Payments UK accounts refer to total payments to schemes as 'scheme fees'. To estimate total scheme net revenues relating to card transaction acquired by Global Payments, we multiply Global Payments' payments to schemes (including Visa and Mastercard) by the ratio of Visa's total scheme and processing fee revenues to Visa's scheme and processing fee revenues from acquirers. This ratio is calculated from the information in Figure 29 of Annex 6 of the PSR's Interim Report.

[✂]

2. **For issuing costs:** we calculate the ratio *Non-interest Expense Excluding Scheme and Processing Fees/Non-interest Income* to obtain an estimate for the issuing cost per pound of the Issuer's revenues.[11] We then multiply this ratio by the 'Interchange Fees' cost reported by the acquirer in order to estimate issuing costs associated with the card transactions acquired by the monoline acquirer.[12] We exclude scheme and processing fees in our estimate of issuer costs because the costs underlying scheme and processing fees are borne by Visa and so are merely transfer payments from a full chain perspective.

   The inclusion of scheme and processing fees in an issuer's costs would lead to underestimating Visa's full chain margin as it would overstate the cost of the hypothetical non-four-party payment scheme.

3. **For acquiring costs:** we use *Administrative and other operating expenses* plus *Depreciation and Amortization* costs.[13] No adjustment to these costs[14] is required because we have already rescaled the issuer's and Visa costs to be consistent with the acquirer's costs. Acquirer scheme and processing fees and interchange fees are also excluded from costs because these are transfer payments from a full chain perspective.[15]

22. As for revenues, using the acquirer's interchange and scheme and processing fees to rescale costs for the issuer and Visa allows us to compute costs on a consistent basis.

3.3. Results

23. The results of our analysis are presented in Table 1 below. The first row reports the total full chain profits of a hypothetical non-four-party Visa scheme as a percentage of the associated full chain revenues for 2021 and 2022. This is compared to the second row which reports the % EBIT margins for the actual Visa four-party scheme. The results show

---

11 Accounts for Capital One's credit card business do not have a specific line item for *Non-interest Expense Excluding Scheme and Processing Fees*. We estimate this as the line item 'Non-interest Expense' less our estimate of scheme and processing fees within that line item. We estimate scheme and processing fees by multiplying Capital One's interchange revenues with our estimated ratio of scheme and processing fees paid by issuers to their interchange revenues. We estimate this latter ratio by multiplying the ratio of scheme and processing fees and interchange fees paid by Global Payments UK by the ratio of Visa's total scheme and processing fee revenues to Visa's scheme and processing fee revenues from acquirers.

12 We use the Credit Card Business of Capital One but calculations using Capital One's overall worldwide financials produce qualitatively similar results.

13 This ensures consistency with the Visa Global operating expenses which also include depreciation and amortization.

14 'Administrative and other operating expenses', 'Depreciation' and 'Amortization' are separate line items in Global Payments UK accounts.

15 Global Payments UK accounts list scheme and processing fees and interchange fees as separate line items in costs. We do not include these line items in our estimate of acquiring costs for the reasons set out above.

[✂]

that that the hypothetical 'full chain' margin of a Visa non-four-party scheme would be substantially lower than Visa's actual global margin.[16]

Table 1: Profitability comparison of Visa and Hypothetical non-four-party Visa scheme

Margins	2021	2022
Hypothetical non-four-party Visa scheme	**27.5%**	**20.6%**
Visa global four-party scheme[17]	65.6%	64.2%

Source: [✂] analysis

24. Table 2 below shows that, when comparing Visa's margins on a like-for-like comparison with non-four-party payment methods, Visa's margins are on average materially lower than Diners', and comparable to those of other payment methods such as American Express and PayPal.

Table 2: Comparison of Hypothetical Visa non-four-party scheme and non-four-party payment schemes

Margins	2021	2022
Hypothetical non-four-party Visa scheme	**27.5%**	**20.6%**
American Express	24.4%	18.9%
Diners (Discover)	59.4%	52.3%
PayPal	16.2%	12.2%

Source: [✂] analysis

3.4. Commentary and sensitivities

25. We have considered multiple sensitivities to our analysis set out above to ensure the robustness of our findings.

26. **Sensitivity to choice of monoline issuer and acquirer.** We selected Capital One as it is the largest and most prominent monoline issuer, and because its financial statements provided sufficient granularity to conduct our analysis. We nevertheless considered a sensitivity that relies on Vanquis Bank as the monoline issuer. A full chain analysis based on Vanquis Bank results in lower full chain margins for a hypothetical Visa non-four-party scheme of around 10%.[18] We are not aware of any other monoline acquirer that provides

16 We note that the reduction in margins from 2021 to 2022 reflects a decline in profitability of the issuing business. We see a similar trend for both our monoline issuer Capital One and competing three-party schemes like American Express.

17 See Appendix and https://investor.visa.com/SEC-Filings/default.aspx#annual-filings

18 The full chain margins using Vanquis data are estimated as 11.2% in 2021 and 8.9% in 2022.

[✂]

sufficient granularity in its financial statements to conduct our analysis.[19] In any event, we note that based on best available data, issuer profits are materially larger than acquirer profits such that the full chain margins are likely to be less sensitive to the choice of acquirer than the choice of issuer.

27. **Geographic mix.** The Capital One statement does not provide full geographic granularity and so Capital One's cost per unit of interchange fee may partly reflect higher interchange income it earns in the US. The evidence points to the UK credit issuing market being competitive[20] and we understand that UK credit issuers are subject to stronger regulatory obligations than their US counterparts. Therefore, using financial data wider than the UK may underestimate issuing costs in the UK. Indeed, the lack of UK-specific data is likely to be conservative in the sense that, if UK only data was available for Capital One, the full chain margins we estimate on the basis of that data would be lower than the base case findings in this report. This is also consistent with the fact that our sensitivity based on a UK-specific issuer (Vanquis) leads to lower full chain margins.

28. **Sensitivity to using alternative sources of Visa financial data.** Our analysis relies on Visa Global's published accounts in order to ensure that like-for-like data was used for each of the monoline issuer, acquirer, and Visa (i.e., which are all based on published financial accounts). Using the internal Visa profitability data submitted to the PSR [✂]. Scheme and processing costs account for a [✂] in the hypothetical vertically integrated non-four-party Visa scheme, any changes to the estimated scheme costs [✂] on our full chain margin estimates.

29. **Allowing for there being other activities associated with the completion of payments by comparator payment methods.** We note that there may be third parties involved with facilitating the acquiring of these comparator payments. For example, a merchant may choose to accept American Express as part of their contract with their acquirer. We would ideally adjust the % EBIT margins of the comparators accordingly but there is no publicly available data for us to do so on a consistent basis. In any event, we do not consider that such an adjustment would meaningfully affect our general conclusion that Visa's full chain margins are comparable to those of alternative payment methods including American Express, Diners and PayPal. Even accounting for the margin of third-party acquiring services would not materially change the estimated American Express and Diners/Discover % EBIT margins.

30. **Other revenue streams for debit issuers.** We note that debit cards are typically provided by personal current account (PCA) providers and that PCAs provide financial institutions

---

19 We have also reviewed WorldPay's and Lloyds Cardnet's financial data but their data does not distinguish between interchange fees and scheme and processing fees which is central to excluding transfer payments between participants. While the sum of interchange, scheme and processing fees paid by an acquirer would be sufficient to exclude these from acquirer's costs, it would not be sufficient to estimate issuing and scheme costs underlying this total amount as rescaling scheme and issuer costs requires identifying the fees the acquirer pays to each separately. Having interchange fees and 'scheme and processing fees' as separate line items allows estimating underlying costs for each.

20 A 2016 market study by the FCA found that competition in credit issuing was *"working fairly well for most consumers"*, that *"consumers are relatively engaged and willing to switch"* and that consumers were assisted by price comparison sites. https://www.fca.org.uk/publication/market-studies/ms14-6-3-credit-card-market-study-final-findings-report.pdf. The primary concerns identified were with respect to high-risk customers.

[✂]

with an opportunity to cross-sell other financial services such as overdrafts, personal loans, and mortgages. For purposes of considering the full chain margins of the Visa scheme, it is appropriate to consider only the revenues and costs associated with providing payment services in order to ensure that the full chain margin is comparable to a non-four-party payment system that does not provide PCAs.

4. CONCLUSIONS

31. This annex sets out in more detail our concerns with the approach taken in the IR of comparing Visa's % EBIT margins to the margins of non-four-party payment methods like PayPal, without applying adjustments to ensure that this comparison is like-for-like. Firms with different business models will generate different levels of percentage margins, and a scheme which chooses an open, four-party, business model that delegates the cost-intensive activities of managing direct end user relationships, will tend to generate comparatively high margins as a percentage of revenue compared with non-four-party business models, even where the end user outcomes are identical. This approach risks leading to a misidentification of harm to end users.

32. When relying on a like-for-like comparison, this annex has shown that Visa's full chains margins are generally comparable to the margins of the non-four-party payment schemes PayPal and American Express, and are lower than Diners'. Taken together, this raises doubts as to whether the IR's profitability assessment can be relied on to make economically sound findings on whether Visa's fees are – or are likely to be – higher than a competitive level.

[✂]

APPENDIX A: SUPPORTING CALCULATIONS

A.1 Financial reports for Visa, monoline issuer and acquirer

Table 3: Visa Global

(In million USD)	2021	2022
Net revenues	**24,105**	**29,310**
Operating Expenses		
Personnel	**4,240**	**4,990**
Marketing	**1,136**	**1,336**
Network and processing	**730**	**743**
Professional fees	**403**	**505**
Depreciation and amortization	**804**	**861**
General and administrative	**985**	**1,194**
Litigation provision	**3**	**868**
Total operating expenses	**8,301**	**10,497**
Operating income	**15,804**	**18,813**
Non-operating Income (Expense)		
Interest expense	(513)	(538)
Investment income (expense) and other	772	(139)
Total non-operating income (expense)	259	(677)
Income before income taxes	16,063	18,136
Income tax provision	3,752	3,179
Net income	12,311	14,957

Source: Visa Inc., SEC filings https://investor.visa.com/SEC-Filings/default.aspx#annual-filings

[✂]

Table 4: Capital One - Credit Card business results

(in million USD)	2021	2022
Net interest income	14,074.0	16,584.0
Interchange fee revenue (net)	3,497.0	4,178.0
Non-interest income	4,806.0	5,771.0
Total net revenue (1)	18,880.0	22,355.0
Provision (benefit) for credit losses	-902.0	4,265.0
Non-interest expense	9,621.0	11,627.0
Income from continuing operations before income taxes	10,161.0	6,463.0
Income tax provision	2,403.0	1,536.0
Income from continuing operations, net of tax	7,758.0	4,927.0

Source: Capital One., SEC filings https://investor.capitalone.com/financial-results/sec-filings?

Notes: (1) Non-Interest income includes interchange fees, service charges and other customer-related fees, Net securities gains (not reported by segment). (2) Interest Income includes: interest on loans, Investment securities and Cash equivalents and other interest earning assets (not reported by segment). (3) Our provision for credit losses in each period is driven by net charge-offs, changes to the allowance for credit losses and changes to the reserve for unfunded lending commitment.

Table 5: Global Payments UK

(In million GDP)	2021	2022
Gross merchant service income	736.7	827.5
Interchange fees	-406.8	-458.6
Scheme fees	-193.2	-204.6
Net merchant service income	136.7	164.3
Equipment leasing	12.1	12.3
Other commission income	28.5	30.4
Revenue	177.4	207.0
Administrative and other operating expenses	-51.2	-81.2
Operating Profit (before depreciation)	228.6	288.1
Depreciation	-2.7	-3.3
Amortization	-2.3	-1.7
Operating Profit	121.2	120.7

[✂]

(In million GDP)	2021	2022
Profit on Visa Shares	0.0	5.0
Interest Income	0.0	0.0
Financial Costs	-0.5	-0.4
Fair value loss on FCTL financial assets	-0.2	-0.1
Profit for the year	120.5	125.3

Source: Companies House, GPUK LLP filings : https://find-and-update.company-information.service.gov.uk/company/OC337146/filing-history.

Note: Global Payments reports profits as a % of net revenue (i.e., MSC payments net of interchange and scheme fees). Profit margins are naturally significantly lower if expressed as a % of all payments received from merchants.

Table 6: Vanquis Bank – Credit Card Division income statement

(In million GBP)	2021	2022
Net Interest Income	303.9	315.0
Non-Interest Income	57.8	45.1
Net Revenue	361.7	360.1
Impairment charge on loans and advances to customers	-3.7	-16.8
Operating and administrative expenses	-184.1	-164.8
Profit before taxation	173.9	178.5

Source: Companies House, Vanquis Banking Group PLC, https://find-and-update.company-information.service.gov.uk/company/00668987/filing-history?page=3

Note: Listed as a 'Specialist' issuer in the RBR report, but seems to offer vehicle and personal loans. To capture profit associated with 'issuer' business, the above reports its 'Credit Card' division.

