

Annex 4 to final report

# Market review of card scheme and processing fees

Optional services

March 2025

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Note: The places in this document where confidential material has been redacted are marked with a [S].

# Annex 4

## Optional services

- 4.1** Mastercard and Visa offer a wide variety of services to their acquirer and merchant clients. This annex considers the optional services supplied by Mastercard and Visa, and whether the schemes face effective competitive constraints in the supply of these services to acquirers.
- 4.2** Before turning to this analysis, it is necessary to define optional services. The schemes each offered their own definition of optional services, which we set out below:
- **Mastercard** submitted that many of the services it offers are optional and acquirers and merchants can decide to accept or refuse them separately from Mastercard services in general. Acquirers and merchants have the choice to opt-out of a product/service where they do not perceive value, either because they have no need for that service or they have a preferred alternative solution.<sup>1</sup>
  - **Visa** submitted that its clients have different customer propositions and levels of capability, meaning they make different choices about how to interact with the Visa payments network and which services to use. Visa therefore offers a range of optional services that complement its service offering.<sup>2</sup>
- 4.3** Based on our work on this market review, we have broadly categorised Mastercard and Visa's services in three categories:
- **Core scheme services** are services which acquirers are obliged to purchase in order to participate in the card scheme.
  - **Core processing services** are services which acquirers have to purchase if they want to use Mastercard or Visa for processing their card transactions. These core activities include authorisation, clearing, and settlement.<sup>3</sup>
  - **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 purchase as a condition of participation in the card schemes.
- 4.4** We have not considered behavioural fees as part of our analysis in this annex. This is because, while behavioural fees may be considered optional in the sense that they can be avoided, they are designed to incentivise specific behaviours rather than be a complementary offering to the scheme's core services.

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1 Mastercard submission, May 2022. [3-].

2 Visa response to PSR questions of 9 January 2022. [3-].

3 Mastercard submitted that the fact that an issuer or acquirer has decided to issue or accept Mastercard cards does not require that issuer or acquirer to procure processing services from Mastercard. The customer remains free to agree whatever processing arrangement it sees fit, be that with Mastercard, or with competing providers of processing services. Mastercard does not consider core processing services as mandatory but, rather, as optional services (Mastercard submission, May 2022 [3-]). However, for the purposes of this analysis, we have assessed core processing services separately from optional services. Competitive constraints in the supply of core processing services are analysed in Annex 3.

**4.5** This annex is structured as follows:

- First, we set out our analytical framework.
- Second, we summarise the evidence we have collected from stakeholders.
- Next, we set out the optional services supplied by Mastercard and Visa which we have analysed in this annex as well as the criteria we have used to prioritise some optional services over others.
- Finally, in our analysis section, we analyse the evidence for each of the Mastercard and Visa optional services we have chosen to prioritise.

## Analytical framework

**4.6** The competitive constraints that Mastercard and Visa face for optional services may not necessarily be the same as those they face for core services. It may also be the case that competitive constraints differ between each optional service depending on the alternatives available to acquirers and merchants.

**4.7** We have considered whether Mastercard and Visa are subject to effective competitive constraints in the supply of the optional services they provide to acquirers and merchants. We are seeking to understand the extent of competitive constraints from two perspectives: (i) the choices available to acquirers and merchants as alternatives to purchasing the optional services offered by Mastercard and Visa; and (ii) whether there is widespread countervailing buyer power among acquirers when it comes to negotiating the fees they pay for these optional services.

**4.8** When considering the choices available to acquirers and merchants, we have taken account of whether the choice to use the service or not is made by the acquirer or the merchant. We want to understand the choices that acquirers and merchants have available to them from two perspectives.<sup>4</sup> First, we have considered whether there are functional substitutes or alternatives to the optional services supplied by Mastercard and Visa. These alternatives may come in three forms:

- 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, or similarly meets the same needs, as the optional service provided by Mastercard and Visa.
- An acquirer or merchant could self-supply its own service which achieves the same outcome or meets its needs in a similar manner as the optional service provided by Mastercard and Visa.

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<sup>4</sup> We are also aware that, even in the case of optional services for which the choice is made by the acquirers, in the broader context, merchants may be able to choose a different payment method in response to higher fees charged by Mastercard and/or Visa and passed through to them by their acquirer. However, for the purposes of this annex, we are focusing on the choices available to acquirers (and to merchants only if they can decide whether or not to use a specific optional service). The competition that Mastercard and Visa face from alternative payment methods is covered in Annex 1.

- 4.9** Second, we also want to consider to what extent acquirers and merchants have a choice about whether to purchase the optional services at all. In making this assessment, we consider that some, or even most, acquirers or merchants not purchasing a given service is not in itself evidence of effective competitive constraints. It may be the case that some of these optional services are important only for merchants in specific sectors due to the business models they operate.
- 4.10** If the evidence suggests there are no (or very few) alternatives to the optional services supplied by Mastercard and Visa, this is likely to indicate that the firms face ineffective competitive constraints in the supply of these services. In this case, Mastercard and Visa may have the ability and incentive to charge higher prices or offer lower quality services to acquirers and merchants than would be the case under effective competition.
- 4.11** We are aware that for some optional services, the decision about whether to use the service is made by the acquirer, while for others the decision is made by merchants. Where the decision is made by merchants, it is possible that there are alternatives to the optional service available to acquirers or merchants; competitive constraint on the schemes can be provided in both cases.
- 4.12** However, even in the absence of alternative suppliers, it may be the case that the schemes do face effective competitive constraints if acquirers or merchants have countervailing buyer power when negotiating with Mastercard and Visa. Some acquirers or merchants may be able to negotiate discounts or rebates, or delay proposed increases in fees for some optional services. If there is evidence that many of the acquirers or merchants are able to do this, the lower prices negotiated by acquirers/merchants may mitigate any potential harm in the market.

## Evidence collected

- 4.13** To develop our analysis, we collected and analysed evidence from several sources. Specifically, we issued two Section 81 Notices to Mastercard and Visa and two Section 81 Notices to acquirers. The first Section 81 Notice to acquirers was sent in January 2023 and considered competition across all of Mastercard and Visa's services.<sup>5</sup> This Section 81 Notice sought to understand: (i) more about acquirers' relationships with Mastercard and Visa; (ii) what alternatives to Mastercard and Visa are available to acquirers in the UK; and (iii) what impact the changes to scheme and processing fees implemented by Mastercard and Visa since 2017 have had on acquirers in the UK.
- 4.14** The second Section 81 Notice was sent in November 2023 and asked more specific questions about the optional services discussed in this annex.<sup>6</sup> This Section 81 Notice sought to understand optional services, including:
- which optional services acquirers purchase from the card schemes and whether these services are used within acquirers' businesses or made available to merchant customers
  - whether or not acquirers and the card schemes both view particular services as optional

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<sup>5</sup> We received responses from the following acquirers to our first Section 81 Notice: [redacted].

<sup>6</sup> We received responses from the following acquirers to our second Section 81 Notice: [redacted].

- how particular optional services are used within acquirers' businesses and the need that these services fulfil for the acquirer or merchants (including whether or not they are using the optional service)
- the extent to which alternative provision of these particular optional services exists that could address the same business needs for the acquirer or merchants, and whether acquirers purchase optional services from the alternative providers

**4.15** In the interim report, we noted two limitations to our evidence base:

- a. We had not collected evidence from merchants, despite them making the ultimate decision about whether to use many of the optional services or not.
- b. We did not ask acquirers (or merchants) about the specific alternatives to the optional services proposed by the schemes in their submissions.

**4.16** Following the publication of our interim report, we have collected the following evidence to address these limitations:

- We have held phone calls with ten acquirers and received written responses from two additional acquirers on optional services.<sup>7</sup>
- We sent a request for information (RFI) on the topic of optional services to 70 merchants (the merchant RFI) and received ten responses.<sup>8,9</sup> The RFIs only focused on those optional services where the decision about whether to use the service is made by the merchant.<sup>10</sup> We also held a phone call with one of the merchants.<sup>11</sup> The alternatives to these optional services we asked about were based on information provided by the schemes in response to s81 notices.

**4.17** In the 'Analysis of the evidence' section below, we have analysed each of the services and set out the evidence collected for each service. When referring to the evidence from the second Section 81 Notice sent to acquirers, we have referred to the purpose of the question when summarising responses. The questions we asked in the second Section 81 Notice to acquirers, as well as the purpose behind the questions, is set out below in Table 1.

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7 Phone calls were held with [redacted]. Further written responses were received from [redacted].

8 We received responses from: [redacted].

9 We also sent a Section 81 Notice to [redacted] acquirers in order to obtain contact details for merchants. These acquirers were: [redacted]. The Section 81 Notice asked each acquirer to provide contact details for its five largest UK merchant customers, by total value of transactions in the 2023/24 financial year, for each of the following five sectors/industries: groceries/supermarkets, e-commerce retailers, car/vehicle hire operators, hotels/accommodation providers, and fuel/petrol station operators.

10 These services were:

1. **Mastercard's** Account Status Inquiry, Acquirer Authentication Exemption Indicator, Address Verification Service and CVC2, Identity Check, and Pre-Authorisation.
2. **Visa's** Account Verification, Acquirer 3DS Authentication, Address Verification Service, and VTS Acquirer Authentication.

We only asked merchants about the five Mastercard optional services that [redacted]. This was to keep the information request to merchants manageable. This led to the exclusion of the Automatic Billing Updater service from the merchant RFI.

11 [redacted].

**Table 1: Questions in the second Section 81 Notice to acquirers and purpose of the questions**

| <b>Purpose of the question</b>                             | <b>Question in Section 81 Notice</b>   |
|--|--|
| <b>Alternatives available to acquirers</b>                 | In the UK, are there any alternative services which could address the same business need? If so, indicate: (a) the names of these 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.   |
| <b>Alternatives available to merchants</b>                 | 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.  |
| <b>Implications for acquirers of not using the service</b> | What would be the implications for your activity as an acquirer if you did not use the optional service?   |
| <b>Implications for merchants of not using the service</b> | 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.   |
| <b>Countervailing buyer power</b>                          | In the last five years, for each of the optional services listed, please explain whether you have been able to: (a) negotiate reductions to the fees charged for these optional services; (b) obtain payments or funding from Mastercard or Visa which offset (partially or wholly) the magnitude of the fees charged for these optional services; (c) reject or delay any proposed increases in fees charged for these optional services. |

## Limitations of evidence

- 4.18** As mentioned above, one of the limitations of our analysis in the interim report was that we had not collected evidence from merchants, who ultimately make the choice about whether to use many of the optional services we are considering.<sup>12</sup> To address this limitation, after publication of the interim report we sent an RFI to 70 merchants, to which we received ten responses.
- 4.19** While we are cognisant that acquirers may not be fully aware of the choices available to merchants, acquirers have told us that the choice of which optional services to provide to merchants is largely driven by demand from merchants (this is discussed in more detail below in paragraphs 4.37 to 4.40). We acknowledge that the evidence we have gathered from merchants may not be a representative first-hand account of the choices available to all merchants. We have therefore approached the evidence gathered from acquirers and merchants holistically. Taken together with responses to our interim report, and evidence gathered from the schemes, it provides us with an overall understanding of the issues relevant to the supply of the most important optional services<sup>13</sup>, and a broader understanding of the issues relevant to the supply of optional services more generally.
- 4.20** Our understanding of optional services has evolved in the course of the review:
- When commencing our analysis of optional services, we did not know which services were used by acquirers and which were used by merchants. Therefore, we could not be sure which stakeholder to gather evidence from.
  - Similarly, we did not know which types of merchants were the primary users of each service or whether the schemes targeted each service at specific types of merchants. If we had contacted merchants at that stage, there was a risk that we could have contacted the wrong type of merchant and misinterpreted their responses.
- 4.21** We therefore adopted what we considered a more proportional approach, asking acquirers about the alternatives available to merchants for those optional services that merchants can decide whether or not to use. We considered that, as acquirers make those optional services available to merchants, they are likely to have a good understanding. The evidence we received following the interim report supported our view that acquirers have a good understanding of merchant demand for optional services. Furthermore, we were able to clarify with acquirers which optional services were chosen by acquirers and which were chosen by merchants.

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12 In their responses to the interim report consultation, both schemes argued that this was a limitation of our interim report, as well as noting that we did not ask acquirers about the specific alternatives and competitive constraints suggested by the schemes. See Mastercard response to MR22/1.9 (21 May 2024), page 29, and Visa response to MR22/1.9 (21 May 2024), paragraph 4.11.

13 Based on the data we have received from Mastercard and Visa, and our own calculations, we estimate that the optional services analysed in this report accounted for approximately [3-] % of Mastercard's UK optional fee revenue in the 2021 financial year, and approximately [3-] % of Visa's UK optional fee revenue in the 2022 financial year.



## Optional services offered by the schemes

### Optional services offered by Mastercard

**4.22** In order to create a list of the main optional services that Mastercard offers to acquirers, we started from data previously provided by Mastercard on the annual revenue it receives from individual acquirers broken down by processing or scheme fee category.<sup>14</sup> Mastercard had indicated whether each fee category was mandatory or optional. The data provided by Mastercard included information on 41 optional services. We chose to prioritise a narrower set of optional services. Among the fee categories that Mastercard indicated as optional, we excluded from our analysis of optional services any fee category where:

- Mastercard generated [£] in revenue in the year 2021. This does not preclude that Mastercard may not face effective competitive constraint on the supply of these services. However, we have excluded these services for the purpose of prioritisation.<sup>15</sup>
- We or Mastercard considered the fee as behavioural. For example, 'Non-Compliance Fees', which Mastercard classifies as being optional (Mastercard generated [£] from 'Non-Compliance Fees' in 2021). However, we consider this to be a set of behavioural fees, as they are designed to encourage specific behaviours.<sup>16</sup> We have chosen to exclude behavioural fees because they are designed to elicit certain behaviour among acquirers or merchants rather than be a complementary offering to the scheme's core services.
- We did not consider the associated service to be a payments-related service offered to acquirers, complementing the scheme's core services. Specifically, we consider the following services should be excluded for this reason:
  - Mastercard generated [£] in revenue in 2021 from 'Implementation' services, which is a consultancy and marketing service offered by Mastercard rather than a service specifically related to payments or supporting acquirers' payment operations.<sup>17</sup>
  - The Mastercard Wholesale Program generated [£] in revenue in 2021. This is a virtual commercial card program that is available to intermediaries in the travel sector. We believe this service operates as a cardholder/issuer service rather than an acquirer service.
- We already have evidence that Mastercard faces competition for the service and very few acquirers purchase the service. Brighterion is an Artificial Intelligence (AI) solution developed by Mastercard and internal documents provided by Mastercard shows it

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14 Mastercard response to PSR questions dated 14 and 16 February 2023. [£]. We asked Mastercard to include only the largest acquirers that provided services to UK merchants and together account for 95% of total value across all Mastercard transactions in 2021. Mastercard provided the PSR with [£].

15 We have excluded the following fees and services from our analysis because Mastercard generated [£] from these in 2021: [£].

16 We have excluded the following services and fees from our analysis because we consider them to be behavioural fees: Acquirer Processing Integrity, Non-Compliance Fees, and Transaction Processing Excellence.

17 The following provides more information on Implementation Services: [Implementation Services | Mastercard Data & Services](#)

faces competition from several providers for this service.<sup>18</sup> Further, the data provided by Mastercard shows [redacted]. Therefore, we have excluded this service for the purpose of prioritisation. Mastercard generated [redacted] from the Brighterion service in 2021.

**4.23** For the remaining optional services, we asked Mastercard to provide a description of these services, including an explanation of (i) the customer needs that the services respond to; and (ii) the types of transactions (where applicable) for which the service is typically used or the fee is charged.<sup>19</sup>

**4.24** The list of optional services, as well as a description of these services which Mastercard provided, is presented below in Table 2.

**Table 2: Optional services provided by Mastercard**

|  |  |
|--|--|
| <b>Account Status Inquiry</b>                      | <ul style="list-style-type: none"> <li>Account Status Inquiry (ASI) is a service for merchants to validate the status of a card. The service works via a non-financial message and checks if the card is operational and if the card information is consistent (i.e. that the name, expiry date and CVC match the card number).</li> <li>The ASI service is used primarily to check accounts in advance of future Card-Not-Present (CNP) transactions. Merchants that use card-on-file (CoF) payments or offer subscriptions are typical users of this service.</li> <li>Although less common, the service can also be used for card-present transactions. For example, ASI is used in some transport systems in Europe to validate card payments and some airport lounges use ASI to validate card credentials before entry.</li> <li>This is an opt-in service for acquirers. When ASI is offered from acquirers to merchants, its use is ultimately decided by the merchant.</li> </ul> |
| <b>Acquirer Authentication Exemption Indicator</b> | <ul style="list-style-type: none"> <li>Acquirer Authentication Exemption Indicator is a service that allows acquirers to request a Strong Customer Authentication (SCA) exemption by informing the issuer through use of an 'Acquirer Exemption Indicator' in authorisation or authentication flow. The Acquirer Authentication Exemption Indicator was introduced in line with the exemptions set out in the Payment Services Directive 2 (PSD2) Regulatory Technical Standards. The exemptions include, but are not limited to: (i) low value payment transactions; (ii) merchant-initiated transactions; (iii) acquirer low-fraud and transaction risk; (iv) recurring payments; and (v) SCA delegation.</li> <li>The service is generally used for CNP transactions that meet any of the previous criteria and where the merchant decides to bypass SCA. The choice of whether to use the service is ultimately made by merchants.</li> </ul>  |

<sup>18</sup> A document produced for Mastercard by a third-party consultancy shows that Brighterion faces competition from several AI providers across Brighterion's use cases, including AML, omnichannel fraud, credit risk management, early delinquency, and acquirer fraud (see [redacted]). Further, an internal document [redacted].

<sup>19</sup> Mastercard response to PSR questions dated 2 October 2023. [redacted].

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**Address  
Verification  
Service and  
CVC2**

- Address Verification Service (AVS) allows CNP merchants to verify a cardholder's billing address within the authorisation process. The merchant requests an AVS, which is sent to Mastercard through the acquirer. Mastercard sends it to the issuer in an address key format so the issuer can verify.
- CVC2 is a three-digit code algorithmically derived by the issuer and printed on the signature panel of cards. During checkout, the merchant may ask the cardholder for the CVC2 number and send it to the acquirer. The acquirer then sends it to the issuer (through Mastercard), which validates that the CVC2 entered matches the CVC2 number on the back of the card. All issuers are required to respond to CVC2 requests.
- This is an opt-in service for acquirers. When it is offered from acquirers to merchants, the choice of whether to use the service is made by merchants.

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**Automatic  
Billing  
Updater**

- Automatic Billing Updater (ABU) is a global platform that updates cardholder account data to reduce the number of CNP transactions being declined due to expiration date and account number changes. It automatically maintains the accuracy of customer card data, prevents disruptions to CoF payments and extends the life of recurring payment arrangements.
- Merchants are most likely to use this service when they offer recurring payments on cards.
- The choice of whether to use the service is made by merchants.

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**Dynamic  
Currency  
Matching**

- Dynamic Currency Matching allows merchants to segregate settlement activity by transaction currency (e.g., settle all euro transactions in euros, all US dollar transactions in US dollars, etc.).
  - Customers may wish to settle transactions in various currencies for a number of reasons that may include hedging of foreign exchange (FX) risk and operational simplicity. The use of this service is predominantly cross-border transactions.
  - The choice of whether to use this service is ultimately made by acquirers.
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**Identity Solutions**

- Identity Solutions includes a number of services for issuers, acquirers and merchants, enabling them to progress through the authentication process.
- Identity Solutions includes: (i) Identity Check, (ii) Smart Authentication Direct, (iii) Smart Authentication Stand-In, (iv) Ekata, and (v) Biometric Card. The Identity Check service, previously known as SecureCode, is Mastercard's EMV 3DS authentication framework. These services are used for CNP transactions.
- Acquirers have the choice of whether or not to use the various Identity Solutions services. Similarly, the choice of whether to use Identity Check is ultimately made by merchants.

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**Mastercom**

- Mastercom is the Mastercard system for administering chargebacks and dispute resolution. It allows transactions that were not in fact initiated by the cardholder, or for which the service or product was not satisfactorily delivered, to be reversed (a 'chargeback'). Mastercom also protects the merchant against invalid chargebacks.
- Mastercom defines a set of rules in the event that an issue arises.
- Mastercom fees are incurred on chargeback transactions, which may result from transactions of any kind.
- The choice of whether to use the service is ultimately made by acquirers.

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**Multi-Currency Settlement**

- Multi-Currency Settlement applies if the transaction currency does not match the acquirer's settlement currency and is not available as one of Mastercard's 30 regional settlement currencies.
  - Customers can set their settlement currency for cross-border transactions based on criteria (for example, Bank Identification Number (BIN), Account Range, Interbank Card Association Number (ICA), etc.)
  - Merchants can decide in which currency they want to settle transactions.
  - The choice of whether to use the service is ultimately made by merchants.
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### Pre-Authorisation

- A Pre-Authorisation is an authorisation for a transaction to be completed at a later time. They are used by merchants that do not know, at the time of the Pre-Authorisation, what the final amount of the transaction will be or if the transaction will indeed be completed (for example, it may later turn out that the product that has been ordered is not in stock).
- The service follows a similar logic as the ASI described above, but also authorises the transaction and holds the funds that will be necessary to complete the transaction. The service provides payment guarantee, while maintaining flexibility over the final billing amount.
- Pre-Authorisations are commonly used by merchants (both Card Present and CNP) when the transaction amount is not clear at the point of presenting the payment method and when the merchant needs an upfront payment guarantee. Typical users of this service include hotels, travel agencies, car rental providers, airlines and petrol stations.
- This is an opt-in service for acquirers and, when it is offered from acquirers to merchants, its use is ultimately decided by the merchant.

### Reports

- Mastercard's reports are delivered through a web-based portal and are bespoke to each acquirer, based in most cases on their own transaction, event and billing data. The reports contain a wide range of information, for example:
  - aggregate key performance indicators (KPIs), such as a summary of authorisation parameters, which can help an acquirer understand why transactions are declined
  - granular information (e.g., split by merchant), for instance information on which merchants used the ABU product
  - bespoke recommendation reports for acquirers
- The choice of whether to use the service is ultimately made by acquirers.

**4.25** Table 3 below lists the number of acquirers who used each of the optional services in 2021 as well as the revenue that Mastercard generated from each of these services in 2021.<sup>20</sup>

**4.26** Overall, [redacted]. We note that, when the choice of whether to use a service is ultimately made by merchants, we would expect most, if not all, acquirers to make the service available to their merchants.

**4.27** Mastercard generates a wide range of revenues from its optional services with the [redacted] generating the lowest (known) revenue [redacted] and [redacted] generating the highest revenue [redacted].

20 Mastercard response to PSR questions dated 14 February and 16 February 2023. [redacted].

**Table 3: Mastercard optional services usage and revenue**

| Service name  | Number of the largest [redacted] acquirers which use the service | Revenue generated in 2021 |
|---|--|---------------------------|
| Account Status Inquiry <sup>21</sup>                      | [redacted]   | [redacted]                |
| Acquirer Authentication Exemption Indicator <sup>22</sup> | [redacted]   | [redacted]                |
| Address Verification Service and CVC2                     | [redacted]   | [redacted]                |
| Automatic Billing Updater                                 | [redacted]   | [redacted]                |
| Dynamic Currency Matching <sup>23</sup>                   | [redacted]   | [redacted]                |
| Identity Solutions <sup>24</sup>                          | [redacted]   | [redacted]                |
| Mastercom   | [redacted]   | [redacted]                |
| Multi-Currency Settlement <sup>25</sup>                   | [redacted]   | [redacted]                |
| Pre-Authorisation   | [redacted]   | [redacted]                |
| Reports   | [redacted]   | [redacted]                |

**4.28** In addition, Mastercard submitted data which shows that different acquirers use Mastercard's various optional services to varying degrees. For example, [redacted]. Mastercard submitted that this data demonstrates the competitive constraints that Mastercard faces in providing its optional services, as customers can supply services in-house, obtain services from competing vendors, or simply not take any of the services.<sup>26</sup>

**4.29** We accept that the data demonstrates that different acquirers use the various optional services to varying degrees. However, these differences in optional service usage do not necessarily imply that Mastercard faces competitive constraints for these services. These differences may be a reflection of the acquirers' different customer bases. For example, some acquirers may have more merchants that operate subscription business models, which may lead to them having greater demand for the ASI service.

21 [redacted] of the revenue generated by Account Status Inquiry is attributable to [redacted].

22 The revenue that Mastercard generates from this service comes under the heading 'Other Revenue'. Mastercard generated [redacted]; however, we do not know how much of this can be attributed to the [redacted].

23 Note: this service does not specifically appear in the revenue data we have received from Mastercard. Therefore, we have taken the figures for 'Currency Services', which we believe Dynamic Currency Matching is a part of.

24 [redacted]. However, [redacted] have told us that [redacted]. Therefore, we have some concerns about the accuracy of Mastercard's revenue data.

25 Note: this service does not specifically appear in the revenue data we have received from Mastercard. Therefore, we have taken the figures for 'Currency Services', which we believe the Multi-Currency Settlement is a part of.

26 Mastercard response to PSR questions dated 14 and 16 February 2023. [redacted].

## Optional services offered by Visa

- 4.30** Unlike for Mastercard, in the case of Visa we could not use previously submitted revenue data to obtain a list of optional services, as the data was not sufficiently granular for this purpose. We therefore asked Visa to provide a list of the optional services it sells to acquirers in the UK, as well as other information, including on the optional fees it charges. We subsequently asked Visa to provide a description for a selection of these services.<sup>27</sup> In our request, we defined 'optional services' to mean those services that an acquirer, issuer, or merchant do not have to buy as a condition of participation in the card payment system.
- 4.31** The list of optional services provided by Visa was more granular in detail compared with Mastercard. In particular, Visa provided revenue data for individual reports whereas Mastercard provided revenue data for reports as a whole. We have chosen to analyse all of Visa's reports services, even for those reports where revenue is [redacted], in order to make a comparison with Mastercard's Reports service. The only service we have excluded from our analysis for the purpose of prioritisation was Edit Package, which is a software service which [redacted].
- 4.32** The list of optional services, as well as a description of these services which Visa provided, is included below in Table 4.