A.2 Illustration of Full chain P&L for Visa

We provide below further detail on the full chain profitability calculations on the basis of the Credit Card Business of Capital One.

Table 7: Illustration of full chain profitability for Visa

(In millions)	Index	Formula	2021	2022
Full chain Revenues				
Capital One - Net interest income	[1]		14,074	16,584
Capital One – Interchange fee revenue	[2]		3,497	4,178
Capital One - Non-interest income	[3]		4,806	5,771

[✂]

(In millions)	Index	Formula	2021	2022
Capital One - Provision (benefit) for credit losses	[4]		-902	4,265
Global Payments UK - Gross merchant service income	[5]		736.73	827.49
Global Payments UK - Equipment leasing	[6]		12.12	12.26
Global Payments UK - Other commission income	[7]		28.55	30.43
Credit card share of Visa Interchange fee value in the UK	[8]		0.29	0.35
Issuer Net Interest Revenue	**[9]**	**(([1]-[4])/[2])*[17]*[8]**	**505.19**	**473.28**
Acquirer Revenue	**[10]**	**[5]+[6]+[7]**	**777.40**	**870.18**
Visa Costs				
Visa Net revenues	[11]		-24,105	-29,310
Visa Total operating expenses	[12]		-8,301	-10,497
Global Payments UK - Scheme fees	[13]		-193.22	-204.60
Issuer net scheme fee/Acquirer net schemes	[14]		0.09	0.23
Visa Operating Costs - Rescaled	**[15]**	**([12]/[11])*[13]*(1+[14])**	**-72.45**	**-89.96**
Issuer Costs				
Capital One Non-interest expense	[16]		-9,621	-11,627
Global Payments UK - Interchange fees	[17]		406.78	458.61
Issuer Operating Costs - Rescaled	**[18]**	**([16]/[3])*[17]-[13]*[14]*([2]/[3])**	**-801.81**	**-890.24**
Acquirer Costs				
Global Payments UK - Administrative and other operating expenses	[19]		-51.17	-81.18

[✂]

(In millions)	Index	Formula	2021	2022
Global Payments UK - Depreciation	[20]		-2.69	-3.35
Global Payments UK - Amortization	[21]		-2.32	-1.74
Acquirer Cost	**[22]**	**[19]+[20]+[21]**	**-56.17**	**-86.26**
Visa Full Chain Margin	**[23]**	**(98]+[10+[15]+[18]+[22])/([9] +[10])**	**27.5%**	**20.6%**

Source: [✂] analysis

Social value of Visa’s payment innovations in the UK

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

1. This report estimates the social value[1] of two recent payment innovations that Visa played a leading role in developing and rolling out: contactless and tokenization. We quantify the spillover benefits generated by this technology to end-users in the UK (i.e., merchants and consumers) and compare the social returns (total of private returns to Visa, issuers and end-users) generated by these technologies with the private return to Visa.

2. Using the best available data,[2] we find that both innovations generate significant end-user benefits that considerably outweigh the private returns for Visa. Given that the payments industry is characterized by significant ongoing innovation,[3] and that future innovation initiatives are likely to create similar spillover benefits for end-users in the UK, any regulatory intervention should carefully consider the potential effects on innovation incentives. In other words, the existence of these spillover benefits to end-users implies scope for unintended consequences from regulation.

Key findings on estimated end-user benefits from contactless and tokenization

3. As summarised in the table below, we find that the introduction of tokenization and contactless on Visa cards has led to significant benefits to cardholders and merchants in the UK. Over a ten-year time horizon (2017 to 2027), we estimate total benefits to end-users in the UK of £[✂] (with £[✂] from contactless and £[✂] resulting from tokenization), of which total benefits to UK merchants amount to £[✂].

1 This report focuses on Visa's end users, i.e. merchants and consumers, in line with the PSR's statutory objective that the payment systems "*considers and promotes the interests of all the businesses and consumers that use them*." Reference to social value is to the value for end users of Visa's payment system.

2 We rely on best available data including Visa transaction data, data on UK fraud and authorisation rates, publicly available data and reports (Juniper, RBR) as well as research and methodology developed in academic articles.

3 For instance, the PSR recognises at paragraph 6.54 of the IR that *"the payment sector has seen a lot of innovation in recent years – including from Mastercard and Visa, as well as innovation by other firms facilitated by the card schemes."*

Table 1: UK End-user benefits from contactless and tokenization on Visa cards, cumulative over 2017-2027 (in million)

Benefit	UK Consumer Benefits	UK Merchant Benefits	Total UK End-User Benefits
Contactless			
Time savings at POS	[✂]	[✂]	[✂]
Adoption costs	[✂]	[✂][4]	[✂]
Tokenization			
Reduction in Fraud	[✂]	[✂]	[✂]
Increased Authorization Rate	[✂]	[✂]	[✂]
Decrease in Cart Abandonment	[✂]	[✂]	[✂]
Time Savings from Card on File (COF)	[✂]	[✂]	[✂]
Tokenization Subtotal	[✂]	[✂]	[✂]
Adoption costs	[✂]	[✂]	[✂]
Total Contactless + Tokenization	[✂]	[✂]	[✂]
Total Adoption Costs	[✂]	[✂]	[✂]
Total Net Benefits	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

4. Full details of the methodology and data used for these estimates are set out further below and in accompanying replication files. By way of summary:

5. **Approach to estimating UK end-user benefits from contactless.** Contactless benefits UK consumers and merchants by reducing the transaction times at the Point of Sale (POS). We quantify the end-user benefit on Visa card transactions in the UK by: (i) estimating the consumer benefit based on the time savings on contactless transactions (as estimated in public studies) and academic estimates of the opportunity cost of time for consumers; and (ii) estimating the merchant benefit from wage cost savings as a result of a reduction in the amount of time staff are required to be at the checkout. We calculate these benefits based on the same public studies on time savings generated by contactless and median wage rates.

6. **Approach to estimating UK end-user benefits from tokenization.** We quantify four benefits from the adoption of tokenization on Visa cards.

4 We have, on a conservative basis, treated the full fixed cost of merchants purchasing/renting an EFTPOS terminal to Visa transactions even though the terminal can be used to accept contactless cards from any scheme or issuer.

7. First, tokenization reduces the incidence of fraud on card transactions, which benefits merchants, issuers, and consumers by reducing their costs. Visa data on UK fraudulent transactions between 2019 and 2023 points to tokenization having reduced fraud rates on CNP transactions by approximately [✂] relative to traditional primary account number (PAN) transactions. We quantify these benefits by estimating how many more fraudulent transactions there would have been if the fraud rate of the tokenized CNP transactions was equal to the PAN CNP fraud rate.

8. Second, tokenization increases authorization rates because the lower risk and cost of fraud makes it more likely that issuers and merchants will approve more transactions on the first attempt. This benefits consumers as it reduces the time it takes to make a successful transaction, including avoiding the need for consumers to attempt the transaction again. It also benefits merchants by mitigating the need to re-engage with customers following a declined transaction and reducing the number of lost sales as a result of card declines (i.e., sales that never take place with any merchant). Visa data on UK transaction authorization rates show that tokenization increased authorization rates by approximately [✂] percentage points over the period 2019 to 2023. We quantify these consumer and merchant benefits based on the number of additional eCommerce transactions that are authorised on the first attempt in the UK due to tokenization.

9. Third, tokenization increases the degree of trust that consumers can have in transacting online, particularly in allowing merchants to hold their card details on file (COF). COF transactions benefit both merchants and consumers by reducing cart abandonment, whereby consumers might otherwise abandon carts as a result of a lengthy and complex checkout process or lack of trust in the website or the merchant. We estimate the consumer and merchant benefit from reduced cart abandonment based on: (i) the consumer's time saving in attempting the initial transaction or re-attempting the transaction at the same or a different merchant; and (ii) the merchant benefit from incremental sales due to COF solutions addressing issues with payment friction.

10. Fourth, consumers benefit from cost savings when processing COF transactions because they do not, for example, need to manually enter their card details and authorise each recurring transaction. We estimate the benefit to consumers as the value of the time saved making COF transactions.

Key findings on private and social returns and innovation spillovers in the UK

11. We then estimate, for the UK specifically, the private returns generated by Visa from these technologies and estimate the overall social rate of return from these technologies (i.e., the return for merchants, consumers, issuers, and Visa). We find that the social returns from both technologies significantly exceed Visa's private returns.

12. Our approach follows the foundational studies in the literature on the benefits of innovation.[5] We estimate private benefits to Visa by estimating the incremental transaction revenue Visa generates from the additional tokenized or contactless transactions, and comparing these to the estimated cost for Visa to develop the technologies based on best available data relating to the volume of Visa patents and typical costs per patent. We similarly estimate the costs incurred by merchants and issuers to develop and roll-out the

5 See: Z. Griliches, "Research costs and social returns: Hybrid corn and related innovations," Journal of Political Economy 66:5 (1958). E. Mansfield *et al.*, "Social and Private Returns from Industrial Innovations," Quarterly Journal of Economics 91:2 (1977).

technologies, taking account of transfer payments between network participants that would otherwise lead to double counting.

13. Based on these calculated benefits and costs we compute the private internal rate of return (***IRR***) to Visa attributable to the UK, the social IRR for the UK and, based on this, the overall UK social benefit-to-cost ratio. The results are presented in Table 2 below.

14. We find that Visa's UK return on its investment in these innovations is considerably lower than the social returns to all parties (i.e., merchants, consumers, issuers, and Visa). The social IRR on tokenization is estimated at [✂], compared to Visa's own IRR of [✂]. Similarly, the estimates indicate a social IRR for contactless of [✂] compared to Visa's IRR of [✂]. These estimates indicate a social benefit-to-cost ratio of [✂] for tokenization and [✂] for contactless in the UK.

Table 2: Private and Social IRRs on benefits from contactless and tokenization on Visa cards

Innovation	Visa's Private IRR	Social IRR	Social Benefit to Cost Ratio
Contactless	[✂]	[✂]	[✂]
Tokenization	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

Sensitivities and robustness

15. We note that our calculations are likely to be conservative and underestimate the overall benefits for the wider UK economy from these payment innovations.

16. First, our analysis focusses on only a subset of quantifiable benefits. It does not take into account how these technologies have facilitated follow-on investments and innovations, for example with contactless facilitating new merchant business models like cashless stores and follow on innovations like mobile payments; and tokenization has facilitated the growth of the app economy and online wallets.

17. Second, our quantitative estimates are conservative in several respects. For example, we focus only on the direct financial costs of fraud, abstracting from the stress and inconvenience it causes, and our analysis of reductions in payment friction focusses narrowly on card on file transactions. Innovations in payment technology also contribute to broader social benefits. For example, contactless technology unlocked subsequent innovations like mobile payments, and tokenization facilitates in-app payments and digital wallets. Similarly, increased use of contactless and eCommerce increased the economy's robustness to the COVID pandemic.[6] Such benefits are more difficult to quantify, and do not feature in our calculations, but are further indirect benefits to end-users.

18. We also show that even when accounting for different sensitivities, the overall conclusion that UK merchants and consumers derive material benefits from Visa's investments in contactless and tokenization, and that Visa's private return is significantly outweighed by the social return, are robust. These include varying our approach to forecasting the volume of future transactions, attributing only a proportion of the benefits on Visa card transactions

6 See for example, 500 million additional touch-free Visa payments as European contactless limits increase | Visa.

to Visa, assuming a lower impact of tokenization on cart abandonment, and making alternative assumptions on the level of fraud reduction from tokenization.

Conclusions

19. Overall, we find that both innovations generate significant end-user benefits (i.e., for UK merchants and consumers), and that the social returns considerably outweigh the private returns to Visa, consistent with the PSR's innovation objective. This has two key implications.

20. First, reductions in payment innovation could be highly costly for UK merchants and consumers given the significant benefits they receive from these innovations (as demonstrated above with regards to contactless and tokenization specifically). Given that the payments industry is characterized by significant ongoing innovation, and that future innovation initiatives are likely to create similar spillover benefits for end-users, any regulatory intervention needs to consider the potential effects on innovation incentives.[7]

21. Second, the fact that returns from innovation primarily benefit third parties rather than organisations undertaking innovations such as Visa indicates the possibility that innovation may be underprovided relative to a socially efficient level. This is because there may be investments that are socially beneficial but the corresponding private returns do not justify incurring the cost of the investment. This indicates a heightened risk of unintended consequences resulting from regulatory interventions having the effect of dampening private innovation incentives.

22. The remainder of this report is organized as follows. Section 2 provides background on the two innovations. Sections 3 and 4 discuss and quantify the end-user benefits of contactless payments and tokenized payments. Section 5 estimates the private, issuer and end-user benefits of these innovations. Section 6 estimates the costs incurred in facilitating these technologies. Section 7 estimates social returns from these innovations, Section 8 presents the sensitivities applied to verify the robustness of our key findings, and Section 9 sets out our conclusions.