**Table 4: Optional services provided by Visa**

|                                     |   |
|-------------------------------------|---|
| <b>Account Verification</b>         | <ul style="list-style-type: none"><li>Account Verification (AV) is a service that uses a zero-value authorisation to determine that an account is valid and in good standing before a transaction takes place.</li><li>The choice of whether to use the service is ultimately made by merchants.</li></ul>  |
| <b>Acquirer 3DS Authentication</b>  | <ul style="list-style-type: none"><li>3DS is a technology used by merchants and issuers to authenticate the identity of the cardholder with the issuer for CNP transactions.</li><li>The Acquirer 3DS Authentication Request Fee is levied on transactions where an acquirer's merchant requests 3DS authentication to the Visa Directory Server.</li><li>The choice of whether to use the service is ultimately made by merchants.</li></ul> |
| <b>Address Verification Service</b> | <ul style="list-style-type: none"><li>Address Verification Service (AVS) is an authentication service that uses the authorisation process to verify that the billing address entered by the initiator of a transaction matches the address held by the card issuer.</li><li>The choice of whether to use the service is ultimately made by merchants.</li></ul>   |

<sup>27</sup> Visa response to PSR questions dated 27 September 2023. [redacted].

|  |  |
|--|--|
| <b>TC33 Clearing and Settlement (CAS) Advice</b> | <ul style="list-style-type: none"> <li>CAS Advice is a service that provides acquirers with transaction-level settlement details (including interchange) to support reconciliation, research, and billing. The reports are relevant to acquirers who use BASE II settlement (also known as Dual Message System or 'DMS' settlement).<sup>28</sup></li> <li>The choice of whether to use the service is ultimately made by acquirers.</li> </ul>                    |
| <b>SMS Raw Data and SMS Reports</b>              | <ul style="list-style-type: none"> <li>SMS Raw Data and SMS Reports are services that provide acquirers with transaction-level settlement details (including interchange) to support reconciliation, research and billing. The reports are relevant to acquirers who use Single Message System (SMS) settlement.</li> <li>The choice of whether to use the service is ultimately made by acquirers.</li> </ul>   |
| <b>TC33 POS Advice</b>                           | <ul style="list-style-type: none"> <li>TC33 POS Advice is a service that allows acquirers to receive authorisation and authorisation reversal details in a BASE II TC33 format on a subscription basis.</li> <li>The choice of whether to use the service is ultimately made by acquirers.</li> </ul>  |
| <b>Visa Settlement Service Reports (VSS)</b>     | <ul style="list-style-type: none"> <li>VSS is a reporting service that provides clients with consolidated information on their net settlement positions.</li> <li>Default reports are provided free of charge. Fees are levied for certain types of additional reports.</li> <li>The choice of whether to use the service is ultimately made by acquirers.</li> </ul>  |
| <b>VTS Acquirer Authentication</b>               | <ul style="list-style-type: none"> <li>Visa Token Service (VTS) is a technology that allows ecosystem participants to secure payments by replacing sensitive account details with a unique digital identifier known as a token.</li> <li>The VTS Acquirer Authentication fee is levied on transactions where VTS is used to facilitate and/or verify authentication.</li> <li>The choice of whether to use the service is ultimately made by merchants.</li> </ul> |

**4.33** We also asked Visa to indicate, for each optional service, the revenue it generated in the 2022 financial year from the largest acquirers that provide services to UK merchants which together account for a high proportion ([3-]) of total value across all Visa transactions.<sup>29</sup> Table 5 below lists the number of acquirers who used each of the listed optional services in 2022 as well as the revenue generated from each of these services in the 2022 financial year.

28 Dual message transactions have two stages: authorisation and settlement. Single message transactions combine authorisation and settlement into a single stage.

29 Visa response to PSR questions dated 27 September 2023. [3-].



**4.34** Overall, [2] acquirers account for a high proportion ([2]) of the value across all of Visa's transactions. For [2] of the optional services, at least [2] out of [2] acquirers purchased the service, while for [2] of the optional services [2] of the acquirers purchased the service ([2]). We note that, when the choice of whether to use a service is ultimately made by merchants, we would expect most, if not all, acquirers to make the service available to their merchants.

**Table 5: Visa optional services usage and revenue**

| Service name                                   | Number of the largest [2] acquirers which use the service | Revenue generated in FY2022 |
|--|---|-----------------------------|
| Account Verification                           | [2]   | [2]                         |
| Acquirer 3DS Authentication                    | [2]   | [2]                         |
| Address Verification Service                   | [2]   | [2]                         |
| Reports, consisting of:                        | [2]   | [2]                         |
| • SMS Raw Data and SMS Reports                 | [2]   | [2]                         |
| • TC33 Advice                                  | [2]   | [2]                         |
| • TC33 Clearing and Settlement (CAS) Advice    | [2]   | [2]                         |
| • Visa Europe Settlement Service (VSS) Reports | [2]   | [2]                         |
| • VTS Acquirer Authentication                  | [2]   | [2]                         |

Source: PSR analysis based on Visa response to PSR questions dated 27 September 2023. [2]

## Analysis of the evidence

### Introduction

**4.35** This section analyses the evidence we have received from both acquirers and merchants:

- The first sub-section considers evidence which cuts across the schemes' optional services. In particular, it considers:
  - how acquirers decide which optional services to use within their businesses and which supplier to use
  - which services acquirers believe there are no or limited alternatives to
  - where acquirers believe there are alternatives to the optional services
- The following 15 sub-sections go into more detail on each of the specific optional services offered by the schemes, and the evidence we have regarding them.

**4.36** Table 6 provides a summary of our findings following the analysis of the evidence we have collected.

**Table 6: Summary of findings**

| Section  | Overview   |
|--|--|
| <b>Cross-cutting evidence</b>  | <ul style="list-style-type: none"> <li>Nearly all acquirers told us that the decision about which optional services to use within their business is based on merchant demand. Some acquirers also noted that some optional services are necessary to avoid behavioural fees.</li> <li>When deciding which supplier to use for optional services (i.e. whether the schemes, a third-party, or self-supply), some acquirers said this decision depends on the costs and benefits of each option. Some acquirers acknowledged there may be alternatives to the optional services provided by the schemes, but there are challenges in terms of complexity associated with using them. Acquirers also suggested that self-supply may be possible in some instances, particularly for fraud and reporting services.</li> <li>Merchants were also asked about how they decide which optional services to use within their business. Merchants provided a wide range of factors, including business needs, risk/fraud mitigation, avoidance of behavioural fees, and technical practicality.</li> <li>We also asked merchants how they decide which supplier to use for an optional service. While some use a formal procurement process, for most the decision is not based on whether the service is provided by Mastercard or Visa. Nevertheless, some did say that they often have no choice but to use Mastercard or Visa, or whatever their acquirer offers.</li> </ul> |
| <b>Mastercard Account Status Inquiry and Visa Account Verification</b> | <ul style="list-style-type: none"> <li>The decision about whether to use these services is ultimately made by merchants. Some merchants told us they do not use these services because they use zero-value transactions instead, although it is unclear whether zero-value transactions are a different service to ASI and AV. In any case, we do not consider Mastercard or Visa services to be competitive constraints on their own services. Merchants also told us that the potential alternatives proposed by the schemes are not viable alternatives to the optional services. Acquirers similarly told us that there are no alternatives to these optional services.</li> </ul>   |

| Section   | Overview   |
|---|--|
| <b>Mastercard Acquirer Authentication Exemption Indicator</b>             | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by merchants. Mastercard submitted that merchants have a choice about whether to make use of SCA exemptions under PSD2, but we do not consider this to be a competitive substitute to the service. Merchants told us that conducting SCA for every transaction could make the user journey more complex, leading to higher abandonments and authentication failures. Acquirers similarly told us that there are no alternatives to this service.</li> </ul>   |
| <b>Mastercard and Visa Address Verification Service</b>                   | <ul style="list-style-type: none"> <li>The decision about whether to use these services is ultimately made by merchants. Merchants told us that the potential alternatives proposed by the schemes are not effective substitutes for these services. Acquirers similarly told us that there are no alternatives to these services.</li> </ul>  |
| <b>Mastercard Automatic Billing Updater</b>                               | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by merchants, although we have not obtained evidence from merchants regarding the choices available to them. The majority of acquirers told us that there are no suitable alternatives to this service, although one acquirer indicated there may be alternatives available from other providers.</li> </ul>  |
| <b>Mastercard Dynamic Currency Matching</b>                               | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. The service is typically used in conjunction with the Multi-Currency Settlement service where they are collectively known as 'Currency Services'. Acquirers told us it is important to offer these Currency Services if they wish to compete for merchants that require settlement in multiple currencies, such as airlines. Some acquirers may choose not to compete for these customers, and therefore not to use this service.</li> <li>Acquirers did not mention alternatives to this service in their Section 81 responses. When probed further on the viability of FX markets as an alternative, acquirers stated that, while FX markets are a potential alternative, the practicalities of using them as an alternative make them unviable.</li> </ul> |
| <b>Mastercard Identity Solutions and Visa Acquirer 3DS Authentication</b> | <ul style="list-style-type: none"> <li>The decision about whether to use these services is ultimately made by merchants. While merchants indicated that SCA exemptions are a potential alternative to Identity Check, these exemptions also result in fees being charged, and not all merchants are able to make use of them for all transactions. Merchants indicated that potential alternatives to Visa's Acquirer 3DS Authentication are ineffective substitutes and unlikely to meet their needs. Acquirers similarly indicated that there are no alternatives to these services.</li> </ul>  |

| Section                                     | Overview  |
|---|---|
| <b>Mastercard Mastercom</b>                 | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. The majority of acquirers told us that there are no alternatives to this service. However, one of the acquirers responded that there are some third-party alternatives, including Visa's Verifi service. Mastercard internal documents [3].</li> </ul>   |
| <b>Mastercard Multi-Currency Settlement</b> | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. The service is typically used in conjunction with the Dynamic Currency Matching service where they are collectively known as 'Currency Services'. Acquirers told us it is important to offer these Currency Services if they wish to compete for merchants which require settlement in multiple currencies, such as airlines. Some acquirers may choose not to compete for these customers, and therefore not to use this service.</li> <li>Acquirers did not mention alternatives to this service in their Section 81 responses. When probed further on the viability of FX markets as an alternative, acquirers stated that, while FX markets are a potential alternative, the practicalities of using them as an alternative make them unviable.</li> </ul> |
| <b>Mastercard Pre-Authorisation</b>         | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by merchants. Some of the merchants told us that there are potential alternatives, but it is notable that some of these alternatives are only viable for certain types of merchant or business models, and that they rely on other Mastercard services. Acquirers told us that there are no viable alternatives to this service. Subsequent phone calls with acquirers suggested that any potential alternatives to Pre-Authorisation would require changes to the business models of merchants in sectors that are significant users of this service, such as hotels.</li> </ul>  |
| <b>Mastercard Reports</b>                   | <ul style="list-style-type: none"> <li>The choice of whether to use this service is ultimately made by acquirers. Two acquirers told us that they could use internal data as an alternative to these reports (although one stated that these would not have the equivalent level of data). None of the acquirers indicated that there are third parties that can provide reporting services.</li> </ul>   |
| <b>Visa SMS Raw Data and Reports</b>        | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. None of the acquirers that responded to our Section 81 Notice mentioned any alternatives to this service.</li> </ul>   |

| Section   | Overview   |
|---|--|
| <b>Visa TC33 Clearing and Settlement Advice</b> | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. Some acquirers have told us they are able to use their own internal data as an alternative, or use an 'interchange engine'. However, the majority of acquirers have indicated there are no viable substitutes to this service.</li> </ul>   |
| <b>Visa TC33 POS Advice</b>                     | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. The majority of acquirers that we spoke to told us that they do not purchase this service because they do not require it. However, among the acquirers that do purchase the service, none indicated that there are any alternatives.</li> </ul>   |
| <b>Visa Settlement Service Reports</b>          | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by acquirers. None of the acquirers that we spoke to proposed any viable alternatives to the service.</li> </ul>  |
| <b>VTS Acquirer Authentication</b>              | <ul style="list-style-type: none"> <li>The decision about whether to use this service is ultimately made by merchants. Only one of the merchants that responded to our information request told us it uses this service, and it indicated that the alternatives are likely to be weak substitutes. Six of the merchants that responded told us their needs are addressed through other means. Visa internal documents also indicate that [redacted]. The documents, however, also note that [redacted]. One of the acquirers that responded to our Section 81 Notice suggested that acquirer tokens are an alternative to VTS. The majority of acquirers that responded to our Section 81 Notice indicated that there are alternatives to this service.</li> </ul> |

## Cross-cutting evidence

### How acquirers decide which optional services to use within their business

- 4.37** We held phone calls with ten acquirers and received written responses from two further acquirers on the subject of optional services. We asked these acquirers how they decide which optional services to use within their businesses.
- 4.38** Nearly all (eight) of the acquirers we spoke to told us the decision is broadly based on merchant demand.<sup>30</sup> Four acquirers told us that they decide whether to use optional services based on merchant requirements and whether the service provides value.<sup>31</sup> Four other acquirers told us that the choice of whether to use an optional service is based on the need for them to remain competitive or because merchants expect certain services. One acquirer said the choice of optional services depends on how the services align with the company's business objectives and the specific needs of its customer base. Services which are less likely to be used by the target market or that do not add significant value are not prioritised.<sup>32</sup> Another acquirer said it chooses services which allow it to trade and be

30 [redacted].

31 [redacted].

32 [redacted].

competitive based on demand from merchants and the functionality they want.<sup>33</sup> One acquirer told us it identifies the merchants it wishes to target or wants to attract and then looks at what capabilities are required for merchants in the relevant sectors. Some optional services are quite sector-specific and the expectations to provide a seamless customer experience are high in these sectors.<sup>34</sup> One acquirer said the choice is based on merchant demand and some services are considered standard in the market, so not offering them would restrict its ability to work with large merchants.<sup>35</sup>

**4.39** Some acquirers also noted that some optional services are necessary to avoid behavioural fees. For example, one acquirer said some optional services (citing card verification value (CVV)) are not optional for some merchants based on scheme rules, and not using these services will result in non-compliance and in being subject to associated penalties.<sup>36</sup> Another acquirer said it receives Visa's TC33 reports in order to identify non-compliant transactions and pass the associated fees on to the relevant merchants.<sup>37</sup> One acquirer said it considers whether it will incur behavioural fees if it did not take an optional service.<sup>38</sup>

**4.40** Finally, one acquirer said that, as well as considering whether customers would utilise a particular service, it also considers how it would implement the service, and the associated cost.<sup>39</sup>

#### **How acquirers decide which supplier to use for optional services**

**4.41** We asked acquirers how they decide which supplier to use for optional services, whether that be the schemes, an alternative third-party supplier, or to self-supply by developing a service in-house.

**4.42** Some acquirers said that this decision depends on the costs and benefits of each option. For example, one acquirer told us that implementation of an optional service from an alternative supplier has a very significant impact on its business and any implementation would need to be carefully reviewed to ensure the benefits match the investment. It also said that self-supply will depend on the amount of resource and cost involved in upgrading its platform to perform the function. Where it seeks an alternative, it outsources in the main for efficiency purposes.<sup>40</sup> Another acquirer also said cost is a big factor in its decision and cited the example of platform maintenance, which is done by a third party.<sup>41</sup> Finally, one acquirer said it identifies which services are available in the market and evaluates which it can provide itself and which of these to focus on. As it needs to focus its internal work and resources, and where it wants immediate availability, going for the optional service from the schemes is at times preferable.<sup>42</sup>

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33 [redacted].

34 [redacted].

35 [redacted].

36 [redacted].

37 [redacted].

38 [redacted].

39 [redacted].

40 [redacted].

41 [redacted].

42 [redacted].

**4.43** Some acquirers acknowledged that alternatives to certain optional services offered by the schemes may exist, but there are challenges in terms of complexity associated with using these alternatives. One acquirer said it is extremely difficult to integrate with alternative providers. While it may be possible in some areas, in general it is very cumbersome and managing an additional provider adds an additional layer of complexity.<sup>43</sup> Another acquirer said there are alternative solutions available for authentication. However, while it is possible to source from alternative providers, this adds complexity to the service offering. This is because adding another party to provide services such as authentication can cause issues such as latency, accessibility and integration problems. The acquirer said it is not always to the customer's benefit to use third parties and to be competitive in the market it cannot risk any delay or issues.<sup>44</sup> The acquirer went on to say that, aside from Mastercard's 'reporting features' and Visa's 'added packages' services, all other optional services have a dependency or are part of the default card offering. If it did not provide these services, it would be less competitive.<sup>45</sup>

**4.44** We also asked acquirers whether it is possible to self-supply any optional services provided by the schemes. Some acquirers told us that it is possible to supply some fraud protection services:

- One acquirer said that, while it takes some input from the card schemes, fraud screening is mostly based on its own data. It told us that third parties can also provide this service, but they would still rely on the acquirer's internal transaction data and the acquirer would have less control over how the data is utilised.<sup>46</sup>
- Another acquirer said that there are several services which it opts not to take, with one example being fraud detection in the travel industry. The acquirer did an internal review and found that its own internal data would be sufficient to provide this service.<sup>47</sup>

**4.45** Aside from fraud services:

- One acquirer said that, while some scheme services could enhance its internal data, reporting services can be handled internally. All other services, however, have a dependency on the schemes (that is, they require some sort of connection to the Mastercard or Visa network) or are part of the schemes' default offering which, if not provided by the schemes, would make the acquirer less competitive.<sup>48</sup>
- Another acquirer said it is currently using a third-party provider for tokenisation, but it is working on its own in-house solution.<sup>49</sup>

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43 [redacted].

44 [redacted].

45 [redacted].

46 [redacted].

47 [redacted].

48 [redacted].

49 [redacted].

## How merchants decide which optional services to use within their business

**4.46** We sent an RFI to 70 merchants and received ten responses. In the RFI, we asked merchants to explain how they decide which optional services to use within their business. Nine of the ten respondents answered this question:<sup>50</sup>

- Five merchants told us the decision is based on business need or is made after they have reviewed the business case for it.<sup>51</sup>
- Four merchants told us the decision is partly based on risk mitigation or fraud mitigation.<sup>52</sup>
- Four merchants consider whether the service will be of benefit to their customers or will improve their customer journey.<sup>53</sup>
- Three of the merchants said they consider whether they need the service to comply with scheme rules and avoid penalties (that is, behavioural fees).<sup>54</sup>
- Three merchants also consider the technical practicality of implementing the new service (that is, ease of integration or impact on current technology set-up).<sup>55</sup>
- Finally, one merchant said it has a straightforward card payment operation and will discuss any new service with its acquirer regarding its requirements.<sup>56</sup>

**4.47** We also asked merchants how they decide which supplier to use for an optional service – that is, whether to use Mastercard, Visa or an alternative supplier, or self-supply. Nine of the ten respondents answered this question:<sup>57</sup>

- Three of the merchants told us they use a formal procurement process – an ITT (invitation to tender), RFI (request for information), or RFP (request for proposal). These merchants told us they consider factors such as cost and value, compliance with scheme rules, ease of integration, and availability of viable alternatives.<sup>58</sup>
- Even some of those merchants that do not use a formal procurement process said the decision is not based on whether the service is provided by Mastercard or Visa. For example, one merchant said providers are selected based on the services they offer, price, and due diligence.<sup>59</sup> Another merchant said it is based on cost, existing relationships, and the need to ensure it is right for their business.<sup>60</sup> [redacted].<sup>61</sup>

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50 [redacted].

51 [redacted].

52 [redacted].

53 [redacted].

54 [redacted].

55 [redacted].

56 [redacted].

57 [redacted].

58 [redacted].

59 [redacted].

60 [redacted].

61 [redacted].



- However, two of the merchants said they often have to use either Mastercard or Visa,<sup>62</sup> with one of the merchants saying the schemes have a monopoly on the products and have the advantage of them being built into an existing system.<sup>63</sup>
- Finally, two of the merchants told us the decision is determined by what their PSP (payment service provider) or acquirer supports.<sup>64</sup>

### Summary of evidence

- 4.48** In summary, the evidence we have received from acquirers generally indicates that the decision about which optional services to use within their business is broadly based on demand from merchants for those services. However, some acquirers also noted that some optional services are necessary to avoid behavioural fees. In terms of how acquirers decide which supplier to use for optional services, some acquirers told us that this decision is based on the costs and benefits of each option. Even where there are alternatives to the schemes' optional services, there may be challenges in terms of complexity associated with using them.
- 4.49** Overall, the evidence from acquirers indicated that there are few instances where there are viable substitutes to the schemes' optional services. The main area where we heard there may be viable alternatives is fraud protection services, with some acquirers stating it is possible to self-supply these services.
- 4.50** When asked to explain how they decide which optional services to use within their businesses and how they decide which supplier to use, merchants provided a broad range of means for how they reach their decisions. The evidence was mixed in terms of whether there are viable alternatives to the schemes for optional services.

### Account Status Inquiry (Mastercard) and Account Verification (Visa)

- 4.51** Account Status Inquiry (ASI) is a Mastercard optional service for merchants to validate the status of a card via a non-financial message to check if the card is operational and if the card information is consistent. The choice of whether to use this service is ultimately made by merchants.
- 4.52** Account Verification (AV) is a Visa optional service that uses a zero-value transaction to determine that an account is valid and in good standing before a transaction takes place. The choice of whether to use this service is ultimately made by merchants.
- 4.53** We have assessed these services together as we believe they are equivalent services offered by Mastercard and Visa.

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62 [redacted].

63 [redacted].

64 [redacted].

### Mastercard's submissions

- 4.54** We asked Mastercard to indicate where UK acquirers could source alternative services for ASI.<sup>65</sup> Mastercard submitted that merchants have alternatives available to ASI, depending on their need. This is reflected in the variation in the use of this service across merchants. [redacted].<sup>66</sup> According to Mastercard, this partial uptake by merchants indicates they have the option not to use this type of pre-emptive account or transaction validation.<sup>67</sup>
- 4.55** Mastercard also submitted that acquirers are not bound by the Mastercard network in their choice of measures to avoid risk ahead of CNP transactions. For example, a merchant could request proof of identity from the cardholder before registering a CoF. 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 their details more than once. Where a merchant uses ASI to query active cards on file, they could instead contact their customers directly to request a confirmation that the card is still valid and requesting an update if necessary.
- 4.56** Finally, Mastercard submitted that merchants also have alternatives within the Mastercard network, such as using Pre-Authorisation.
- 4.57** In response to our interim report, Mastercard also said that the interim report does not appear to consider the data or the potential alternatives submitted by Mastercard.<sup>68</sup>

### Visa's submissions

- 4.58** Visa submitted that its AV service is one of many that exists in the payments ecosystem.<sup>69</sup> Many merchant service providers and acquirers offer upfront risk management and authentication services for transactions made in more 'traditional' CNP environments. Alternatives to Visa include: Riskified, Stripe, RSA, Broadcom, Modirum, Worldline, RiskShield, iSoft, Signifyd, Callsign and NuData, among others.
- 4.59** Visa also submitted that merchants can also choose to develop authentication capabilities in-house. Large firms in the technology and retail sectors can leverage direct consumer relationships to enter or expand into providing authentication services which compete with Visa.

### Acquirers' responses to our second Section 81 Notice

- 4.60** In response to our Section 81 Notice, nine out of ten acquirers told us they had purchased the ASI service and AV in the last 12 months.<sup>70</sup> The remaining acquirer told us it does not purchase these services, but the services are offered to its merchant customers and the cost is passed through.<sup>71</sup>

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65 Mastercard response to PSR questions dated 2 October 2023. [redacted].

66 [redacted].

67 See also Mastercard response to MR22/1.9 (21 May 2024), page 43. Mastercard also repeated in its response the data it has on ASI queries.

68 Mastercard response to MR22/1.9 (21 May 2024), page 42.

69 Visa response to PSR questions dated 27 September 2023. [redacted].

70 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

71 Stakeholder responses to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

- 4.61** When asked about the alternatives available to acquirers and merchants, none of the acquirers indicated there are any alternatives for themselves or merchants.<sup>72</sup>
- 4.62** We further asked acquirers what the implications would be for the acquirer if they didn't use the ASI service. All acquirers mentioned that if the acquirer did not offer the service, merchants would either have increased friction or it would make the acquirer less attractive to merchants or both. Three acquirers noted that merchants would be unable to validate cards without processing a non-zero transaction.<sup>73</sup> Three acquirers explained that this could lead to an increase in fraud and higher decline rates.<sup>74</sup> Several acquirers noted that not using the service would make their business proposition less attractive.<sup>75</sup>
- 4.63** We also asked acquirers what the implications would be for the acquirer if they didn't use the AV service.<sup>76</sup> All acquirers explained negative consequences of not using this service. Six acquirers noted competitive disadvantages from not using the service.<sup>77</sup> Three acquirers stated a risk of an increase in either decline rates and/or fraud risk.<sup>78</sup> Three acquirers explained that merchants would have to use alternative methods which would increase friction.<sup>79</sup>
- 4.64** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the ASI service would be on the categories of merchants which commonly use the service.<sup>80</sup> Nine of the ten acquirers stated negative consequences for merchants. Two acquirers said fraud could increase.<sup>81</sup> Four acquirers explained an operational impact or friction for the merchant, for example through increased risk of non-payment.<sup>82</sup> One said that it could limit the ability of merchants to accept recurring and e-commerce payments.<sup>83</sup> One explained decline rates could increase.<sup>84</sup> Finally, two acquirers stated that merchants would be at a competitive disadvantage from not using the service.<sup>85</sup>
- 4.65** We also asked acquirers to explain, based on their knowledge, what the implications of not using the AV service would be on the categories of merchants which commonly use the service.<sup>86</sup> Nine acquirers said that not using the service would cause negative consequences for merchants.<sup>87</sup> Four acquirers explained there could be increased frictions to receiving payments because merchants would not be able to store cards for future payments or could risk non-payments.<sup>88</sup> Two said that fraud could increase.<sup>89</sup>

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72 Stakeholder responses to PSR information request dated 27 November 2023. [3].