7 Promoting innovation is one of the objectives of the PSR. It recognises that a well-functioning innovative payment system, accessible to a wide range of businesses, will in turn enable these businesses to deliver competitive services to their customers.

2. BACKGROUND ON THE INNOVATIONS

2.1. Contactless payments

23. Contactless payments include contactless cards, mobile wallets, and wearables.[8] The first contactless payment card for commuters, the so-called UPass, was introduced in Seoul in the mid-1990s.[9] However, it took much longer to refine and popularize the technology.

24. Radio Frequency Identification (RFID) is a short-distance wireless technology that today is used mainly for controlling inventory.[10] RFID "tags" are small chips that have a CPU, memory, other electronic circuitry, and an antenna. RFID readers send electromagnetic waves that generate a small amount of electrical current in the tag antenna. This current powers the chip, which in turn transmits the information stored in the tag's memory to the reader. Tags can be read at varying distances from less than one inch to 100m, and the data rate is a few kilobits per second.

25. Near Field Communication (NFC) is similar to RFID. NFC is intended to work at distances between two and four inches and with a transmission speed of about 250 kbps. NFC has been incorporated in many smartphones. Mobile wallets and contactless cards rely on NFC.

26. Visa introduced its contactless technology, PayWave, in the UK around 2007.[11] The Barclaycard "OnePulse" card is usually considered the first contactless card in Europe. This Visa card combined chip-and-PIN, contactless payments, and Oyster (public transit payment) functionality.[12]

27. We note that Visa, as well as Mastercard, introduced contactless payment significantly ahead of domestic payment card schemes.[13] For example, the Australian eftpos scheme introduced contactless in 2014, the Danish Dankort scheme in 2015, and the German Girocard and the Norwegian BankAxept schemes in 2016.[14]

28. Although Visa did not "invent" contactless payments, it contributed significantly to developing the technology and played a key role in fostering its adoption in the UK and worldwide. Visa is the second most important contributor to contactless technology by number of patents, and the third most important by patent citations. Using best available

---

8 Juniper Research, "Contactless Payments: Key Opportunities, Emerging Trends & Market Forecasts 2022-2027," September 2022.

9 J. Park and D. Kim, "Korea's Integrated Fare and Smart Card Ticket System", KOTI Knowledge Center Report: Korea's Best Practices in the Transportation Sector, Issue 5, 2013.

10 J. Olenewa, Guide to Wireless Communication, 4th edition (Boston: Cengage Learning, 2017), especially pp. 8-9.

11 Juniper Research, "Contactless Payments: Key Opportunities, Emerging Trends & Market Forecasts 2022-2027," September 2022, p. 16.

12 Barclays, "Ten years of contactless", 4 September 2017 and H. Qureshi, "Londoners can shop and go with quick-pay credit card", The Guardian, 16 September 2007.

13 RBR recognized that the share of payments using domestic schemes in France, Germany, and Italy has been decreasing due to international schemes' offering enhanced eCommerce and contactless functionality to cardholders. See page 19 of RBR, Global Payment Cards Data and Forecasts to 2027 – International Overview, September 2022.

14 Juniper Research, "Contactless Payments: Key Opportunities, Emerging Trends & Market Forecasts 2022-2027," September 2022, p. 17.

data on cost per patent, we estimate that Visa has invested approximately one billion USD globally in developing contactless payment technology, of which we attribute [✂] million to the UK (total investment from 2007 to 2023).[15]

29. In addition to this technical contribution to the underlying contactless technology, Visa has made significant investments in promoting the roll out and adoption of contactless. This includes subsidising contactless-enabled terminals, establishing partnerships with strategic merchants (including mass-transport operators such as London's TfL), and marketing contactless payments as convenient and secure.[16] These investments contributed towards consumers' and merchants' ability to trust that contactless payments are safe and reliable, leading for example to the FCA's decision to increase the transaction threshold from £30 to £45 in 2020 and to £100 in 2021.[17]

30. Figure 1 tracks the number of contactless transactions in the UK from 2017 to 2021 and presents forecasts from 2022 through 2027. The total number of contactless transactions [✂] from 2017 to 2021. Retail Banking Research (RBR) forecasts that contactless transactions [✂] from 2021 to 2027.[18]

Figure 1: [✂]

Source: RBR. Note: The dotted line represents RBR's forecast.

2.2. Tokenized payments

31. "Tokenizing" a payment involves replacing something of high value, such as a debit or credit number, with something of low, or no, intrinsic value.[19] Since its introduction, tokenization has been used to enhance security in card-present (CP), card-not-present (CNP), mobile and, more recently, Internet of Things (IoT) transactions.

---

15 We first calculate the cost of Visa's patents for contactless technology each year (converted to pounds) by taking the number of new patents registered each year and multiplying by the average patent cost, using patent data from 2003 onwards. We then scale the investment by the UK's share of total Visa contactless transactions in order to estimate the share of Visa's investments attributable to the UK. We assume investments for each of 2024 through 2027 are the same as in 2023, for a total global estimated R&D spend for this period of [✂]. Due to data limitations, we use the 2017 share of UK contactless transactions for 2007 through 2017 and the 2021 share for 2021 through 2027. As one would anticipate, the estimated investment is high in initial years but decreases significantly as the technology matures – this is because there are fewer patents in later years.

16 See, for example, "TfL named fastest growing contactless merchant in Europe" March 17, 2015, last visited on April 2, 2024.

17 The FCA increased the contactless transaction thresholds in 2021, recognising that contactless payments meet "evolving expectations of customers and merchants for fast but secure ways to pay" (https://www.fca.org.uk/news/press-releases/fca-confirms-increase-thresholds-contactless-payments). The FCA's Policy Statement also recognises that contactless payments are safe compared to other methods, despite increases in thresholds (para 1.11 of PS21/2, https://www.fca.org.uk/publication/policy/ps21-2.pdf).

18 RBR, now branded "datos insights" is a prominent market research organization in retail banking. Visa subscribes to and uses its reports in the ordinary course of business. We note that UK Finance reports actual contactless figures for 2021-2024 that are roughly [✂] lower but still show a marked upwards trend and growth from March 2021 to March 2024 of about [✂]. However, UK Finance does not provide a breakdown by card scheme, which we rely on in our methodology, nor does it offer forecasts to 2027 which allows us to assess longer term benefits.

19 Juniper Research, "Payment Tokenization: Key Opportunities, Segment Analysis & Market Forecasts 2022-2027," July 2022, p. 10.

32. There are two main forms of tokenization. In "network tokenization", the card scheme itself issues the token.[20] Network tokens are valid across the entire ecosystem and are applicable to a wide range of use cases. For "non-network tokenization", other players in the payment ecosystem - including merchants, acquirers, third parties, and issuers - generate the token for use within their own specific environment or with their own customers. In this case, tokenization replaces the personal account number at a specific point in the payment process rather than for general use.

33. Tokens can be single-use or "persistent". Single-use tokens are valid for a single transaction. When a customer makes a new purchase at the same merchant, they will not be recognized, and a new token will have to be created. Persistent tokens, by contrast, can be used to secure recurring transactions, thereby matching new purchases to the same account. Persistent tokens can be stored by the merchant, enabling them to keep a consumer's card details on file, which simplifies the process of authorising recurring transactions and can also significantly reduce checkout times for consumers. Persistent tokens can save consumers time when they make repeated purchases at a specific merchant.

34. Visa made significant technical contributions to tokenization and played an important role in encouraging its adoption. Visa is the second most important contributor to tokenization technology by number of patents, and it is the most important contributor by patent citations. We estimate that Visa has invested at least 500 million USD globally in developing tokenization, of which we attribute approximately [✂]to the UK.[21]

35. Mobile wallets were the first tokenization use cases in which the major payment-card networks were involved. Apple Pay, for example, was launched in 2014 and was developed in collaboration with the major payment card networks, including Visa and Mastercard, and several large banks.[22] The Visa Token Service was launched that year and later expanded to serve other mobile wallets such as Google Pay and Samsung Pay, wearables such as Fitbit Pay and Garmin Pay, and streaming services such as Netflix.[23]

36. Figure 2 tracks the number of Visa tokenized CNP transactions in the UK from 2019 to 2023, the period for which such data is readily available. We have then forecasted these transaction volumes through 2027.

Figure 2: [✂]

Source: Visa transactions data and [✂] analysis. Note: the dotted line is a forecast. This forecast is based on an assumption that total transaction volume grows as forecasted by RBR and that tokenized transactions grow to

20 Each card network operates its own token-generation service and generally has its own token vault.

21 This estimate relies on the number of tokenization patents Visa has obtained over time and the average amount of R&D resources spent in obtaining each patent, using data on tokenization patents from 2005 onwards. The average R&D-to-patent ratio is obtained from a sample of companies that have a history of heavy patenting activities at the US Patent Office (USPTO). Note that we derive [✂] from 2019-2023 and then we assume 2023 levels of investment through 2027 to get [✂]. As the technology matures, we are seeing fewer patents in later years, implying a tail-off in the investment.

22 N. Poper, "Banks Did It Apple's Way in Payments by Mobile", The New York Times, September 11, 2014.

23 Visa Token Service Fact Sheet, "Tokenization milestones", 2020.

100% of CNP transactions.[24] The forecast is similar when relying on the compound annual growth rate for tokenized CNP transactions of [✂]seen in 2022/23.

3. END-USER BENEFITS OF CONTACTLESS PAYMENTS

37. We now turn to quantifying the benefits of contactless for UK merchants and consumers. Our focus is on the benefits that arise from reducing the time required to complete transactions, benefiting both consumers and merchants. The table below summarizes our quantification of the end-user benefits on contactless Visa card transactions in the UK from 2017 through to 2027.

Table 3: Summary of end-user benefits on contactless Visa card transactions in the UK

Benefit	Estimated Benefits (million)
Time savings for consumers at the POS	[✂]
Time savings for merchants at the POS	[✂]
Total	[✂]

Source: [✂] analysis of Visa transactions data and public data.

3.1. Contactless payments lower transaction times for consumers

38. Contactless transactions are faster than either contact-card transactions or cash transactions.[25] The value to consumers of the saved time is measured by the opportunity cost of time.

39. We can express the benefit to consumers from the time savings at the POS due to the use of a contactless payment option as:

$$B_{C_{CON}} = (C_{TRANS_{NON-CON}} - C_{TRANS_{CON}}) \times N_{CON}$$

Where:

$$B_{C_{CON}} = Benefit\ to\ consumers\ from\ time\ savings\ at\ the\ POS\ due\ to\ contactless$$

$$C_{TRANS_{NON-CON}} = The\ time\ cost\ incurred\ by\ consumers\ when\ making\ a$$

24 The assumption that tokenized transactions will grow to [✂] of CNP is based on Visa data which [✂].

25 Studies indicate that transactions made using contactless cards and mobile wallets are faster than those made using contact cards or cash. The study that we rely on for the purpose of our analysis reports that contactless card payments at the POS take an average of 7.8 seconds, compared with 14.8 seconds for contact cards, resulting in a 7-second time differential. See Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022, p. 28.

In addition to the Norges Bank study, other studies also indicate that the use of contactless payment methods results in faster transaction times than when customers pay by contact card or cash. For example, a recent Swedish study reported that payments at the POS that are made using a mobile wallet take an average of 5 seconds, compared with 12 seconds for cards and 22 seconds for cash. See: Sveriges Riksbank, "Cost of Payments in Sweden", March 2023, p. 26. A Visa study from 2017 also reported that the average duration of contactless card transactions is 12.5 seconds versus 28.9 seconds for non-contactless card transactions, resulting in a difference of 16.4 seconds. See: Roubini ThoughtLab and Visa, "Cashless Cities: Realizing the Benefits of Digital Payments" 2017, p. 38.

$$contact\ card\ transaction\ at\ the\ POS$$

$$C_{TRANS_{CON}} = The\ time\ cost\ incurred\ by\ consumers\ when\ making\ a$$

$$contactless\ card\ transaction\ at\ the\ POS$$

$$N_{CON} = The\ number\ of\ contactless\ payments\ made\ at\ UK\ merchants$$

40. We estimate that the introduction of contactless on Visa cards resulted in a benefit to UK consumers from time saved at the POS of at least [✂] billion over the period 2017 to 2027 based on the following datapoints (including from recent studies):

- the average time taken by consumers to make a contact card transactions at the POS is 14.8 seconds;[26]
- the average time taken by consumers to make a contactless card transaction at the POS is 7.8 seconds;[27]
- the value that consumers attribute to time spent transacting is equal to the time incurred per transaction multiplied by 73% of the median wage rate for the UK (using £10.83 opportunity cost in 2023 as a base, which equates to 73% of the median wage rate for the UK);[28] and
- the number of Visa contactless payments made at UK merchants as reported by RBR.[29]

41. The table below estimates the benefits to UK consumers from reduced transactions times due to the use of contactless on Visa cards, from 2017 through to 2027.

Table 4: Consumer benefits of contactless on Visa cards in the UK

Year	Estimated consumer benefit (million)
2017	[✂]
2018	[✂]
2019	[✂]
2020	[✂]
2021	[✂]
2022	[✂]

26 Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022. Page 28.

27 Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022. Page 28.

28 To estimate the value that consumers attribute to time spent making transactions, we rely on a study that indicates that in 2023, the value of time that UK consumers attributed to time spent waiting while shopping was £10.83 per hour, which is 73.23% of the median wage in the UK for 2022. See: C. Krekel and G. MacKerron, "Back to Edgeworth? Estimating the Value of Time Using Hedonic Experiences." July 2023, IZA Discussion Paper No. 16308, p. 1.

For the median wage rate we use Office for National Statistics Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14, Table 14.5(a) Hourly pay – Gross median hourly pay derived from Tab "All", cell D6.

29 RBR, Global Payment Cards Data and Forecasts to 2027 – International Overview, September 2022.

Year	Estimated consumer benefit (million)
2023	[✂]
2024	[✂]
2025	[✂]
2026	[✂]
2027	[✂]
Total	[✂]

Source: [✂] analysis of Visa transactions data and public data.

3.2. Contactless payments benefit merchants by lowering transaction times at the retail POS

42. Consumer use of contactless cards at the POS also benefits merchants. By reducing the time required for consumers to transact, merchants can process the same number of transactions using fewer resources (i.e., staff spend less time processing transactions and more time doing other productive tasks). This ultimately leads to wage cost savings.[30]

43. Mathematically, we can express the benefit to merchants from consumer use of a contactless payment option at the POS as:

$$B_{M_{CON}} = TS_{COUNTER} \times W_{RETAIL} \times N_{CON}$$

Where:

$$B_{M_{CON}} = Benefit\ to\ merchants\ from\ time\ savings\ at\ the\ POS\ due\ to\ contactless$$

$$TS_{COUNTER} = The\ time\ savings\ made\ by\ staff\ in\ processing\ contactless\ vs\ contact\ card\ transactions\ at\ the\ POS$$

$$W_{RETAIL} = The\ average\ retail\ wage\ rate\ in\ the\ UK$$

$$N_{CTCOUNTER} = The\ number\ of\ contactless\ payments\ made\ at\ UK\ merchants$$

44. We estimate that the introduction of contactless on Visa cards resulted in a benefit to UK merchants of at least [✂] billion over the period 2017 to 2027 based on the following datapoints (including from recent studies):

- the average time savings made by retail staff when processing a contactless card transaction at the POS relative to a contact card transaction is 7 seconds;[31]

[30] While in the short run there may not be other productive tasks for the staff and so wage costs may remain the same, we expect wage cost savings for merchants in the longer term.

[31] Norges Bank reports that contactless card payments take an average of 7.8 seconds, compared with 14.8 seconds for a contact card payment, resulting in a 7.0 second time differential. See: Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022. Page 28

- the average hourly wage in the UK for retail occupations is as reported by the Office for Nations Statistics;[32] and
- the number of Visa contactless payments made at UK merchants is as reported by RBR.[33]

45. The table below presents benefits to UK merchants from reduced transactions times due to the use of contactless on Visa cards, from 2017 through to 2027.

Table 5: Estimated merchant benefits of contactless on Visa cards in the UK

Year	Estimated merchant benefit (million)
2017	[✂]
2018	[✂]
2019	[✂]
2020	[✂]
2021	[✂]
2022	[✂]
2023	[✂]
2024	[✂]
2025	[✂]
2026	[✂]
2027	[✂]
Total	[✂]

Source: [✂] analysis of Visa transactions data and public data.

3.3. Other unquantified benefits

46. In addition to the quantifiable benefits above, contactless technology has resulted in other socially desirable outcomes that are more difficult to quantify. These include, for example, a better user experience for users of public transport, a better allocation of real estate with floorspace previously used for handling payments reallocated to more productive purposes, and the emergence of cashless stores. During the COVID pandemic, millions of consumers switched from cash and chip & pin to contactless payments as it became lower risk from a

32 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/latest

33 RBR, "Global Payment Cards Data and Forecasts to 2027 – International Overview", September 2022.

health perspective.[34] There have been "halo" effects where the introduction of contactless on the TfL network has resulted in beneficial usage in adjacent shops,[35] while the effects of the technology also permitted follow on innovations such as mobile payments.

47. Our quantifications above did not take these benefits into account such that our estimates are likely to be conservative.

4. END-USER BENEFITS OF TOKENIZED PAYMENTS

48. Tokenized payments reduce fraud rates, increase authorization rates, reduce cart-abandonment rates, and lower transaction times by enabling merchants to securely maintain customers' card details on file. We estimate the value of these benefits for both consumers and merchants noting there are likely to be additional, unquantified, benefits.

49. The table below summarizes our estimates of the consumer benefits from the introduction of tokenization on Visa cards from 2019 through to 2027, with a breakdown by source of benefit.[36]

Table 6: Estimated consumer benefits from tokenization on Visa cards in the UK (million)

Year	Reduction in Fraud	Increased Authorization Rate	Decreased Cart Abandonment	Time Savings from COF	Annual Total
2019	[✂]	[✂]	[✂]	[✂]	[✂]
2020	[✂]	[✂]	[✂]	[✂]	[✂]
2021	[✂]	[✂]	[✂]	[✂]	[✂]
2022	[✂]	[✂]	[✂]	[✂]	[✂]
2023	[✂]	[✂]	[✂]	[✂]	[✂]
2024	[✂]	[✂]	[✂]	[✂]	[✂]
2025	[✂]	[✂]	[✂]	[✂]	[✂]
2026	[✂]	[✂]	[✂]	[✂]	[✂]
2027	[✂]	[✂]	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]	[✂]	[✂]

34 For instance, 78% of shoppers in the US said that they have changed their shopping habits to contactless and to online during the pandemic. https://techcrunch.com/sponsor/visa/contactless-commerce-not-just-covid-19-trend/. A similar trend happened across the globe, including the UK https://finance.yahoo.com/news/visa-contactless-payments-surge-coronavirus-pandemic-cash-free-society-060047669.html.

35 See, for example, historical reports of the TfL's introduction of contactless: https://www.marketingweek.com/tfl-on-plans-to-launch-a-new-brand-focused-app-and-roll-out-contactless-to-taxis/.

36 Visa data to 2023. Forecast assumes all CNP transactions will be tokenized by 2027 and applies RBR growth rate on all transactions. Alternative extrapolations based on 2022/23 Visa growth rates give comparable estimates.

Source: [✂] analysis of Visa transactions data and public data.

50. Similarly, the estimates of the merchant benefits from the introduction of tokenization on Visa cards from 2019 through to 2027 are shown below.

Table 7: Estimated merchant benefits from tokenization on Visa cards in the UK (million)

Year	Reduction in Fraud	Increased Authorization Rate	Decreased Cart Abandonment	Annual Total
2019	[✂]	[✂]	[✂]	[✂]
2020	[✂]	[✂]	[✂]	[✂]
2021	[✂]	[✂]	[✂]	[✂]
2022	[✂]	[✂]	[✂]	[✂]
2023	[✂]	[✂]	[✂]	[✂]
2024	[✂]	[✂]	[✂]	[✂]
2025	[✂]	[✂]	[✂]	[✂]
2026	[✂]	[✂]	[✂]	[✂]
2027	[✂]	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

51. In the following subsections we provide a description of our methodology for calculating each benefit.

4.1. Tokenized payments reduce fraud

52. Globally, tokenized payments result in a significant reduction in fraud. In recent years, Visa has publicly reported that tokenization reduces fraud rates by between 18% and 26%, as compared to primary account number (PAN) transactions (i.e., non-tokenized card transactions).[37] [✂] have been observed in the UK, with a reduction in fraud rates of [✂] during 2019-21 and [✂] over the 2021-2023 period.[38]

53. [✂]. Fraudsters steal a set of payment account details and use them to provision an account to a wallet before making fraudulent transactions. This form of fraud is recorded

37 See J. P. Morgan and Token ID, "Network tokenization for merchants," February 2024, available at https://www.jpmorgan.com/insights/payments/payments-optimization/network-tokenization-for-merchants. This document reports an 18-percent fraud-reduction rate from tokenization based on 2022 data. Cole and Ansari report a 26-percent reduction in fraud rates based on 2020 data. See B. Cole and A. Ansari, "Convenience and control: Why the future of eCommerce is tokenization," Cybersource, April 2022, available at https://www.cybersource.com/content/dam/documents/campaign/capabilities/why-the-future-of-ecommerce-istokenization-en-us.pdf.

38 Visa transactions data.

as relating to tokenized transactions but is not related to the issue of a token or any vulnerability with respect to tokenization technology. Rather, fraudsters compromise non-tokenized data, including card and personal data, and circumvent an issuing bank's provisioning checks[39] in order to commit "token fraud".[40] They may equally use this data for non-token fraud but fraudsters often use it to set up e-wallets which are tokenized.

54. Given this, we have focused on CNP transactions where the distortions of provisioning fraud are less acute. However, we present further sensitivities in Section 8 which show that this approach is not driving our ultimate conclusions.

55. For the purpose of our analysis, we consider that fraud reduction benefits are enjoyed equally by merchants and consumers.[41] We acknowledge that these benefits may accrue to a different extent as between consumers, merchants[42] and issuers, but these cost savings ultimately constitute social benefits from tokenization. This is because regardless of where the financial liability for fraud lies, there is a social loss from fraud that tokenization reduces.

56. In estimating the value for the reduction in fraud losses due to tokenization, we utilise Visa's data on transaction values and fraud rates in the UK.[43] Mathematically we compute:

$$B_{LOWER_{FRAUD}} = LOSSES_{NT} - LOSSES_T$$
$$= \alpha \times LOSSES_{NT}$$

Where:

$LOSSES_{NT}$ $is\ the\ percent\ losses\ due\ to\ payment\ card\ fraud\ on\ PAN$ $transactions\ multiplied\ by\ the\ value\ of\ tokenized\ transactions\ in\ the\ UK$

$LOSSES_T = (1 - \alpha) \times LOSSES_{NT}$

$\alpha = percentage\ change\ in\ fraud\ loss\ rate$

57. We use Visa data on UK fraud rates, which shows [✂] during 2019-23. We apply this differential to the actual and forecasted CNP tokenized transaction values to derive the counterfactual level of fraud without tokenization.

---

39 Provisioning is an initial step where the issuing bank creates a token based on a person's account details. If a fraudster steals personal data, including card details, they can use this information for non-tokenized fraud as well as tokenized fraud (e.g. if they use it to open an e-wallet account).

40 Visa is working to address provisioning fraud by providing more analytics to issuers so they can place additional hurdles on the initial provisioning of a wallet, as well as to be sceptical of transactions coming from newly-provisioned wallets which raise more risk of fraud. For more information, see https://investor.visa.com/news/news-details/2023/Visa-Provisioning-Intelligence-Launches-to-Combat-Token-Fraud/default.aspx.

41 For consumers, fraud results in inconvenience and stress in dealing with fraud cases.

42 For instance, a merchant may lose physical goods sent to the fraudster and these are irrecoverable.

43 See Financial Fraud Action UK, "Fraud the Facts 2017", 2018, pp. 23-24; The UK Cards Association, "UK Card Payments 2017," 2017, pp. 7-8. "Fraud the Facts" reports that face-to-face card fraud losses at UK retailers was £62.8 million in 2016 and that internet/eCommerce fraud losses on UK-issued cards was £308.8 million in 2016. The UK Cards Association reports total eCommerce volume was £248 billion and total face-to-face volume was £396 billion, which gives a fraud rates of 12.5 basis points for eCommerce and 1.58 basis points for face-to-face. The total value of face-to-face card purchases is calculated using the total value of purchases (debit and credit card) discounted by the value of online purchases and mail order/telephone order purchases.

58. The table below reports the fraud-reduction benefits from tokenization on Visa cards in the UK. Tables 1, 6, and 7 report these benefits split equally between merchants and consumers.

Table 8: Estimated fraud reduction benefits from tokenization on Visa cards in the UK (in millions)

Year	Fraud reduction benefit (CNP)
2019	[✂]
2020	[✂]
2021	[✂]
2022	[✂]
2023	[✂]
2024	[✂]
2025	[✂]
2026	[✂]
2027	[✂]
Total	[✂]

Source: [✂] analysis of Visa transactions data and public data.

59. The estimates trend upwards due to the growth in tokenized transactions. In total, we estimate [✂]in benefits over the 2019-27 period.

60. Additional sensitivity analysis is presented in Section 8. As discussed further below, our estimate of the benefits of fraud reduction focus narrowly on financial losses due to fraud. Accounting for the inconvenience and stress suffered by victims of fraud would tend to increase these estimates.