73 Stakeholder responses to PSR information request dated 27 November 2023. [3].

74 Stakeholder responses to PSR information request dated 27 November 2023. [3].

75 Stakeholder responses to PSR information request dated 27 November 2023. [3].

76 PSR information request dated 27 November 2023. [3].

77 Stakeholder responses to PSR information request dated 27 November 2023. [3].

78 Stakeholder responses to PSR information request dated 27 November 2023. [3].

79 Stakeholder responses to PSR information request dated 27 November 2023. [3].

80 PSR information request dated 27 November 2023. [3].

81 Stakeholder responses to PSR information request dated 27 November 2023. [3].

82 Stakeholder responses to PSR information request dated 27 November 2023. [3].

83 Stakeholder response to PSR information request dated 27 November 2023. [3].

84 Stakeholder response to PSR information request dated 27 November 2023. [3].

85 Stakeholder responses to PSR information request dated 27 November 2023. [3].

86 PSR information request dated 27 November 2023. [3].

87 Stakeholder responses to PSR information request dated 27 November 2023. [3].

88 Stakeholder responses to PSR information request dated 27 November 2023. [3].

89 Stakeholder responses to PSR information request dated 27 November 2023. [3].

One said that it could reduce merchant ability to accept recurring or CNP transactions.<sup>90</sup>  
Two said it would lead to a competitive disadvantage for merchants.<sup>91</sup>

**4.66** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts or rebates, or delay increases to proposed fee increases for ASI or AV.<sup>92</sup>

#### **Merchants' responses to our request for information**

**4.67** In response to our merchant RFI, two merchants (out of ten responses) told us that they use Mastercard's ASI within their business.<sup>93</sup> Five out of ten merchants told us they do not use the service because they have no need for it,<sup>94</sup> two merchants told us their needs are addressed through other means by using a zero-value transaction,<sup>95</sup> and one told us its needs are addressed through other means without specifying how.<sup>96</sup>

**4.68** We asked merchants about the potential alternatives available to them for Mastercard's ASI service and whether each alternative is capable of meeting their business's needs. Specifically, we asked them about the following potential alternatives:<sup>97</sup>

- a. In the case of subscription services, merchants could charge the first payment during the customer sign-up process.
- b. Merchants could request proof of identity from cardholders before registering a card-on-file or signing up to a subscription.
- c. Merchants could reduce the incidence of mistakes being made by cardholders when registering new cards by requiring cardholders to submit details more than once.
- d. Merchants could contact customers directly requesting confirmation that the card is still valid and requesting updated details if necessary.

**4.69** When we asked the two merchants that use ASI about the potential alternatives to it, the first merchant said that, while it is possible it could request proof of identity from cardholders when registering a card-on-file, or reduce the incidence of mistakes being made by cardholders when registering new cards by requiring cardholders to submit details more than once, both of these alternatives could potentially result in additional drop-outs and would not be viable. The merchant also said it would not be viable to contact customers directly requesting confirmation that the card is still valid and requesting an update if necessary, due to the sheer number of customers who would need to be contacted and the burden this would bring.<sup>98</sup>

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90 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

91 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

92 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

93 [redacted].

94 [redacted].

95 [redacted].

96 [redacted].

97 See paragraph 4.16.

98 [redacted].

- 4.70** The second merchant that uses ASI also said the potential alternatives to the service are not practical. It told us that requesting proof of identity from cardholders would be more costly, present GDPR risks, and add friction to the customer payment experience. It also told us that asking customers to submit card details more than once would add friction to the payment process and would provide no security benefit, as it does not check the data that ASI does. The merchant also said that contacting customers and asking them to update card details if necessary is costly compared to ASI, adds delay to the payment being processed and could cause transactions not to complete if the customer does not wish to be contacted or is not available. The merchant also suggested there is a security risk with this approach, since the customer being contacted for updated card details could be a fraudster using someone else's card. Finally, the merchant said that charging for the first payment during a sign-up process (in the case of subscription services) could be viable if the goods or services are being provided at the point of sign-up; if not, it could be undesirable for some customers and lead to lost sales.<sup>99</sup>
- 4.71** Among the merchants not using the ASI service, one of the merchants, which told us it uses a zero-value transaction as an alternative, also discussed the viability of potential alternatives to ASI. It told us that requesting proof of identity from cardholders could present personal data issues, asking cardholders to submit card details more than once would not be a good user journey, and contacting customers directly to request an update to card details if necessary is not scalable or safe.<sup>100</sup>
- 4.72** Two of the merchants that told us they do not use the ASI service because they have no need for it also discussed the viability of the alternatives to ASI. One of these did not think any of the alternatives were viable, because they would create additional friction in the cases of requesting proof of identity and asking cardholders to submit details more than once, while contacting customers directly to request an update to card details if necessary would be a significant overhead.<sup>101</sup> The other merchant said charging for the first payment during the customer sign-up process (in the case of subscription services) is viable if the charges are low, and requesting proof of identity from cardholders would be viable if electronic ID existed in the UK. The merchant also said that asking cardholders to submit their details more than once would slow down or complicate the payment process, but could reduce the risk of fraud, while contacting the customers directly requesting updated card details if necessary is not a viable solution.<sup>102</sup>
- 4.73** We also asked the two merchants using ASI what the implication of not using the ASI service would be for their business. One merchant told us it would see an increase in the number of declined transactions.<sup>103</sup> The other merchant said it may lead to an increase in fraud if lost or stolen card details are used to place online orders; moreover, where an order is placed in advance of payment being taken on the delivery date, this could lead to failed payments on the delivery date, leading to increased costs. In the absence of ASI, the merchant would consider using pre-authorisation or take full payment at the point of ordering, but this could lead to customer dissatisfaction as their money being taken upfront.<sup>104</sup>

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99 [redacted].

100 [redacted].

101 [redacted].

102 [redacted].

103 [redacted].

104 [redacted].

- 4.74** Five out of ten merchants told us that they use Visa’s AV service within their business.<sup>105</sup> Four of the ten merchants told us they do not use the AV service because they have no need for it<sup>106</sup> and one merchant said it does not use it because it uses a zero-value transaction during the card-on-file set-up.<sup>107</sup>
- 4.75** We asked merchants about potential alternatives to the AV service and whether each alternative is capable of meeting their business’s needs. Specifically, we asked them about the following potential alternatives:<sup>108</sup>
- a. Third-party providers of authentication, such as Stripe, RSA, Broadcom, Modirum, Nudata, and Wordline.
  - b. SCA exemptions under PSD2.
  - c. Transaction risk analysis tools which can help maximise the use of SCA exemptions.
  - d. Using a digital front end (such as Apple Pay or Google Pay) to validate customer identity.
  - e. Merchants could develop their own authentication capabilities in-house.
- 4.76** When we asked the five merchants that use Visa’s AV service about third-party providers of authentication, one merchant said that adding further layers to the payment architecture is hard to do for most companies,<sup>109</sup> and another said this option is viable but would come with additional cost.<sup>110</sup> One of the merchants said it is unclear how authentication will verify the account in the same way as AV does, since authentication and account checks are two different processes and authentication takes place before the account checks. Therefore, a successful authentication does not mean there are no issues with the cardholder’s account.<sup>111</sup> Finally, one merchant mentioned transaction risk analysis (TRA), which we assume related to a different potential alternative which is discussed below.<sup>112</sup> One of the merchants did not respond to this question on this specific alternative.<sup>113</sup>
- 4.77** When we asked the five merchants which use Visa’s AV service about SCA exemptions under PSD2, one merchant said it uses a legacy platform which has the fraud check post-authorisation, so it is not allowed to use SCA exemptions;<sup>114</sup> another merchant said it does not have the ability to use these exemptions yet, but is looking to be able to use them in due course.<sup>115</sup> One merchant said this is a viable solution, although it cannot be used for all transactions so is not a complete solution.<sup>116</sup>

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105 [redacted].

106 [redacted].

107 [redacted].

108 See paragraph 4.16.

109 [redacted].

110 [redacted].

111 [redacted].

112 [redacted].

113 [redacted].

114 [redacted].

115 [redacted].

116 [redacted].

- 4.78** Another merchant said it is unclear how an SCA exemption will verify the account.<sup>117</sup> The final merchant did not respond to this question.<sup>118</sup>
- 4.79** We also asked the five merchants that use Visa AV service about using transaction risk analysis tools to maximise the use of SCA exemptions as an alternative. In response, four of the merchants provided the same responses as they did when asked about SCA exemptions as an alternative.<sup>119</sup> The remaining merchant said it will be looking to use these alternatives.<sup>120</sup>
- 4.80** When asked about using digital front ends (such as Apple Pay and Google Pay) to validate customer identity as an alternative to AV, two of the five merchants that use AV said this is not viable.<sup>121</sup> One of these merchants said the customer identity is independent of the status of the account and would not prove the account is in good standing.<sup>122</sup> The remaining three merchants did not respond to this question.<sup>123</sup>
- 4.81** Finally, when asked about merchants developing their own authentication capabilities in-house as an alternative to AV, three of the five merchants that use AV said that this is likely to be too costly.<sup>124</sup> One of these merchants specifically stated that building this would require it to connect to all global card issuers, which would come at significant cost.<sup>125</sup> The remaining two merchants did not respond to this question.<sup>126</sup>
- 4.82** We also asked the merchant that does not use Visa's AV service because it addresses the need through other means about the alternatives presented above. The merchant stated that three of the potential alternatives would result in higher integration costs (third-party providers of authentication services, TRA tools, and merchants developing their own authentication capabilities in-house), while SCA exemptions could increase fraud risk for high-value transactions; digital front-ends could help, but do not address the issue for card-on-file scenarios.<sup>127</sup>
- 4.83** Of the four merchants that do not use Visa's AV service, two did not respond on the viability of the potential alternatives.<sup>128</sup> One of the remaining two merchants said SCA exemptions and transaction risk analysis tools are not practical with high average transaction values, while using third-party providers of authentication services and developing authentication capabilities in-house require additional complexity and supplier management. The merchant did state that digital front ends have been used successfully.<sup>129</sup> The other merchant said it uses Cardinal (which is owned by Visa) for SCA exemptions. In addition, it said it utilises internal software when asked about transaction risk analysis tools, digital front ends, and in-house authentication capabilities. This merchant did not respond to the question about third-party providers of authentication.<sup>130</sup>

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117 [REDACTED].

118 [REDACTED].

119 [REDACTED].

120 [REDACTED].

121 [REDACTED].

122 [REDACTED].

123 [REDACTED].

124 [REDACTED].

125 [REDACTED].

126 [REDACTED].

127 [REDACTED].

128 [REDACTED].

129 [REDACTED].

130 [REDACTED].



**4.84** We also asked merchants what the implications would be for their business if they did not use Visa's AV service, and what they would do if it was no longer available. Among the five merchants that do use Visa's AV service, one told us it would not be able to charge customers that do not turn up to its hotels.<sup>131</sup> The second merchant said it would see an increase in declined payments and chargebacks.<sup>132</sup> The third merchant said it would need to reconsider its payment flow.<sup>133</sup> Finally, one merchant said it may lead to an increase in fraud if lost or stolen card details are used to place online orders; moreover, where an order is placed in advance of payment being taken on the delivery date, this could lead to failed payments on the delivery date, leading to increased costs. In the absence of AV, the merchant would consider using Pre-Authorisation or take full payment at the point of ordering, but this could lead to customer dissatisfaction at their money being taken upfront.<sup>134</sup> The other merchant that uses Visa's AV service did not respond to this question.<sup>135</sup>

### Summary of evidence

**4.85** The ASI and AV services use a zero-value authorisation to determine that an account is valid and in good standing before a transaction takes place, and allow CoF merchants to run checks on their stored payment credentials before they are used for payment.

**4.86** In response to our second Section 81 Notice, none of the acquirers indicated that there are any alternatives to these services for either acquirers or merchants. Acquirers also indicated that there would be significant implications for acquirers and merchants if they did not use these services. None of the acquirers told us they were able to secure discounts or rebates, or delay proposed fee increases, for ASI or AV.

**4.87** In response to the merchant RFI, five out of ten merchants responding to our information request said they do not use Mastercard's ASI service because they have no need for it, while four out of ten merchants said the same thing for Visa's AV service.<sup>136</sup> Some of the merchants that do not use these services told us they use a zero-value transaction as an alternative to these services. It is unclear to us whether zero-value transactions are different from Mastercard's ASI and Visa's AV (which do involve a zero-value transaction). In any case, zero-value transactions would still result in a fee from Mastercard or Visa, and so we do not believe they are an alternative to these services. Other potential alternatives to the services which were proposed by the schemes were not considered viable by merchants.

### Acquirer Authentication Exemption Indicator (Mastercard)

**4.88** The Acquirer Authentication Exemption Indicator is a service that allows acquirers to request a Strong Customer Authentication (SCA) exemption by informing the issuer through the authorisation or authentication flow. The choice of whether to use this service is ultimately made by merchants.<sup>137</sup>

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131 [redacted].

132 [redacted].

133 [redacted].

134 [redacted].

135 [redacted].

136 We acknowledge that fewer merchants that responded to our RFI use the Mastercard ASI service than use the Visa AV. We would expect that the same number (and the same merchants) would use both as they are equivalent services.

137 We have not been able to identify an equivalent service provided by Visa in this instance.



## Mastercard's submissions

- 4.89** Mastercard did not suggest a specific alternative service. Rather, Mastercard submitted that merchants have a choice as to whether or not they want to make use of the SCA exemptions contained in PSD2.<sup>138</sup>

## Mastercard's Internal documents

- 4.90** There is some indication in the internal documents that [redacted].<sup>139</sup>

## Acquirers' responses to our second Section 81 Notice

- 4.91** In response to our second Section 81 Notice, nine out of ten acquirers had purchased this service in the last 12 months.<sup>140</sup> [redacted].<sup>141</sup>
- 4.92** In the Section 81 Notice, we asked the acquirers whether there are any alternatives available to acquirers or merchants. None of the acquirers indicated there are any alternatives for themselves or merchants.<sup>142</sup>
- 4.93** We further asked acquirers what the implications would be for the acquirer if they didn't use this service.<sup>143</sup> All ten acquirers mentioned negative consequences of not using the service. Five acquirers explained that friction would increase for some payment types as all remote transactions would need to be authenticated through 3DS.<sup>144</sup> Three of these said that there would be higher payment decline rates.<sup>145</sup> Three acquirers said there would be a competitive disadvantage from not using the service.<sup>146</sup>
- 4.94** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the Acquirer Authentication Exemption Indicator would be on the categories of merchant which commonly use the service.<sup>147</sup> All acquirers mentioned negative impacts for merchants on not using the service. Seven acquirers explained that merchants would have increased frictions (due to the requirement to authenticate all transactions through 3DS) in accepting payments or a higher decline rate.<sup>148</sup> One acquirer said merchants which do not use this service would not be compliant with SCA rules under PSD2.<sup>149, 150</sup>

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138 Mastercard response to PSR questions dated 2 October 2023. [redacted].