4.2. Tokenized payments increase authorization rates

61. Because tokenization reduces the incidence and cost of managing fraud,[44] it also permits increases in authorization rates. The ability of merchants to securely hold a consumer's card details on file, through the use of persistent tokens, not only leads to a more frictionless payment experience for the consumer but also lowers the risk of compromising personal information through data leaks. This further reduces scope for fraud. When the probability of transaction fraud declines, issuers and merchants have an incentive to approve more transactions on the first attempt. For the purposes of this annex, references to an increase

44 The fraud cost under tokenization is reduced as re-issuing a token attracts lower costs than re-issuing a card. The cost reduction also incorporates time (reissuance can be instant versus days).

in authorization rates should be interpreted as meaning the same as a reduction in decline rates.[45]

62. Increased authorization rates benefit both consumers and merchants. Below, we set out our approach to quantifying this benefit.

4.2.1. Consumer benefits from increased authorization rates

63. As tokenization increases authorization rates, more transactions take place on the first attempt than they would without tokenization. Some of the declined transactions would otherwise have been attempted again and completed on the second try. In this case the benefit to consumers from increased authorization rates is the avoided cost of transacting a second time. Alternatively, some of the tokenized transactions would have never happened were it not for authorization (i.e., those which would have been declined and the customer would not reattempt the purchase with the same or a different merchant). In this case, the benefit to consumers from increased authorization rates is at least the cost of time attempting to complete the transaction.[46]

64. In both cases, we therefore conservatively estimate the benefit to consumers to be the avoided cost of transacting.

65. We estimate the increase in authorization rate by comparing the authorization rate for tokenized vs PAN transactions based on Visa data. The estimated incremental number of transactions that were authorized due to tokenization is obtained by applying the difference in the rates to the total number of tokenized transactions.[47]

66. We estimate the benefit to UK consumers to be at least [✂] over the period 2019 to 2027 based on the following datapoints (including from recent studies):

- tokenization [✂].[48]

---

45 Authorisation also refers to checks that the account is valid and has sufficient funds, which may not be dependent on fraud rates. Reduced fraud tends to improve authentication rates (which can happen before authorisation).

46 We say "at least" because if the expected consumer benefit from a transaction that never happened had been lower than the transaction cost incurred by the consumer, then the consumer would not have attempted the transaction in the first place.

47 The difference in authorization rates is based on a weighted average for 2019-23, separately for CP and CNP transactions. This is then applied to the annual series 2019-23 total tokenized transactions (total being all declined and approved tokenized transactions). For 2024-27 we apply growth rate in transactions obtained from Juniper overall tokenized transactions for the UK.

48 Visa transactions data.

- the value of the time cost incurred by consumers in respect of eCommerce[49] transactions is equal to the time cost per transaction, which is 34.7 seconds[50] multiplied by the opportunity cost that UK consumers attribute to time spent waiting while shopping (£10.83 per hour which equates 73% of the median wage rate for UK);[51] and
- the number of attempted tokenized transactions by Visa cardholders in the UK is estimated to be equal to the sum of the approved and the declined tokenized transactions.

4.2.2. Merchant benefits from increased authorization rates

67. Similarly, merchants benefit from increased authorization rates. There are three outcomes of a declined transaction from a merchant perspective. First, we assume there is no benefit to the merchant when a declined transaction is reattempted and processed in subsequent attempts. Second, for some of the transactions that are not authorized, the merchant may be able to entice a customer back to its store but only after incurring a re-engagement cost. For these transactions, the benefit to the merchant from increased authorization rates is the avoided re-engagement cost for each relevant transaction.[52] Third, when a transaction is declined and the customer never reattempts the transaction (either at the same or a different merchant), the cost to the merchant is the incremental profit from the transaction that is lost.

68. As in the approach above with respect to consumer benefit, we estimate the increase in authorization rate and in turn the incremental number of transactions that were authorized due to tokenization.

69. We estimate the benefit to UK merchants from the cost efficiencies and increased sales due to tokenization to be at least [✂] over the period 2019 to 2027 based on the following datapoints (including from recent studies):

- as in the calculation for the consumer benefits, we assess that tokenization [✂][53];

49 We rely on the study using ecommerce transactions. Since the impact of tokenization on approvals of CP transactions is negligible, the overall result is not sensitive to this assumption (approximately 1% of the calculated benefits come from CP transactions).

50 We rely on a Norwegian study that measured the average time that consumers take to make certain types of card payments. The time taken to make a non-tokenized online payment is 34.7 seconds. See Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022. Page 30

51 To estimate the value that consumers attribute to time spent making transactions, we rely on a study that suggests that in 2023, the opportunity cost of time that UK consumers attributed to time spent waiting while shopping was £10.83 per hour, which is 73.23 percent of the median wage in the UK for 2022. See: C. Krekel and G. MacKerron, "Back to Edgeworth? Estimating the Value of Time Using Hedonic Experiences." July 2023, IZA Discussion Paper No. 16308, p. 1.

52 Some transactions that do not happen on the first try may happen later without the merchant incurring any "re-engagement costs" (that is, expenditures on advertising or other marketing costs to try and recover the sale they lost in the first place). In this case, there is no loss for the merchant and thus no benefit from increased authorization rates.

53 Visa transactions data.

- an estimated 2% of all attempted online transactions are declined on the first attempt and never completed;[54]
- 26% of card transactions that are not authorized on the first attempt require merchants to incur a re-engagement cost;[55]
- the average cost to merchants of re-engaging with a consumer to encourage them to complete their transaction is £0.53;[56]
- the average incremental profit margin made by UK merchants in respect of online sales was 40.86% in 2019, 39.28% in 2020, 34.06% in 2021, and 30.79% in 2022 (we apply the 2022 margins to 2023 and 2024-27 forecasts);[57] and
- the average value of eCommerce transactions for UK merchants is the same as that reported by RBR; [58]
- the number of attempted tokenized transactions by Visa cardholders in the UK is estimated to be equal to the sum of the approved and the declined tokenized transactions.

4.2.3. Total end-user benefits from increased authorization rates

70. The table below sets out our estimate of the benefits for UK consumers and merchants from increased authorization rates due to tokenization on Visa cards from 2019 through to 2027.

Table 9: Increased authorization benefits on Visa cards in the UK (millions)

Year	Consumer	Merchant	Annual Total
2019	[✂]	[✂]	[✂]

54 The literature indicates that 5 to 10 percent of online transactions are declined in the first attempt. Of the 5-10 percent of declined transactions, approximately 50 percent are successful on the second or third try, resulting in 2 to 5 percent of total potential sales being lost due to authorization issues. Therefore, we assume that 2 percent are never completed, and 98 percent are completed later. See Baymard Institute, "How to Recoup 30% of Card Declined Abandonments".

55 We assume that merchants re-engage with consumers for whom a transaction is not authorized and that, of these transactions, 26 percent involve a cost of re-engagement. See Growth Natives, "Leverage Ecommerce Retargeting to Win Back Your Customers," 18 August 2022, updated 8 April 2024. We have not found UK-specific values for this parameter.

56 We base this on an estimate of the cost of Google Retargeting for Google Ads. This has been estimated to be between US$0.66 to US$1.23 per click. We use US$0.66 for our calculations and have applied an exchange rate of 0.8 GBP/$US. See: DigiSocial, "How Much Does Google Retargeting Cost for Google Ads", 12 September 2023 and Kobe Digital, Google Remarketing Costs: Your Pricing Guide. We have not found UK-specific values for this parameter.

57 Gross margins are collected from Professor Aswath Damodaran – Section Cash Flow Estimation - Operating and Net Margins by Industry, available at available at https://pages.stern.nyu.edu/~adamodar/New_Home_Page/dataarchived.html. We use "Retail Online - Gross Margin" data, for Western Europe, which includes EU, UK, Switzerland & Scandinavia. The margins reported already exclude the average merchant service charge of 0.6%. See PSR, Market review into card-acquiring services Final report, Figure 11.

58 RBR, "Global Payment Cards Data and Forecasts to 2027 – International Overview", September 2022. The average reported online transaction size varies between [✂].

Year	Consumer	Merchant	Annual Total
2020	[✂]	[✂]	[✂]
2021	[✂]	[✂]	[✂]
2022	[✂]	[✂]	[✂]
2023	[✂]	[✂]	[✂]
2024	[✂]	[✂]	[✂]
2025	[✂]	[✂]	[✂]
2026	[✂]	[✂]	[✂]
2027	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

4.3. Tokenized payments reduce cart abandonment rates

71. Consumers initiate many transactions online but a material proportion of these are not completed because customers abandon their carts.[59] We focus on cart abandonment among those consumers that do intend to make a purchase but do not do so for reasons that can be addressed by the reduction in friction, and increase in consumer confidence, brought about by COF solutions facilitated by the adoption of tokenization.[60]

72. Shoppers that have an intention to buy abandon their carts for many reasons, including lack of trust in the merchant to hold their card details and a checkout process that is long and convoluted.[61] Tokenization can reduce such instances of cart abandonment. First, tokenization increases consumer trust in transacting online because their card details will not be compromised in the event that the merchant with whom they are dealing is subject to a data security breach. Second, the ability of merchants to securely hold a consumer’s card details on file, through the use of persistent tokens, reduces the time it takes for a consumer to complete the checkout process and permits more frictionless payment experiences.

73. Reduced cart-abandonment rates have benefits for both consumers and merchants.

---

59 Data published by Statista indicates that in Great Britain, the online shopping cart abandonment rate for 2023/24 was between 74.9 per cent and 76.5 per cent. See: Statista, “Online shopping cart abandonment rate in Great Britain from February 2023 to April 2024”. Research conducted by Royal Mail suggests that cart abandonment rates may be even higher, at around 90%. See: See: Royal Mail, Delivery Matters 2020, p. 22.

60 According to Statista, on 37 percent of situations in which the cart is abandoned, consumers are just browsing and have no intention to buy. See: Statista, “Consumer reasons for abandoning their cart when shopping online in the United Kingdom (UK) in 2018”.

61 The Baymard Institute reports that 25 percent of US consumers who have an intention to buy and abandon their cart is because they do not trust the website with their card information and 22 percent do so because of a long and convoluted checkout process. See: Baymard Institute, “49 Cart Abandonment Statistics for 2024”.

4.3.1. Consumer benefits from lower rates of cart abandonment

74. When carts are abandoned, there are two possible outcomes. First, the transaction never happens at the same or a different merchant (i.e., the consumer does not reattempt the purchase). In this case, consumers lose *at least* the cost incurred in attempting the transaction (measured as the opportunity cost of time). Second, the transaction happens after a reattempt at the same or at a different merchant. Here, consumers lose the cost incurred in transacting again. Thus, for both outcomes, the value of reduced cart-abandonment rates for consumers can be approximated by the avoided transaction cost.

75. We can express the benefit to consumers from lower cart abandonment rates as:

$$B_{C_{LOW_{CART_{ABAN}}}} = r_1 \times r_2 \times r_3 \times C_{TRANS_{COST}} \times N_{POTENTIAL} \times P_S$$

76. Where:

$$B_{C_{LOW_{CART_{ABAN}}}} = Benefit\ to\ consumers\ from\ lower\ cart\ abandonment\ rates$$

$$r_1 = Proportion\ of\ all\ potential\ eCommerce\ transactions$$
$$where\ the\ cart\ is\ abandoned$$

$$r_2 = Proportion\ of\ all\ abandoned\ eCommerce\ transactions$$
$$where\ the\ consumer\ had\ an\ intent\ to\ purchase$$

$$r_3 = Proportion\ of\ all\ abandoned\ eCommerce\ transactions$$
$$due\ to\ to\ frictions\ at\ checkout$$

$$C_{TRANS_{COST}} = The\ time\ cost\ incurred\ by\ consumers\ when\ transacting\ online$$

$$N_{POTENTIAL} = The\ number\ of\ potential\ eCommerce\ transactions$$
$$with\ UK\ merchants$$

$$P_S = The\ proportion\ of\ eCommerce\ transactions\ abandoned\ due\ to$$
$$frictions\ at\ checkout\ that\ would\ go\ ahead\ with\ tokenization$$

77. We estimate the benefit to UK consumers in terms of reduced cart abandonment and the associated time spent transacting due to tokenization to be at least [✂] over the period 2019 to 2027 based on the following datapoints (including from recent studies):

- 76.5% of all attempted online transactions with UK merchants are ultimately abandoned (r_1);[62]
- 37% of all instances of cart abandonment in the UK occur because the customer was just browsing, with no intention to purchase (r_2);[63]

---

62 Data published by Statista indicates that in Great Britain, the online shopping cart abandonment rate for 2023/24 was between 74.9 per cent and 76.5 per cent. See: Statista, “Online shopping cart abandonment rate in Great Britain from February 2023 to April 2024”. Research conducted by Royal Mail suggests that cart abandonment rates may be even higher, at around 90%. See: See: Royal Mail, Delivery Matters 2020, p. 22.

63 See: Statista, “Consumer reasons for abandoning their cart when shopping online in the United Kingdom (UK) in 2018”. For the purpose of our analysis, we focus on the 63 percent of the 76.5 percent of situations in which the consumer has placed an item in their cart and has the intention to make a purchase.

- of the remaining 63% of all abandoned carts where the consumer had an intention to purchase, 47% of these were abandoned because of frictions at checkout (r_3) – this means that 22.7% (obtained by multiplying 76.5%, 63%, and 47%) of all potential online transactions are *addressable* by the adoption of tokenization;[64]
- the value of the time cost incurred by consumers in respect of eCommerce[65] transactions is equal to the time cost per transaction, which is 34.7 seconds[66] multiplied by the opportunity cost that UK consumers attribute to time spent waiting while shopping (£10.83 per hour, which equates to 73% of the median wage rate for UK) ($C_{TRANS_{COST}}$);[67]
- the number of *potential* online card transactions with Visa at a UK merchant ($N_{POTENTIAL}$) is calculated by multiplying the number of *actual* Visa transactions by 1/(1- cart abandonment rate), i.e. $(1/(1-r_1))$.[68]

---

64 The Baymard Institute reports that, of all abandoned carts that are abandoned at checkout in the US, 25% are abandoned because the consumer didn't trust the site with their credit card information and 22% are abandoned because of a long and convoluted checkout process. See Baymard Institute, "49 Cart Abandonment Statistics for 2024". For the purpose of our analysis, we assume that no consumers abandon their carts at checkout due to both a distrust of the site and the long and convoluted checkout process (i.e., they abandon their cart for one or the other reason but not both). As a result, we assume that 47% of those carts abandoned at checkout are due to these "frictions at checkout".

We consider this assumption to be conservative. Earlier survey data commissioned by Visa indicates that almost three quarters of British online shoppers end up abandoning their virtual shopping baskets for fear of having their credentials stolen, or when the buying process becomes too tedious. See Truta, F, "72% of Brits abandon their online shopping carts mid-purchase for fear of security", Bitdefender, 2 August 2017. A more recent study indicated that three quarters of UK consumers would abandon their shopping basket if the process took too long. See: Searles, K., Internet Retailing, "Half of UK consumers would abandon cart due to expensive delivery costs", Internet Retailing, 9 June 2023. Additionally, an online shopping survey from November 2016 found that 23 percent of UK respondents considered that "filling out my shipping and billing information for every purchase" might stop them from completing an online purchase. See "VISA: Online Shopping," November 2016.

We also note that the assumption that no consumers abandon their carts at checkout due to both a distrust of the site and the long and convoluted checkout process is conservative in its effect on the results of our analysis in that it raises the private return to Visa relatively more than it raises the social returns from the innovation, relative to an assumption that there is some overlap in the proportion of consumers that cite these reasons for cart abandonment.

65 We rely on the study using ecommerce transactions. Since the impact of tokenization on approvals of CP transactions is negligible, the overall result is not sensitive to this assumption (approximately 1% of the calculated benefits come from CP transactions).

66 We rely on a Norwegian study that measured the average time that consumers take to make certain types of card payments. The time taken to make a non-tokenized online payment is 34.7 seconds. See Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022. Page 30

67 To estimate the value that consumers attribute to time spent making transactions, we rely on a study that suggests that in 2023, the opportunity cost of time that UK consumers attributed to time spent waiting while shopping was £10.83 per hour, which is 73.23 percent of the median wage in the UK for 2022. See: C. Krekel and G. MacKerron, "Back to Edgeworth? Estimating the Value of Time Using Hedonic Experiences." July 2023, IZA Discussion Paper No. 16308, p. 1.

68 For the purpose of our analysis, we estimate the number of potential transactions ("$N_{Potential}$") by reference to the number of actual Visa CNP transactions that also involve the use of a persistent token.

- we assume that only for those transactions which relate to eCommerce (i.e. excluding e-wallet remote transactions) and for those among eCommerce which use a persistent token[69] solves the instances of cart abandonment where the customer abandons the transaction solely because of experiencing frictions at checkout (factor P_S). We rely on Juniper data which indicates that approximately [✂] of online tokenized transactions relate to eCommerce and of these slightly more than half use a persistent token.[70] On this basis, we conservatively[71] assume that only 11% of instances of cart abandonment in tokenized transactions due to checkout frictions are solved by COF transactions.

4.3.2. Merchant benefits from lower rates of cart abandonment

78. For merchants, the benefit of lower cart abandonment is the increased sales they make from a reduction in frictions experienced by consumers at checkout. As a group, merchants experience a loss on those transactions that were attempted but were abandoned entirely due to frictions at checkout (i.e., never took place at another merchant). The loss is the average profit margin on the average transaction size for this subset of transactions.

79. We can express the benefit to merchants from lower cart abandonment rates as:

$$B_{C_{LOW_{CART_{ABAN}}}} = r_1 \times r_2 \times r_3 \times r_4 \times M_{P_{MARGIN_{ONL}}} \times AVG_{TRANS_{SIZE_{ONL}}} \times N_{POTENTIAL} \times P_S$$

80. Where:

$$B_{M_{LOW_{CART_{ABAN}}}} = Benefit\ to\ merchants\ from\ lower\ cart\ abandonment\ rates$$

$$r_1 = Proportion\ of\ all\ potential\ eCommerce\ transactions\ where\ the\ cart\ is\ abandoned$$

$$r_2 = Proportion\ of\ all\ abandoned\ eCommerce\ transactions\ where\ the\ consumer\ had\ an\ intent\ to\ purchase$$

$$r_3 = Proportion\ of\ all\ abandoned\ eCommerce\ transactions\ due\ to\ to\ frictions\ at\ checkout$$

$$r_4 = Proportion\ of\ all\ abandoned\ eCommerce\ card\ transactions\ due\ to\ to\ frictions\ at\ checkout\ that\ never\ happen$$

---

69 We use persistent tokenized transactions as a proxy for COF transactions. This is because tokenization only shortens the checkout process when the customer already has its card on file (which requires use of a persistent token) or where the customer checks out by other means where its card details are stored (e.g., through the use of Click to Pay).

70 Based on Juniper data we estimate that approximately [✂] of all Visa CNP tokenized transactions are eCommerce transactions that involve the use of a persistent token. The remainder comprise eCommerce transactions that involve the use of a single token and tokenized mobile payments, which may or may not involve the use of a persistent token. For the purpose of our analysis, we assume that mobile payments that involve the use of a persistent token do not reflect COF transactions. Juniper Research, “Payment Tokenization: Key Opportunities, Segment Analysis & Market Forecasts 2022-2027”, September 2022.

71 We already scale down our estimate of $N_{Potential}$ by a significant amount (almost 90%, from multiplying by factors $r_1 \times r_2 \times r_3$), and this estimate of the proportion of COF transactions is likely to be conservative [✂].

$$M_{P_{MARGIN_{ONL}}} = The\ incremental\ profit\ margin\ that\ UK\ merchants\ make\ on\ online\ sales$$

$$AVG_{TRANS_{SIZE_{ONL}}} = Average\ value\ of\ an\ online\ card\ transaction\ for\ a\ UK\ merchant$$

$$N_{POTENTIAL} = The\ number\ of\ potential\ eCommerce\ transactions\ with\ UK\ merchants$$

$$P_S = The\ proportion\ of\ eCommerce\ transactions\ abandoned\ due\ to\ frictions\ at\ checkout\ that\ would\ go\ ahead\ with\ tokenization$$

81. We apply the same assumptions outlined for our consumer benefit calculation above.

82. The calculation of merchant benefits also requires us to estimate the factor r_4 (i.e., the proportion of all abandoned eCommerce card transactions due to frictions at checkout that never happen, either with the same or a different merchant). If these can be avoided, merchants benefit in the form of incremental profit from those transactions that would otherwise have been lost. For the purpose of our calculations, we use the following datapoints (including from academic research):

- 16% of online card transactions with UK merchants that are abandoned due to frictions at checkout are never completed (either with the same or a different merchant) (factor r_4);[72]
- The average profit margin made by UK merchants in respect of online sales was 40.86% in 2019, 39.28% in 2020, 34.06% in 2021, and 30.79% in 2022 (we apply the 2022 margins to 2023 and 2024-27 forecasts) (factor $M_{P_{MARGIN_{ONL}}}$);[73] and
- The average value of an online card transaction for UK merchants is as reported by RBR (factor $AVG_{TRANS_{SIZE_{ONL}}}$).[74]

83. We estimate the benefit to UK merchants to be up to £[✂] over the period 2019 to 2027.

72 See Statista, "Cart abandonment: what shoppers did after abandoning their cart in the United Kingdom (UK) in 2020". The numbers need to be recalculated because they do not account for the fact that many people that abandoned their cart did not have an intention to buy in the first place. The original Royal Mail source, on which the Statista figures are based, reports what people did after abandoning their carts but without excluding those that had no intention to buy. The percentages reported are as follows: 31 percent purchased the same item later on the same site; 26 percent purchased the same item at a different online retailer; 23 percent were not looking to purchase so that they did nothing; 8 percent purchased the item at a physical store; and, finally, we conclude that 1 – 0.31 – 0.26 – 0.23 – 0.08 = 0.12 (or 12 percent) did not buy the product. We exclude the 23 percent of individuals that had no intention to buy and we recalculate the figures. 31/77 = 0.40 (or 40 percent); 26/77 = 0.34 (or 34 percent); 8/77 = 0.10 (or 10 percent); and finally, 12/77 = 0.16 (or 16 percent). Thus, we conclude that, in 16 percent of situations in which the cart was abandoned, the purchase was not completed (after excluding those individuals that had no intention to purchase in the first place).

73 Gross margins are collected from Professor Aswath Damodaran – Section Cash Flow Estimation - Operating and Net Margins by Industry. We use "Retail Online - Gross Margin" data, for Western Europe, which includes EU, UK, Switzerland & Scandinavia. The margins reported already exclude the average merchant service charge of 0.6%. See PSR, Market review into card-acquiring services Final report, Figure 11.

74 RBR, "Global Payment Cards Data and Forecasts to 2027 – International Overview", September 2022. The average reported online transaction size varies between [✂].

84. We consider our approach to be conservative in several respects. For example, we assume that tokenization only reduces card abandonment in circumstances where a consumer has its COF (and the merchant uses a persistent token). This under-estimates the potential benefits from tokenization with regards to reduced cart abandonment. In reality, some instances of cart abandonment due to consumer mistrust may be avoided through the use of single tokens (i.e, consumers may opt to provide their card data to merchants that they know tokenize their transactions and may do so for a single transaction, without allowing the merchant to retain their COF). We also ignore any cart abandonment benefit from the use of mobile wallets and rely on an estimate of the share of COF transactions based on Juniper Research, which gives [✂]. We provide further sensitivities on our assumptions in Section 8.

4.3.3. Total end-user benefits from lower rates of cart abandonment

85. The table below reports our estimated benefits from reduced cart-abandonment rates for consumers and merchants from 2019 through to 2027.

Table 10: Decrease in cart abandonment benefits from Visa cards in the UK (in millions)

Year	Consumer	Merchant	Total
2019	[✂]	[✂]	[✂]
2020	[✂]	[✂]	[✂]
2021	[✂]	[✂]	[✂]
2022	[✂]	[✂]	[✂]
2023	[✂]	[✂]	[✂]
2024	[✂]	[✂]	[✂]
2025	[✂]	[✂]	[✂]
2026	[✂]	[✂]	[✂]
2027	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

4.4. Tokenized payments reduce transaction times

86. COF generates benefits for consumers because it reduces transaction times. Without persistent tokens, a consumers would need to enter their personal and card information every time they attempt an eCommerce transaction.[75] With persistent tokens, COF is feasible, and the transaction becomes considerably shorter.

87. We can express the benefit to consumers from having their card on file as:

75 We note that some merchants may choose to implement card on file solutions without tokenization, but this requires them to store consumers full card details which exposes both consumer and merchant to substantial risk.

$$B_{C_{COF}} = (C_{TRANS_{COST}} - C_{TRANS_{COST}COF}) \times N_{COF}$$

88. Where:

$$B_{C_{COF}} = Benefit\ to\ consumers\ from\ having\ their\ card\ on\ file$$

$$C_{TRANS_{COST}} = The\ time\ cost\ incurred\ by\ consumers\ when\ transacting\ for\ a\ non - COF\ eCommerce\ transaction$$

$$C_{TRANS_{COST}COF} = The\ time\ cost\ incurred\ by\ consumers\ when\ transacting\ for\ a\ COF\ eCommerce\ transaction$$

$$N_{\mathrm{COF}} = The\ number\ of\ COF\ eCommerce\ transactions$$

89. We estimate the benefit to UK consumers to be at least £[✂] over the period 2019 to 2027 based on the following datapoints (including from recent studies):

- the time cost incurred by consumers in respect of non-COF eCommerce transactions is 34.7 seconds;[76]
- the time cost incurred by consumers in respect of COF eCommerce transactions is 7.8 seconds;[77]
- the opportunity cost that UK consumers attribute to time spent waiting while shopping is £10.83 per hour which equates 73% of the median wage rate for UK;[78]; and
- the number of COF eCommerce transactions is estimated based on Visa data on CNP tokenized transactions in the UK and applying the share of persistent tokenized eCommerce transactions as reported by Juniper.[79]

90. The table below reports the benefits to UK consumers from reduced transaction times due to them having their card on file with UK merchants, from 2019 through to 2027.