139 [redacted].

140 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

141 Stakeholder response to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

142 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

143 PSR information request dated 27 November 2023. [redacted].

144 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

145 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

146 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

147 PSR information request dated 27 November 2023. [redacted].

148 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

149 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

150 We note that PSD2 is no longer applicable in the UK. However, PSD2 was implemented into UK law under the PSRs 2017. The SCA requirements are explained here: <https://www.fca.org.uk/firms/strong-customer-authentication> Where an acquirer refers to PSD2 in this annex, we assume they are referring to the PSRs 2017. The SCA requirements under the PSRs 2017 are explained here: <https://www.fca.org.uk/firms/strong-customer-authentication> The SCA requirements are explained here: <https://www.fca.org.uk/firms/strong-customer-authentication>.

**4.95** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. Two acquirers told us that they have been able to negotiate reduced fees for Mastercard’s Acquirer Authentication Exemption Indicator. [redacted].<sup>151</sup> [redacted]. Another [redacted], which has subsequently been renewed until [redacted].<sup>152</sup>

#### **Merchants’ responses to our request for information**

**4.96** In response to the merchant RFI, five merchants (out of ten responses) told us that they use Mastercard’s Acquirer Authentication Exemption Indicator.<sup>153</sup> Three out of ten merchants told us they do not use the service because they have no need for it,<sup>154</sup> and two said they do not use it for other reasons<sup>155</sup> (one of which was because the merchant does not qualify to use the service as its fraud check is post-authorisation<sup>156</sup>).

**4.97** We did not ask the merchants about potential alternatives, as none were identified or suggested. However, we did ask merchants what the implication would be for their business of not using the service and what actions they would take if the service was no longer available. Among the five merchants that said they use the service, two merchants said they would need to conduct SCA for every transaction.<sup>157</sup> One of these merchants said SCA is less user-friendly and would lead to a more complex user journey,<sup>158</sup> while another merchant said it would lead to additional friction and could lead to higher abandonments and authentication failures.<sup>159</sup> Another merchant said the Acquirer Authentication Exemption Indicator is a scheme requirement, and in a worst-case scenario they would need to revert to invoicing and requesting bank payments.<sup>160</sup> Another merchant said they would see an increase in customer dropouts.<sup>161</sup> The final merchant said this service is ‘not required’, although this contradicts their previous response saying they use this service.<sup>162</sup>

#### **Summary of evidence**

**4.98** The Acquirer Authentication Exemption Indicator can be used by all merchants which are required to comply with SCA requirements. Mastercard submitted that merchants have a choice about whether to make use of the SCA exemptions under PSD2. However, we do not consider that subjecting all transactions to SCA is a competitive substitute to the Acquirer Authentication Exemption Indicator as this is likely to require the use of other Mastercard services (for example, Identity Check).

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151 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

152 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

153 [redacted].

154 [redacted].

155 [redacted].

156 [redacted].

157 [redacted].

158 [redacted].

159 [redacted].

160 [redacted].

161 [redacted].

162 [redacted].

- 4.99** None of the acquirers that responded to our Section 81 Notice submitted that there are any alternatives to this service. The responses from acquirers also indicated there would be significant implications for merchants if they did not purchase this service. While two acquirers have been able to secure reduced fees for this service, none of the remaining eight acquirers were able to secure such deals.
- 4.100** Half (five out of ten) of the merchants responding to our information request make use of the Acquirer Authentication Exemption Indicator, while three told us they do not use this service because they have no need for it and the remaining two for other reasons. The responses from these merchants indicate that there would be significant consequences if they did not use the service. For example, they may have to conduct SCA for every transaction, or there could be a more complex user journey due to more friction, which could lead to higher abandonments and authentication failures.

### Mastercard Address Verification Service and CVC2 and Visa Address Verification Service

- 4.101** The Mastercard Address Verification Service (AVS) allows CNP merchants to verify a cardholder's billing address within the authorisation process, assessing if it matches the address held on file by the card issuer. The CVC2 is a three-digit code printed on the signature panel of cards which is used to validate a card during the checkout process. The choice of whether to use this service is ultimately made by merchants. The AVS and CVC2 are offered [3-].
- 4.102** The Visa Address Verification Service (AVS) is an authentication service that uses the authorisation process to verify that the billing address entered by the initiator of the transaction matches the address held by the card issuer. The service is typically used by merchants for CNP transactions such as e-commerce. The choice of whether to use this service is ultimately made by merchants. We note that this service is distinct from Visa's equivalent service to CVC2 (CVV2).<sup>163</sup>
- 4.103** We have chosen to analyse these services together as they are both intended to verify that the billing address provided by the initiator of the transaction matches the address held on file by the card issuer.

#### Mastercard's submissions

- 4.104** We asked Mastercard to indicate where UK acquirers could source alternative services for the AVS and CVC2.<sup>164</sup> Mastercard submitted that the AVS and CVC2 are additional layers of security for CNP transactions and can be substituted or complemented with other services that improve the fraud prevention capabilities of transactions.
- 4.105** Mastercard further submitted that there are several options provided by third parties and by Mastercard that acquirers and merchants could use to minimise fraud risks and are therefore alternatives to the AVS and CVC2. Mastercard offer Ekata, Identity Check, NuDetect for Merchants, Trusted Device API, and SafetyNet among others. Competitor offerings include Falcon, Featurespace, ai Corporation, Biocatch, Callsign, ThreatMetrix, IBM Trusteer, and Vital Signs. Credit reference agencies also support merchants and acquirers in cardholder screening to reduce fraud risk.

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<sup>163</sup> Although we have not considered Visa's CVV2 service in our analysis, this service was mentioned by acquirers in response to our Section 81 Notice (see Table 6 in Annex A below).

<sup>164</sup> Mastercard response to PSR questions dated 2 October 2023. [3-].

- 4.106** Finally, Mastercard submitted that AVS may also be used to reduce the risk of cardholders submitting incorrect address information during checkout. Merchants have several ways to address this issue, such as postcode finder APIs, requesting proof of address, and requesting address confirmation during checkout.
- 4.107** In response to our interim report, Mastercard submitted that between December 2022 and September 2023, [redacted] of its CNP transactions processed by UK acquirers used the AVS. Mastercard reiterated the third-party options available to acquirers and merchants which could minimise fraud risks and are therefore alternatives to this service. Mastercard also reiterated that the AVS is also commonly used to reduce the risk of cardholders submitting incorrect address information and pointed to the potential alternatives available to merchants to mitigate this risk.<sup>165</sup>

#### Visa's submissions

- 4.108** Visa submitted that its AVS is one of many that exist in the payments ecosystem.<sup>166</sup> Many merchant service providers and acquirers offer upfront risk management and authentication services for transactions made in more 'traditional' CNP environments. Alternatives to Visa include: Riskified, Stripe, RSA, Broadcom, Modirum, Worldline, RiskShield, iSoft, Signifyd, Callsign, and NuData among others.
- 4.109** Visa also submitted that merchants can also choose to develop authentication capabilities in-house. Large firms in the technology and retail sectors can leverage direct consumer relationships to enter or expand into providing authentication services which compete with Visa.
- 4.110** Finally, Visa submitted that digital payment front-ends have a large presence in retail purchases and also typically hold a lot of information about the person initiating the transaction. They can therefore also validate customer identity. For example, a customer making a payment using a mobile digital wallet can verify their identity by entering their biometric information on a mobile device, thus facilitating authentication.

#### Acquirers' responses to our first Section 81 Notice

- 4.111** In our first Section 81 Notice, we asked acquirers whether there are alternatives available for acquirers that wish to offer UK merchants the ability to accept Mastercard/Visa cards, but want to use non-Mastercard/Visa providers where possible.<sup>167</sup> One respondent stated that for fraud protection tools, such as Identity Solutions/Identity Check, EMV 3DS, and CVC2, there are additional providers, but they are usually contracted out directly by the merchant.<sup>168</sup>

#### Acquirers' responses to our second Section 81 Notice

- 4.112** In response to our second Section 81 Notice, nine out of ten acquirers told us they had purchased both Mastercard's AVS and CVC2 and Visa's AVS in the last 12 months.<sup>169</sup> The remaining acquirer told us it does not purchase these services, but the services are offered to its merchant customers and the cost is passed through.<sup>170</sup>

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<sup>165</sup> Mastercard response to MR22/1.9 (21 May 2024), page 44.

<sup>166</sup> Visa response to PSR questions dated 27 September 2023. [redacted].

<sup>167</sup> PSR information request dated 11 January 2023. [redacted].

<sup>168</sup> Stakeholder responses to PSR information request dated 11 January 2023. [redacted].

<sup>169</sup> Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

<sup>170</sup> Stakeholder response to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

- 4.113** In the Section 81 Notice, we asked the acquirers whether there are any alternatives to the Mastercard AVS and CVC2 and Visa AVS for acquirers. None of the acquirers indicated there are any alternatives for them.<sup>171</sup> Similarly, we asked whether there are alternatives to the Mastercard AVS and CVC2 services for merchants.<sup>172</sup> One respondent indicated that Apple Pay and Google Pay may be alternatives to the use of Mastercard's Address Verification and CVC2 service.<sup>173</sup> This is because these digital wallets don't require the use of CVC2 and instead use biometrics and other factors to secure e-commerce payments. None of the acquirers indicated that there are any alternatives for themselves or merchants to the Visa AVS.<sup>174</sup>
- 4.114** We further asked acquirers what the implications would be for the acquirer if they didn't use Mastercard AVS and CVC2 service.<sup>175</sup> All ten acquirers stated at least one of the following would happen if they stopped using the service: (i) there would be a negative impact on the acquirer competitiveness; (ii) fraud rates would increase; or (iii) decline rates would increase.<sup>176</sup> One acquirer said the schemes mandate that the CVC2 service is used in some industries, for example gambling.<sup>177</sup> Two acquirers stated that not offering the service would limit their ability to offer acceptance of ecommerce transactions to merchants.<sup>178</sup>
- 4.115** We also asked acquirers what the implications would be for the acquirer if they didn't use the Visa AVS.<sup>179</sup> All the acquirers said that not using this service would negatively impact them. Six acquirers stated that they would be at a competitive disadvantage.<sup>180</sup> The remaining four acquirers, as well as two of the aforementioned six acquirers, explained that fraud could increase from not using the service.<sup>181</sup>
- 4.116** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the Mastercard AVS and CVC2 would be on the categories of merchant which commonly use the service.<sup>182</sup> All acquirers stated this would be negative for merchants. Two acquirers explained there would be a competitive disadvantage to merchants not using the service.<sup>183</sup> Seven of the acquirers noted that the risk of fraud would increase for merchants.<sup>184</sup> Three acquirers explained that there could be increased decline rates.<sup>185</sup>

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171 Stakeholder responses to PSR information request dated 27 November 2023. [3].

172 PSR information request dated 27 November 2023. [3].

173 Stakeholder response to PSR information request dated 27 November 2023. [3].

174 Stakeholder responses to PSR information request dated 27 November 2023. [3].

175 PSR information request dated 27 November 2023. [3].

176 Stakeholder responses to PSR information request dated 27 November 2023. [3].

177 Stakeholder response to PSR information request dated 27 November 2023. [3].

178 Stakeholder responses to PSR information request dated 27 November 2023. [3].

179 PSR information request dated 27 November 2023. [3].

180 Stakeholder responses to PSR information request dated 27 November 2023. [3].

181 Stakeholder responses to PSR information request dated 27 November 2023. [3].

182 PSR information request dated 27 November 2023. [3].

183 Stakeholder responses to PSR information request dated 27 November 2023. [3].

184 Stakeholder responses to PSR information request dated 27 November 2023. [3].

185 Stakeholder responses to PSR information request dated 27 November 2023. [3].

**4.117** We also asked acquirers to explain, based on their knowledge, what the implications of not using the Visa AVS would be on the categories of merchants which commonly use the service.<sup>186</sup> All ten acquirers explained consequences for merchants which do not use this service. Six acquirers said it could increase fraud risk.<sup>187</sup> Two acquirers said it would increase decline rates.<sup>188</sup> Two acquirers stated merchants would be at a competitive disadvantage if they did not use the service.<sup>189</sup>

**4.118** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts or rebates, or delay proposed fee increases for Mastercard's AVS and CVC2 or Visa's AVS.<sup>190</sup>

### Acquirer phone calls

**4.119** When we discussed the alternatives to Mastercard and Visa's Address Verification Service in calls with three acquirers, they indicated that these are not suitable alternatives:

- One acquirer said there are no credible alternatives to Mastercard and Visa's Address Verification Service. The acquirer acknowledged that merchants could verify addresses through a provider such as Experian, but said this would add friction to the transaction through delay. It also said there is anecdotal evidence that approval rates by issuers are lower without the Address Verification Service.<sup>191</sup>
- Another acquirer said that any alternative, including Experian, would not be a feasible alternative to the Address Verification Service. This is because such a service would not be able to confirm that the consumer's address matches the one associated with the card.<sup>192</sup>

### Merchants' responses to the PSR's Request for Information

**4.120** In response to the merchant RFI, four merchants (out of ten responses) told us that they use Mastercard's AVS.<sup>193</sup> Two other merchants told us that they do not use the service, because they have no need for it,<sup>194</sup> while three merchants told us that they do not use the service as their needs are addressed through other means, without specifying how.<sup>195</sup> One merchant said that it is reviewing the need for this service as it feels 3DS now covers the security element that AVS used to.<sup>196</sup>

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186 PSR information request dated 27 November 2023. [3-].