76 Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022.

77 In the absence of available data on the time taken to complete an online COF transaction, we assume that such transactions take the same time as contactless card payments at the POS (7.8 seconds). Given that card details do not need to be entered (other than the first time) and shipping details are updated automatically, offering a one-click purchase, it seems realistic that the checkout time would significantly decrease from the non-COF 34.7 seconds – contactless thus provides a time benchmark as it does not require the provision of further information at checkout. We therefore estimate the time savings made by consumers when making a COF transaction instead of a regular online payment to be 26.9 seconds. This is the difference between the time taken for consumers to make a contactless card payment at the POS (7.8 seconds) and the time taken to make a non-tokenized online payment (34.7 seconds). See Norges Bank, "Costs in the Norwegian Payment System 2020," Norges Bank Papers No. 3, 2022. Page 30.

78 To estimate the value that consumers attribute to time spent making transactions, we rely on a study that suggests that in 2023, the opportunity cost of time that UK consumers attributed to time spent waiting while shopping was £10.83 per hour, which is 73.23 percent of the median wage in the UK for 2022. See: C. Krekel and G. MacKerron, "Back to Edgeworth? Estimating the Value of Time Using Hedonic Experiences." July 2023, IZA Discussion Paper No. 16308, p. 1.

79 Juniper Research, "Payment Tokenization: Key Opportunities, Segment Analysis & Market Forecasts 2022-2027", September 2022.

Table 11: COF transaction time saving benefits on Visa cards in the UK (in millions)

Year	Consumer benefit from time saved
2019	[✂]
2020	[✂]
2021	[✂]
2022	[✂]
2023	[✂]
2024	[✂]
2025	[✂]
2026	[✂]
2027	[✂]
Total	[✂]

Source: [✂] analysis of Visa transactions data and public data.

4.5. Other unquantified benefits

91. There are additional benefits from tokenization that are not incorporated into these quantifications. For example:

- Tokenization does not just reduce the rate of fraud, but also the cost of fraud if it occurs. This is because fraudsters only have access to the token rather than having a cardholder's card details, with the cost of re-issuing a token being lower than the cost of re-issuing a card.
- As well as reducing the direct cost of fraud, end-users are likely to benefit from reduced administrative costs and distress from fraud.
- Tokenization technology helps power other pieces of payment innovation including mobile wallets and app-based payments thereby facilitating follow on innovation by third parties.
- Tokenized COF also enables certain subscription business models, such as streaming services like Netflix. These businesses are able to continue serving their customers uninterruptedly even if a customer receives a new card.

5. PRIVATE AND SOCIAL BENEFITS OF THE INNOVATIONS

5.1. Private and social benefits of contactless payments

92. Private benefits from tokenization and contactless accrue either to Visa or to issuers. The social benefit from the innovations is then the sum of the total private benefits (i.e., to Visa and issuers) and the total end-user benefits (i.e., for merchants and consumers). In this Section we explain how we estimate these private benefits.

93. Private benefits from Visa's contactless transactions are calculated on the incremental Visa card transactions (i.e., those that would not have occurred on Visa cards without the innovation).[80]

94. To estimate incremental transactions that can be attributed to contactless technology we rely on the academic literature. The most reliable study is Brown *et al*. (2020), which uses anonymized bank-account data for a random sample of over 21,000 customers of a Swiss retail bank.[81] The data covers all card transactions and cash withdrawals between 2015 and 2018. The study divides the clients into three groups: early adopters of contactless cards, late adopters, and non-adopters, depending on when the clients receive a new contactless debit card from the bank. They find that contactless payments lead consumers to use their debit cards more often. After receiving a contactless card, clients make an average of seven additional card purchases per year. This represents an increase of 8.6% relative to the sample mean of 79 transactions.

95. While there are some other studies in the literature,[82] we rely on the Brown *et al.* study (2020) for several reasons. First, it is the only study that precisely addresses the relevant question of how many incremental card transactions are driven by contactless payments. In addition, although the Brown *et al.* study does not rely on sophisticated econometric techniques, it uses the (exogenously determined) differential timing of adoption of contactless payments to identify the impact of contactless on incremental card usage. More specifically, the bank rolled out contactless debit cards to clients as their existing cards expired. Brown *et al.* point out that, since expiration dates were random, this setting created a "natural experiment" that allowed them to isolate the causal impact of the new payment technology on customers' payment behaviour. Following this study, we assume that contactless payments increase card transactions by 8.6%.

96. As for tokenization, we multiply the incremental transactions generated by contactless by our estimate of Visa's net revenue per transaction to obtain the level of private benefits to Visa and by the relevant interchange rate per transaction to obtain the level of incremental revenue to Visa issuers.[83]

---

80 Consider the following example. Assume an economy in which, at the starting point, there are 100 transactions per year, 50 on cash and 50 on contact cards. The next year, contactless cards are introduced. The number of transactions stays the same at 100 per year, but now 45 happen on cash, 45 on contact cards, and 10 on contactless cards. Now 10 transactions take place on the new technology, and end-users receive benefits on all 10 (because contactless cards are more efficient payment instruments than both cash and contact cards). However, only 5 of those 10—namely, the 5 in which contactless cards replaced cash—are incremental card transactions, and Visa receives incremental benefits only on those 5.

81 M. Brown *et al*., "Do contactless cards really change the way we pay?," SUERF Policy Briefs, No. 14, June 2020.

82 The academic literature on the impact of contactless is rather limited and focus on measuring the effects of contactless use on cash demand and usage. See e.g., H. Fujiki and M. Tanaka, "Currency demand, new technology, and the adoption of electronic money: Micro evidence from Japan," Electronic Letters 125:1 (October 2014); B. Fung et al., "The impact of retail payment innovations on cash usage," Journal of Financial Market Infrastructures 3:1 (September 2014); H Chen et al., "Retail Payment Innovations and Cash Usage: Accounting for Attrition Using Refreshment Samples," Bank of Canada Working Paper 2014-27, June 2014; and T. Trùtsch, "The impact of contactless payments on cash usage at an early stage of diffusion," Swiss Journal of Economics and Statistics 156:5 (2020).

83 We note that competition between issuers means that interchange revenue is likely to be largely passed through to cardholders. The extent of pass on does not alter our analysis of social costs and benefits and so, for simplicity, we do not model pass on in our analysis.

97. The value of these private benefits is set out in the table below. We also include in this table the end-user benefits as calculated in Section 3 and the total social benefits.

Table 12: Private, end-user and social benefits from contactless on Visa transactions in the UK (in millions)

Year	Visa	Issuer	End-User	Social
2017	[✂]	[✂]	[✂]	[✂]
2018	[✂]	[✂]	[✂]	[✂]
2019	[✂]	[✂]	[✂]	[✂]
2020	[✂]	[✂]	[✂]	[✂]
2021	[✂]	[✂]	[✂]	[✂]
2022	[✂]	[✂]	[✂]	[✂]
2023	[✂]	[✂]	[✂]	[✂]
2024	[✂]	[✂]	[✂]	[✂]
2025	[✂]	[✂]	[✂]	[✂]
2026	[✂]	[✂]	[✂]	[✂]
2027	[✂]	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

5.2. Private and social benefits of tokenized payments

98. Private benefits from Visa's tokenized transactions are calculated on the incremental Visa card transactions. The incremental transactions that are attributed to tokenization are the result of increased authorization rates and reduced cart abandonment rates. As explained earlier, a share of total eCommerce transactions would not have taken place at all in the absence of tokenization. Based on our calculations, we estimate that [✂].[84]

99. We multiply the incremental transactions generated by tokenization by our estimate of Visa's net revenue per transaction to obtain the level of private benefits to Visa associated

84 In our calculations, tokenization generates an increase in card transactions of approximately 4.6 percent. This is the result of the increased-authorization effect (2.8 percent) and the decreased cart-abandonment effect (1.8 percent = 16 percent times 47 percent times 63 percent times the 76.5-percent cart-abandonment rate).

with this innovation.[85] We follow a similar approach for calculating incremental revenue accruing to the issuers.[86]

100. The value of these estimates are set out in the table below. We also include in this table the end-user benefits as calculated in Section 4.

Table 13: Private, end-user and social benefits from tokenization on Visa transactions in the UK (in millions)

Year	Visa	Issuer	End-User	Social
2019	[✂]	[✂]	[✂]	[✂]
2020	[✂]	[✂]	[✂]	[✂]
2021	[✂]	[✂]	[✂]	[✂]
2022	[✂]	[✂]	[✂]	[✂]
2023	[✂]	[✂]	[✂]	[✂]
2024	[✂]	[✂]	[✂]	[✂]
2025	[✂]	[✂]	[✂]	[✂]
2026	[✂]	[✂]	[✂]	[✂]
2027	[✂]	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data. Note: Issuer benefits are reported assuming they retain all the revenue rather than passing it on to consumers. This is a simplifying assumption and in fact competition between issuers is likely to result in interchange revenue being passed on. Assuming pass on to consumers would increase benefits to end users but would have no impact on total social benefits.

6. PRIVATE AND SOCIAL COSTS OF THE INNOVATIONS

101. To determine the social and private rates of return from these innovations, we compare the benefits they generate to the respective costs. To estimate the development costs, we rely on patent data and information on the typical cost associated with earning a patent – this is an established approach and one that allows us to apportion the investment costs to the UK specifically.

85 Using public information on Visa's net revenues ($29.3 billion) and total volume of payments ($11.6 trillion) in 2022, we obtain per transaction revenue of 25 basis points. We use net revenues as a conservative approximation to profits, which are the true per-transaction benefits to Visa. We note that global data is likely to overstate Visa's private benefit because it earns lower net revenues in the UK. See Visa Annual Report 2022.

86 We use the onshored IFR capped rate of 0.3 percent for credit cards. With that information, we have calculated the incremental revenue to UK issuers. Our same comment as at footnote 80 applies to this aspect of our analysis.

102. In 1990, Samuel Trajtenberg published a seminal paper on patents, R&D, and citations.[87] His empirical analysis confirmed two hypotheses: first, patents weighted by citations are a good proxy for the value of the innovations described in the patents, but the raw counts of patents are not; and second, the raw counts of patents are a good proxy for the R&D investments companies make in developing the innovations. Researchers have explored both hypotheses.[88]

103. Researchers have also studied the inverse of the patent-to-R&D ratio, namely the R&D-to-patent ratio. This ratio measures the amount of R&D resources companies need to invest in a given year to obtain one patent. This is the metric we use in our study. We use two sources of information: one is the annual report on the top patenting companies published by the USPTO, and the other is publicly available information on the resources those companies invested in R&D each year. This allows us to construct a measure of the R&D-to-patent ratio, which we then apply to Visa and its patenting activities. Specifically, we calculate an average R&D-to-patent ratio for a sample of companies in the USPTO reports between 2007 and 2020, and then multiply the number of patents taken by Visa each year (for each technology) by the average R&D-to-patent ratio to obtain a total Visa R&D number for that year.[89] We then allocate a portion of that figure to the UK based on the share of Visa's contactless or tokenized transactions that happened in the UK over the relevant period.[90]

87 S. Trajtenberg, "A Penny for your Quotes: Patent Citations and the Value of Innovations," Rand Journal of Economics 21:1 (Spring 1990).

88 As regards the second hypothesis, researchers have tracked the evolution of the economy-wide patent-to-R&D ratio over time. In a 1993 paper, for example, Samuel Kortum showed that, for the United States, the ratio declined from about 3.5 in the 1950s to about 1.0 in the late 1980s. That is, if in the 1950s companies obtained, on average, 3.5 patents per million USD spent on R&D, by the late 1980s they were obtaining one patent per million USD spent. S. Kortum, "Equilibrium R&D and the Patent-R&D Ratio: U.S. Evidence," American Economic Review Papers and Proceedings (May 1993). An excellent collection of studies on the connections between R&D and patents is in Z. Griliches, editor, R&D, Patents, and Productivity (Chicago: The University of Chicago Press, 1984).

89 For calculating an average R&D-to-patent ratio, we use the annual USPTO reports on the top companies obtaining patents in the United States over the period 2007-2020. Note that data are available from 1995 to 2020, but we start in 2007 because that is when we observe Visa's first patents for contactless in GlobalData. ***See*** USPTO, Calendar Year Patent Statistics. From those reports, we track the patents obtained and R&D investments made by the top 20 companies (based on their total patents over that time period). For companies in the top 20 that report R&D expenditure data, we calculate the R&D-to-patent ratio—that is, the R&D investments each company made to obtain one patent each year during the relevant period—and then we calculate an investment-weighted average for those companies and years We find R&D expenditure data for 15 of the top 20 companies on MacroTrends and Statista. For 11 companies, R&D expenditure is found for 2009-2020 and the remaining four cover shorter time periods. We then apply that average to Visa's patents for each technology and year to estimate Visa's investments in developing each innovation.

90 This arguably leads to an underestimation the R&D resources invested by Visa to develop the technology. This would be the case if the top patent-takers each year were particularly efficient at transforming R&D resources into patents. If they were, the average R&D-to-patent ratio for this group would be unusually low, and this would lead us to underestimate Visa's R&D investments. Although this could be true, it is not a problem in this context, First, underestimating Visa's R&D investments would lead us to overestimate Visa's private returns from the innovations (rather than underestimating Visa's private returns). In addition, we use the same Visa investment figures to compute both private and social returns from the innovations. We focus on the comparison between private and social returns rather than on the levels themselves. The consistency in our methodology ensures that whatever bias may exist will run in the same direction in both calculations.

104. We apply the same methodology to estimate the investments that Visa issuers have made.

105. We also estimate the investments made by merchants to adopt the two innovations. For tokenization, Juniper Research reports the tokenization revenues that token providers have received (or are forecasted to receive). These are also estimates of the costs that merchants, including UK merchants, have or will incur to tokenize their transactions. The modal token price is 10 cents per token. We arrive at end-user annual investments in tokenization that range from [✂].[91] For contactless, we use data on the annual increase in contactless terminals in the UK together with a cost figure of $100 per terminal[92] to arrive at annual end-user investments of between [✂] over the years when we observe a positive number of contactless transactions.[93]

106. These investment estimates are provided in the table below.

Table 14: Technology investment costs by participant (in millions)

Participant	Contactless	Tokenization
Visa	[✂]	[✂]
Issuers	[✂]	[✂]
Merchants	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

7. ASSESSING THE SOCIAL IMPACT OF THE INNOVATIONS

7.1. An analysis of IRRs and benefits to costs ratios show significant spillover effects

107. The academic literature relies on several metrics to assess the social value of innovations. These measures include:

- the net present value of the benefits, which is the sum of the discounted flow of net benefits arising from an innovation;[94]
- the IRR, which is the rate of return that equates the net present value of the stream of net benefits from an innovation to zero;[95]
- the benefits-to-costs ratio, which is the ratio of the present value of the benefits from the innovation to the present value of the costs incurred in developing it.

91 We use data on price per token and total tokens, by year, in the UK from Juniper Research, "Payment Tokenization: Key Opportunities, Segment Analysis & Market Forecasts 2022-2027".

92 Swipesum, "What Does it Cost to Accept Mobile Payments?" July 8, 2019.

93 Data on the number of contactless terminals in the UK come from RBR's Global Payment Cards Report.

94 For a discussion of the technical issues involved in the calculations, see, among others, T. Au and T. Au, Engineering Economics for Capital Investment Analysis (Boston: Allyn and Bacon, 1983), and S. Benninga, Financial Modeling (Cambridge: MIT Press, 2000).

95 For a short discussion, see and A. Link and J. Scott, Public Goods, Public Gains: Calculating the Social Benefits of Public R&D (Oxford: Oxford University Press, 2011), pp. 34-36.

108. Often, the literature compares the private and social IRRs.[96] The rationale for comparing private and social IRRs[97] is that innovations with larger social than private IRRs are expected to be underprovided as they generate positive externalities on society at large. These externalities are not considered in private decision-making and therefore private actors provide less than the social optimal level.

109. The table below presents the private IRR for Visa and the social IRR, for each innovation. It shows that social IRRs are considerably larger than the private Visa IRRs for both innovations. The social benefits are also significantly larger than the social costs as is evident from the social benefit to cost ratios.[98]

Table 15: Private and social IRRs on benefits relating to Visa transactions in the UK[99]

Innovation	Visa's Private IRR	Social IRR	Social Benefit to Cost Ratio
Contactless	[✂]	[✂]	[✂]
Tokenization	[✂]	[✂]	[✂]

Source: [✂] analysis of Visa transactions data and public data.

110. It is important to note that these IRRs are computed based on the *actual* success of contactless and tokenization. The private return to Visa *ex ante* was significantly riskier and more uncertain. The observation that social returns significantly exceed private ones is hence the relevant one for determining the risk of innovation being underprovided *ex ante*.

111. These private and social IRRs are consistent with the findings of the literature on the social benefits of innovation. Tewksbury *et al*. (1980), for example, report a median private return of 27% and a median social return of 99% for a wide range of commercial projects.[100] The authors report a range of social returns between 20% and 472%. Sveikauskas (2007) reports private returns ranging from 7% to 43%, and social returns ranging from 11% to

---

96 For discussions of these measures with multiple applications, see, among others, G. Tassey, "Methods for Assessing the Economic Impacts of Government R&D," National Institute of Standards and Technology, Planning Report 03-1, September 2003; and A. Link and J. Scott, Public Goods, Public Gains: Calculating the Social Benefits of Public R&D (Oxford: Oxford University Press, 2011). For other studies that compare private and social returns to innovation, see J. Tewksbury *et al*., "Measuring the Societal Benefits of Innovation," Science 209 (August 8, 1980), and L. Sveikauskas, "R&D and Productivity Growth: A Review of the Literature," BLS Working Paper 408, September 2007.

97 The social IRR corresponds to the hypothetical case in which society decides to invest resources in developing and adopting an innovation. In this scenario, the social IRR reflects the return society obtains from its investment.

98 While this only affects the calculation of the social benefit to cost ratio, we use the current risk-free interest rate of 5% as the discount factor in calculating the NPV of the social benefit over the NPV of the social cost. This calculation is not highly sensitive to the choice of the discount factor but a higher factor would decrease this ratio as benefits are estimated to accrue in the future while the investment costs mostly occurred in the past.

99 The issuer investment and incremental revenue are also included in the social IRR and benefit-to-cost ratio. As noted above our analysis does not model pass on of issuers' revenue through to end users. From the perspective of computing end user benefits this is conservative and it makes no difference to the computation of overall social welfare.

100 J. Tewksbury *et al*., "Measuring the Societal Benefits of Innovation," Science 209 (August 8, 1980), p. 659.

147% across many industries.[101] In all the studies we have reviewed in this literature, the social returns are considerably larger than the private returns.

8. SENSITIVITIES

112. We have checked the robustness of our key findings across multiple sensitivities on our assumptions. However, we would reiterate that our results are already conservative in multiple key respects. For example, our results focus on only a subset of quantifiable benefits and do not incorporate the follow-on innovations and investments that have been made by Visa on top of tokenization and contactless technology; we also narrowly focus on only the direct financial costs of fraud; and identify benefit to merchants from reduced payment friction only on card on file transactions.

113. **Alternative forecasting approach.** As explained above, we use a report by RBR to forecast the volume of Visa contactless transactions through 2027 and [✂]. In the table below we conduct a sensitivity in which we instead assume the share of CNP transactions that are tokenized remains stable and apply the RBR growth rate ([✂]) to generate the forecast 2024-27. This shows that under this revised assumption, end-user benefits remain significant at £[✂] (contactless) and £[✂] (tokenization).

114. **Attribution of end-user benefits to Visa.** As explained above, while Visa was a prominent contributor to both tokenization and contactless, it was not the sole inventor or contributor of these technologies. We have therefore considered an alternative approach in which we only attribute a portion of the benefits from the roll out of these technologies on Visa cards to Visa.

115. An assumption that end-user benefits on Visa cards are attributable to Visa based on Visa's share of patent citations for each technology would be too conservative as it will materially understate Visa's contribution to these technologies. First, Visa played a role in both developing these technologies as well as rolling out and popularising them. For example, Visa's significant investments in rolling out and popularising contactless payments contributed towards consumers' and merchants' ability to trust that contactless payments are safe and reliable, leading for example to the FCA's decision to increase the transaction threshold from £30 to £45 in 2020 and to £100 in 2021.[102] Thus, its patent or citation share will understate its overall contribution. Second, our analysis above is based only on Visa transactions, whereas Visa's innovations are likely to have contributed to end-user benefits also when using other payment schemes.

116. On this basis, we consider a midpoint – we first scale the baseline benefits by Visa's share of citations in each year. We then take the average between this scaled and the baseline outcome for each year and each benefit. This is to illustrate the sensitivity to a conservative assumption where even the benefits that occur on Visa's transactions (i.e. estimated using

---

101 L. Sveikauskas, "R&D and Productivity Growth: A Review of the Literature," BLS Working Paper 408, September 2007, p. 28

102 The FCA increased the contactless transaction thresholds in 2021, recognising that contactless payments meet "evolving expectations of customers and merchants for fast but secure ways to pay" (https://www.fca.org.uk/news/press-releases/fca-confirms-increase-thresholds-contactless-payments). The FCA's Policy Statement also recognises that contactless payments are safe compared to other methods, despite increases in thresholds (para 1.11 of PS21/2, https://www.fca.org.uk/publication/policy/ps21-2.pdf).

Visa's UK transaction data) are not fully attributed to Visa. Under this scenario, end-user benefits remain significant at £[✂] (contactless) and £[✂] (tokenization).

117. **Assuming a lower benefit from reduced cart abandonment.** Our approach to estimating the benefits of reduced cart abandonment is conservatively focused on a narrow set of transactions which are tokenized, i.e. card on file eCommerce transactions. We assume that card on file removes payment friction within this narrow set of transactions, thereby leading to a reduction in cart abandonment. While this is a reasonable assumption because card on file transactions make the checkout process much simpler, persistent tokens do not pose a risk for consumers in terms of sensitive personal data loss, and because we have reason to think that Juniper Research's estimated share of card on file transactions is understated, we nevertheless conduct a sensitivity which reduces this benefit by a further 50%. This shows that even under this scenario, end-user benefits remain significant at £[✂]

118. **Alternative fraud rate assumptions for tokenized transactions.** We explained in Section 4.1 that [✂]. For this reason, we focussed our computation of the benefits of tokenization in terms of reduced fraud on CNP transactions. To ensure that this is not driving our results, we present a sensitivity in which we conservatively assume that tokenization *increases* fraud on CP transactions. This shows that our key findings are not materially impacted by these assumptions, showing a [✂].

119. The table below presents the overall end-user benefits (across both consumers and merchants) and social benefit to cost ratio under each of these sensitivities. The quantitative size of the adjustments differs across sensitivity, but none of these adjustments alter the key finding that these innovations generate very large end-user benefits and significant social spillovers.

Table 16: Sensitivity results (millions)

<table>
<tr><th rowspan="2">Sensitivity</th><th colspan="2">Total benefit to end-users (consumers and merchants)</th><th colspan="2">Social benefit to cost ratio</th></tr>
<tr><th>Baseline results</th><th>Sensitivity results</th><th>Baseline results</th><th>Sensitivity results</th></tr>
<tr><td colspan="5">Contactless</td></tr>
<tr><td>Alternative forecasting approach</td><td rowspan="2">[✂]</td><td>[✂]</td><td rowspan="2">[✂]</td><td>[✂]</td></tr>
<tr><td>Partial attribution approach</td><td>[✂]</td><td>[✂]</td></tr>
<tr><td colspan="5">Tokenization</td></tr>
<tr><td>Alternative forecasting approach</td><td rowspan="4">[✂]</td><td>[✂]</td><td rowspan="4">[✂]</td><td>[✂]</td></tr>
<tr><td>Assuming a lower benefit from cart abandonment</td><td>[✂]</td><td>[✂]</td></tr>
<tr><td>Partial attribution approach</td><td>[✂]</td><td>[✂]</td></tr>
<tr><td>Alternative fraud calculations</td><td>[✂]</td><td>[✂]</td></tr>
</table>

Source: [✂] analysis of Visa transactions data and public data.

9. CONCLUSIONS

120. The payments sector is characterised by significant ongoing innovation and product improvements. This report focuses on two features of these developments – contactless and tokenization technology – to assess the social value that innovation in payments can bring.

121. Overall, our analysis shows that innovation in payments technology creates substantial benefits for UK merchants and consumers, and that the private return to Visa from these innovations is significantly smaller than the social return created. This has two main implications.

122. First, that reductions in payment innovation could be highly costly from a social perspective.

123. Second, the fact that returns from innovation primarily benefit third parties and not organisation undertaking innovation, such as Visa, indicates the existence of substantial social spillovers. The existence of such spillovers means that there would be a heightened risk of unintended consequences resulting from regulatory interventions having the effect of dampening innovation incentives.

PUB REF: MR22/1.9 submissions

12 Endeavour Square
London E20 1JN
Telephone: 0300 456 3677
Website: www.psr.org.uk