187 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

188 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

189 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

190 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

191 [3-].

192 [3-].

193 [3-].

194 [3-].

195 [3-].

196 [3-].

**4.121** We also asked merchants about the potential alternatives to Mastercard's AVS that are available to them, and whether each alternative is capable of meeting their business needs. Specifically, we asked them about the following potential alternatives:<sup>197</sup>

- a. Third-party alternatives, including Falcon, Featurespace, AI Corporation, Biocatch, Call Sign, Threatmetrix, IBM Trusteer, and Vital Signs, could help minimise fraud risk.
- b. Credit reference agencies could support merchants in cardholder screening to reduce fraud risk.
- c. Postcode finder APIs, requesting proof of address, and requesting address confirmation at checkout, can be used to reduce risk of cardholders submitting incorrect address information at the checkout.

**4.122** Of the four merchants which use Mastercard's AVS:

- One merchant said all of these alternatives require complex integration, have a high cost of implementation, and would result in higher transaction fees.<sup>198</sup>
- Another merchant said it has used postcode finder APIs previously, but offered no comment on the other two alternatives.<sup>199</sup>
- Another merchant did not offer a comment on the third-party alternatives and said it would require more detail in order to fully comment on credit reference agencies and postcode finder APIs as alternatives.<sup>200</sup>
- The final merchant said the third-party alternatives and credit reference agencies could confirm whether the customer has any ties to the address, but they would be unable to confirm whether the address matches the billing address associated with the card (which only schemes and issuers can do). Similarly, the merchant said that postcode finder APIs support the ease of correctly entering address details, but they do not provide the official security check that Mastercard's AVS provides. The merchant said that postcode finder APIs are potentially complementary to Mastercard's AVS in the case where proof of address is required and Mastercard's AVS fails, in order to minimise fraud risk.<sup>201</sup>

**4.123** Among the merchants that said they do not use Mastercard's AVS because their needs are addressed through other means, one merchant said that all of the potential alternatives add additional complexity and require supplier management,<sup>202</sup> while another merchant said that a third-party service would need to connect to its PSP/Gateway for the third-party alternatives and postcode finder API.<sup>203</sup> One of the merchants did not respond to this question.<sup>204</sup>

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197 See paragraph 4.16.

198 [redacted].

199 [redacted].

200 [redacted].

201 [redacted].

202 [redacted].

203 [redacted].

204 [redacted].



**4.124** We also asked merchants to explain the implications for their business if the Mastercard AVS was no longer available. Of the four merchants that said that they use the service:

- One merchant said it would see an increase in declined transactions.<sup>205</sup>
- Another merchant said there would be a higher risk of chargebacks and transaction disputes.<sup>206</sup>
- A third merchant said it may see an increase in fraud, as it would not be able to validate card details, and chargebacks may also increase. Furthermore, some issuers may not approve any MOTO (mail order/telephone order) payments without Mastercard's AVS data. In this case, the merchant said it could explore the alternative solutions discussed above, but they would not replace Mastercard's AVS and would be used to manage transaction risks.<sup>207,208</sup>

**4.125** We also asked merchants about their usage of Visa's AVS. Six out of ten merchants told us that they use this service,<sup>209</sup> two told us they have no need for the service,<sup>210</sup> and another two told us their needs are addressed through other means, without providing further details.<sup>211</sup>

**4.126** We asked merchants about the potential alternatives to Visa's AVS available to them and whether each alternative is capable of meeting their business needs. Specifically, we asked them about the following potential alternatives:<sup>212</sup>

- a. Third-party providers of authentication such as Stripe, RSA, Broadcom, Modirum, Nudata, and Worldline.
- b. Merchants could develop their own authentication capabilities in-house.

**4.127** Two of the six merchants that use Visa's AVS told us that using third-party providers of authentication services would lead to higher transaction fees,<sup>213</sup> while two merchants said these services would add additional complexity.<sup>214</sup> One merchant said that, while authentication services will provide some sort of security check, they will not confirm if the address matches the card being used; the merchant therefore sees them as complementary services to Visa's AVS rather than substitutes. Furthermore, the merchant suggested that using these services instead of Visa's AVS may lead to a higher rate of issuers declining transactions.<sup>215</sup> Another merchant said the third-party services are viable.<sup>216,217</sup>

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205 [redacted].

206 [redacted].

207 [redacted].

208 The fourth merchant offered no comment. [redacted].

209 [redacted].

210 [redacted].

211 [redacted].

212 See paragraph 4.16.

213 [redacted].

214 [redacted].

215 [redacted].

216 [redacted].

217 One merchant did not respond to the question. [redacted].



**4.128** When asked about the viability of developing authentication capabilities in-house, one of the merchants that uses Visa's AVS said it does have its own authentication method for its mobile app, but it is difficult to link user identity with a cardholder identity to avoid fraud, and there is a high cost of development.<sup>218</sup> Another merchant said it may be viable to develop authentication capabilities in-house, but it would take years to develop and there is no guarantee that issuers would be comfortable with the solution.<sup>219</sup> Another merchant said there is a risk that Visa issuers would not accept this solution and noted the high development and integration costs, which would be likely to be significantly higher than using Visa's AVS.<sup>220</sup> One merchant said developing authentication services in-house would add additional complexity.<sup>221</sup> The remaining two merchants did not respond on this potential alternative.<sup>222</sup>

**4.129** The two merchants which said that they do not use Visa's AVS because their needs are addressed through other means gave us these responses:

- On alternative third-party providers of authentication, one merchant told us that a third-party service is connected to its PSP/Gateway. It also said it is not viable to commit resources to developing in-house authentication capabilities and noted a data protection risk.<sup>223</sup>
- The other merchant said there is a lot of administrative work involved in developing authentication capabilities in-house, and there would be a complicated approval process from the schemes. The merchant offered no comment on the potential third-party providers of authentication services.<sup>224</sup>

**4.130** Among the two merchants that said they do not use Visa's AVS because they have no need for the service, one said numerous other third-party providers offer 3DS, which is very similar and is based on the same principles and requirements as Cardinal Commerce (which is owned by Visa). The merchant specifically mentioned FFS Technologies and Elavon Gateway as potential alternatives that could address the same business needs as Visa AVS. The merchant said it has not used any of these services, but stated that there is a highly competitive market for 3DS.<sup>225</sup> The other merchant did not respond to the question on potential alternatives.<sup>226</sup>

**4.131** We also asked merchants to explain the implications for their business if the Visa AVS was no longer available. Of the six merchants that said they use the service:

- Two merchants said that not using the service would result in a higher risk of chargebacks and disputed or declined transactions.<sup>227</sup>
- Another merchant said that not using the service may result in an increase in card transaction fraud, as it would not be able to validate the correct billing

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218 [redacted].

219 [redacted].

220 [redacted].

221 [redacted].

222 [redacted].

223 [redacted].

224 [redacted].

225 [redacted].

226 [redacted].

227 [redacted].

address, meaning chargebacks may also increase. The merchant added that issuers may not approve MOTO sales transactions without CVC or Visa's AVS, which will impact sales.<sup>228</sup>

- One merchant said it feels it can remove the need for Visa's AVS, as the 3DS service provides the liability shift and extra protection that the AVS used to cover.<sup>229</sup>
- Another merchant said that it would have to use an alternative service for MOTO payments (without specifying which alternative service it would use).<sup>230</sup>
- One merchant did not respond to the question.<sup>231</sup>

### Summary of evidence

- 4.132** Both Mastercard and Visa's AVS are used to verify that the details entered by the initiator of the transaction match the cardholder details held by the issuer during the authorisation process of CNP transactions with the intention of reducing fraud.
- 4.133** For Mastercard and Visa's AVS, acquirers which responded to our second Section 81 Notice told us that there are no alternative third-party suppliers of services to acquirers which they could then offer to merchants, and separately the majority told us that there are no third-party alternatives sold to merchants directly which they are aware of. One acquirer indicated that Apple Pay and Google Pay may be alternatives to Mastercard's AVS for merchants. This, however, requires merchants to steer cardholders towards this payment method, which merchants have limited ability to do.<sup>232</sup> The responses from acquirers also indicate that there would be significant implications for merchants if they did not purchase these services and that none of the acquirers have been able to secure discounts, rebates or delays to proposed fee increases.
- 4.134** Fewer than half of the merchants responding to our merchant RFI use Mastercard AVS, while just over half use Visa's AVS.<sup>233</sup> Two merchants told us that they do not use Mastercard AVS because they have no need for it, while three merchants told us that they do not use the service as their needs are addressed through other means, without specifying how. One merchant said that it is reviewing the need for this service as it feels 3DS now covers the security element that AVS used to. Similarly, two merchants told us they do not use Visa AVS because they have no need for the service and two told us their needs are addressed through other means.
- 4.135** When asked about the potential alternatives to Mastercard's AVS, merchants told us that they are not effective substitutes – for example, because they add complexity to the process or are incapable of matching the billing address to the cardholder's address. The merchants which use Mastercard AVS also told us that there would be significant consequences if they did not use this service – for example, there is a risk they could see an increase in declined transactions.

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228 [redacted].

229 [redacted].

230 [redacted].

231 [redacted].

232 See Chapter 4, paragraphs 4.99 to 4.102.

233 We consider that Mastercard's AVS is an equivalent service to Visa's AVS, and on that basis, would expect the same merchants that use Mastercard's AVS to use Visa's AVS. However, fewer merchants that responded to our merchant RFI use Mastercard's AVS than use Visa's AVS.

- 4.136** Most of the responses to our merchant RFI also indicated that the potential alternatives to Visa's AVS are likely to be ineffective substitutes. However, one merchant (which does not use Visa's AVS) said that there is a highly competitive market for 3DS, which can address the same business needs as Visa's AVS. The merchant did not provide more detail on these alternatives and did not explain whether they also rely on Visa's card rails. The responses from merchants that use Visa's AVS indicated there would be significant implications if they did not use this service.

### Automatic Billing Updater (Mastercard)

- 4.137** The Mastercard Automatic Billing Updater (ABU) is a service which automatically updates customer card data in order to prevent disruption to card-on-file payments and extend the life of recurring payment arrangements, i.e. subscriptions. The choice about whether to use the service is ultimately made by merchants.<sup>234</sup>

#### Mastercard's submissions

- 4.138** Mastercard submitted that the ABU offers merchants the ability to keep their customers' payment registries up to date. Merchants have alternative options to this service.<sup>235</sup> For instance, since merchants hold information about when each of the cards on file will expire, they can contact customers prior to expiration requesting that their payment details be updated. Merchants can also enable customers to register multiple payment methods, which means if a card expires, another registered payment method will automatically become the default.
- 4.139** In response to our interim report, Mastercard reiterated the points it made in its Section 81 response in October 2023.<sup>236</sup>

#### Internal documents

- 4.140** Mastercard competitively assesses its ABU against Visa's product (which we understand to be Visa Account Updater) in a couple of documents:
- One document indicates that Visa only enables acquirer access, while Mastercard enables acquirers, PSPs, and merchants to directly use its service.<sup>237</sup>
  - Another document indicates that [redacted]. Mastercard's 'ABU on the network currently in backlog'.<sup>238</sup>
- 4.141** The comparisons that Mastercard makes with Visa's equivalent product provide some evidence that the two products compete with each other.

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234 Visa's equivalent service, Visa Account Updater, was not included in the list we received from Visa. As a result, we did not specifically ask acquirers about it. However, the service was mentioned as an additional optional service by acquirers in response to our Section 81 Notice. See Table 6 in Annex A below.

235 Mastercard response to PSR questions dated 2 October 2023. [redacted].

236 Mastercard response to MR22/1.9 (21 May 2024), page 44–45.

237 [redacted].

238 [redacted].

### Acquirers' responses to our first Section 81 Notice

- 4.142** We asked acquirers how they decide which scheme and processing services to purchase from Mastercard, which services to purchase from alternative suppliers, and which not to purchase at all.<sup>239</sup> One respondent told us that when deciding which services to purchase from Mastercard and which to purchase from alternative suppliers, it takes into consideration 'whether or not a service is offered by an entity outside of networks (i.e. Mastercard Account Billing Updater)'.<sup>240</sup>

### Acquirers' responses to our second Section 81 Notice

- 4.143** In response to our second Section 81 Notice, nine out of ten acquirers told us they had purchased this service in the last twelve months.<sup>241</sup> The remaining acquirer told us it does not purchase this service, but the service is offered to its merchant customers and the cost is passed through.<sup>242</sup>
- 4.144** In the Section 81 Notice, we asked the acquirers whether there are any alternatives for acquirers or merchants to the Account Billing Updater service. None of the acquirers indicated there are any alternatives for themselves or merchants in response to these questions.<sup>243</sup>
- 4.145** We further asked acquirers what the implications would be for the acquirer if they didn't use the service.<sup>244</sup> All the acquirers explained negative consequences of not choosing this optional service. Five acquirers stated that there would be a negative competitive impact from not using this service.<sup>245</sup> Six acquirers noted that decline rates would increase.<sup>246</sup> Three acquirers explained that this would increase frictions to merchants who accept recurring transactions, potentially leading to acquirers manually contacting cardholders to update details and/or lost sales.<sup>247</sup> One acquirer noted that this is a mandatory service for acquirers and not offering it to merchants could lead to a breach of scheme rules.<sup>248</sup>
- 4.146** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the Automatic Billing Updater service would be on the categories of merchants that commonly use the service.<sup>249</sup> Nine of the ten acquirers explained negative consequences to merchants for not using this service. Eight acquirers mentioned both increased decline rates and increased friction from merchants manually asking cardholders to update details.<sup>250</sup> One acquirer explained that merchants would be at a competitive disadvantage from not using the service.<sup>251</sup>

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239 PSR information request dated 11 January 2023. [3-].

240 Stakeholder response to PSR information request dated 11 January 2023. [3-].

241 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

242 Stakeholder response to PSR information request dated 27 November 2023 [3-]; call with stakeholder [3-].

243 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

244 PSR information request dated 27 November 2023. [3-].

245 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

246 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

247 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

248 Stakeholder response to PSR information request dated 27 November 2023. [3-].

249 PSR information request dated 27 November 2023. [3-].

250 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

251 Stakeholder response to PSR information request dated 27 November 2023. [3-].

**4.147** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed fee increases for Automatic Billing Updater.<sup>252</sup>

#### Acquirer phone calls

**4.148** Alternatives to Mastercard's Automatic Billing Updater were discussed in calls with three acquirers:

- One acquirer said that Mastercard's Automatic Billing Updater (and Visa's Account Updater) are expected from merchants and acquirers cannot do without them. The acquirer said that a large number of fintechs are now operating in the acquiring space, driving innovation. This means that, for some services, acquirers previously had a choice about whether to offer them or not, but now they are seen as a core offering which they must take.<sup>253</sup>
- Another acquirer said that Account Billing Updater is mandated by Mastercard. To avoid using this service, the acquirer would need to develop a bilateral agreement with every issuer in the world. The acquirer added that asking customers to update their card details manually is a valid option, but that not every merchant may wish to do this. This is because approval rates are lower where a merchant stores card details on file, and the Account Billing Updater provides a frictionless experience. The acquirer also acknowledged that merchants could develop logical systems around expiry dates to prompt customers to update card details, but this does not account for instances where cards are lost or stolen.<sup>254</sup>
- Another acquirer said that it is not aware of an alternative for Automatic Billing Updater. It said that a merchant could ask the cardholder to update their payment details, but this would not be a good option in the case of recurring payments.<sup>255</sup>

#### Summary of evidence

**4.149** The ABU is primarily used by merchants that wish to store customer card details on file, for example because they operate a subscription business or because they charge some sort of recurring payment. The choice about whether to use the service is ultimately made by merchants and we have not obtained evidence from merchants regarding the choices available to them.

**4.150** Mastercard submitted that merchants have alternative choices available to them. However, we have not spoken to merchants to understand the viability or credibility of these alternatives. Mastercard's internal documents also show it compares its ABU service to Visa's equivalent Visa Account Updater service. It is not clear from the document whether ABU or Visa Account Updater are scheme-agnostic.<sup>256</sup> If the services are scheme-agnostic, Visa's Account Updater could potentially be a strong competitive constraint on ABU. If the services are not scheme-agnostic, then while Visa Account Updater may not be a direct competitor, it may act as a benchmark for Mastercard in terms of the quality of service or innovation that merchants expect from schemes in this area.

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252 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

253 [3-].

254 [3-].

255 [3-].

256 Scheme-agnostic is where a service can be used in respect of both Mastercard and Visa transactions.

- 4.151** In response to our first Section 81 Notice, one acquirer indicated that it may be possible for acquirers to purchase similar services to ABU from alternative providers, although the respondent did not indicate who these alternative providers are. No other respondent to the first Section 81 Notice, or the second Section 81 Notice, told us there are alternatives to ABU. The responses from acquirers indicate there would be significant implications for merchants if they did not purchase this service and none of the acquirers have been able to secure discounts, rebates or delays to proposed fee increases.

### Dynamic Currency Matching (Mastercard)

- 4.152** Dynamic Currency Matching allows acquirers to segregate settlement activity by transaction currency, e.g. settle all euro transactions in euros, all US dollar transactions in US dollars, etc.<sup>257</sup> An acquirer told us that this is an optional service for acquirers which enables them to settle in their preferred regional settlement service based on the transaction currency.<sup>258</sup> It is enabled whenever the transaction currency is configured for the settlement selection criteria on the acquirer's settlement profile. Once configured, the regional settlement services are dynamically applied based on the transaction currency of each transaction. A fee does not apply to transactions settling in the regional default settlement service.<sup>259</sup>
- 4.153** The decision about whether to use this service is ultimately made by acquirers.

#### Mastercard's submissions

- 4.154** Mastercard submitted that the default settlement in regional settlement currencies remains free of charge to all customers as part of the settlement service and fee.<sup>260</sup> Mastercard customers can then choose to use Dynamic Currency Matching for all or a proportion of their transactions.
- 4.155** Mastercard submitted data which showed that [redacted] acquirers have chosen not to use the Dynamic Currency Matching service. Mastercard also submitted that [redacted], which it stated reflects that the shares of transactions included in the programme vary across acquirers.
- 4.156** Finally, Mastercard submitted that, more generally, when a customer wishes to obtain funds in a larger number of currencies, there are at least two additional levels of choice beyond Mastercard currency services to consider:
- One option is that acquirers have access to a range of providers of foreign exchange trading and hedging. Acquirers could then offer this service to their merchants in turn, e.g. through Dynamic Currency Conversion.
  - If a customer still wishes to receive settlement from Mastercard in multiple currencies based on transaction criteria, they could also choose to bundle transactions of a certain type within Interbank Card Association Numbers (ICAs) and BIN ranges and settle these transactions in different regional settlement currencies. This would not attract a separate fee.

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257 Mastercard response to PSR questions dated 2 October 2023. [redacted].

258 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

259 We have not been able to identify an equivalent service provided by Visa in this instance.

260 Mastercard response to PSR questions dated 2 October 2023. [redacted].

- 4.157** In response to our interim report, Mastercard submitted that, on several occasions, acquirers appear to have responded to the Section 81 Notice with incorrect information. Mastercard noted that two acquirers responded to us stating that, without the use of Dynamic Currency Matching, 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. Mastercard stated that this is incorrect.<sup>261</sup>
- 4.158** Mastercard also submitted that, based on the Section 81 responses we received from acquirers, FX markets are a viable alternative available to acquirers for Currency Services (which encompass Dynamic Currency Matching and Multi Currency Settlement). Mastercard submitted that the statements made by acquirers to the PSR suggests that acquirers are aware of the option to use FX markets and the fact that [redacted] acquirers choose not to purchase this service suggests that it is an optional service. Finally, Mastercard submitted that the statement that the choice of whether to use currency services may be driven by acquirers' business models is not supported by any evidence.<sup>262</sup>

#### **Acquirer responses to our second Section 81 Notice**

- 4.159** In response to our Section 81 Notice, eight out of ten acquirers told us that they had purchased the Dynamic Currency Matching service in the last twelve months.<sup>263</sup> In addition, one acquirer told us it does not purchase this service, but that it is used for its acquiring business and the cost is passed through to merchants.<sup>264</sup>
- 4.160** In the Section 81 Notice, we asked acquirers whether there are any alternative services which could address the same business need as Dynamic Currency Matching in the UK. None of the acquirers indicated there are any alternatives in response to this question.<sup>265</sup>
- 4.161** We further asked acquirers what the implications would be for them if they didn't use the service.<sup>266</sup> Three of the acquirers told us that it would put their business at a competitive disadvantage, as providing this service is seen as the industry standard in the market.<sup>267</sup> Three of the acquirers told us that they would have to undertake internal development work to amend their current set-up, which they further stated may be costly.<sup>268</sup> One acquirer told us that not using the service could result in higher settlement fees for merchants and less efficient processing of transactions.<sup>269</sup> Two of the acquirers told us 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.<sup>270</sup> One acquirer, which told us it does not purchase this service, did not respond to this question.<sup>271</sup>

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261 Mastercard response to MR22/1.9 (21 May 2024), page 34.

262 Mastercard response to MR22/1.9 (21 May 2024), page 39.

263 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

264 Stakeholder response to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

265 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

266 PSR information request dated 27 November 2023. [redacted].

267 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

268 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

269 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

270 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

271 Stakeholder response to PSR information request dated 27 November 2023. [redacted].



- 4.162** We asked acquirers whether, for the services they have chosen not to purchase, it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider.<sup>272</sup> Only one of the acquirers which responded to the Section 81 Notice told us it does not purchase the Dynamic Currency Matching service. It told us this is because it has not identified a requirement for the service.<sup>273</sup>
- 4.163** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed fee increases for Dynamic Currency Matching.<sup>274</sup>

#### Acquirer phone calls

- 4.164** We asked acquirers to explain how Dynamic Currency Matching works in practice. One acquirer told us that Dynamic Currency Matching allows acquirers to combine all transactions in any currency into one file submission which Mastercard then processes. Without this service, acquirers would have to submit separate files for each currency to Mastercard.<sup>275</sup> Similarly, another acquirer told us that Dynamic Currency Matching allows it to receive settlement from multiple currencies into a single Bank Identification Number. [redacted].<sup>276</sup>
- 4.165** Dynamic Currency Matching is often used alongside Multi-Currency Settlement; together they are known as 'Currency Services'. Acquirers told us that merchants that require these services want to be able to settle their transactions in the same currency as the transaction, rather than their base currency.<sup>277</sup>
- 4.166** We also asked whether the decision about whether to use the service is made by acquirers or merchants:
- One acquirer said that the decision is ultimately made by acquirers, but in practice the decision is more of a joint decision between acquirers and merchants. This is because the ability to use this service would be a core request of merchants in some sectors and acquirers would have to offer it in order to compete for those merchants. The acquirer provided the example of airline merchants, which would expect this service as part of an acquirer's core offering.<sup>278</sup>
  - One acquirer stated that larger CNP merchants who want to transact with customers outside their own country want Currency Services because their costs are in a foreign currency, or because they want to manage the exchange rates themselves rather than relying on Mastercard's exchange rates.<sup>279</sup>
  - Another acquirer said some businesses want like-for-like currency and large merchants would prefer to work with one acquirer that can meet their needs in different countries rather than having different acquirers in different countries.<sup>280</sup>

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272 PSR information request dated 27 November 2023 [redacted].

273 Stakeholder response to PSR information request dated 27 November 2023 [redacted].

274 Stakeholder responses to PSR information request dated 27 November 2023 [redacted].

275 [redacted].

276 [redacted].

277 [redacted].

278 [redacted].

279 [redacted].

280 [redacted].



- Finally, one acquirer said the decision about whether to use the service is made by the acquirer. It added that the service has been historically used to minimise the number of single currency Interbank Card Association (ICA) numbers used to support a wide range of scheme settlement currencies. The acquirer said that this service means that it can [redacted] and allows it to use FX markets to ensure best execution. However, the acquirer also stated that [redacted].<sup>281</sup>

**4.167** We asked acquirers whether merchants could still accept transactions in non-sterling currencies if they did not use Currency Services. [redacted].<sup>282</sup> This concurs with Mastercard's post-interim report submissions.

**4.168** Finally, we wanted to understand whether FX markets are a suitable alternative to Currency Services for acquirers:

- One acquirer stated that merchants could receive settlement in non-base currencies without Currency Services, but the cost of developing the required systems would be too high and FX work would be needed, so the cost is prohibitive. The acquirer told us that from a basic transactional point of view, it is not possible for FX markets to be an alternative to Dynamic Currency Matching.<sup>283</sup>
- Another acquirer said it is possible to use FX markets internally as an alternative, but that this would be quite unfavourable as banks would charge a mark-up on FX transactions.<sup>284</sup>
- Similarly, another acquirer said that it is possible for it to settle transactions in non-sterling currencies using FX markets, but this has not been a focus for it as the offering it has from the schemes fits its needs and is easy to take up.<sup>285</sup>
- Another acquirer stated that, while it is technically possible to use FX markets as an alternative, it would be extremely complex operationally and likely to be more expensive as it would require more FX transactions before funds reach the merchant.<sup>286</sup>
- Finally, one acquirer told us that it uses FX markets to ensure best execution. When asked to what extent FX markets are an alternative to Dynamic Currency Market, the acquirer told us that they are not an alternative. This is because the acquirer uses [redacted].<sup>287</sup>

### Summary of evidence

**4.169** Dynamic Currency Matching allows acquirers to segregate settlement activity by transaction currency – for example, settle all euro transactions in euros, all US dollar transactions in US dollars, etc.

**4.170** Two acquirers have told us during phone calls that it is important to offer this service if they wish to compete for merchants that require settlement in multiple currencies, such as airlines. Some acquirers may choose not to compete for these customers, so choose not to use this service.

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281 [redacted].

282 [redacted].

283 [redacted].

284 [redacted].

285 [redacted].

286 [redacted].

287 [redacted].

- 4.171** One of the potential alternatives to this service which we discussed with acquirers is the use of FX markets. However, none of the acquirers that responded to our Section 81 Notice or who we spoke to in phone calls thought these were viable alternatives. Acquirers stated that, while FX markets are a potential alternative, the practicalities of using FX markets as an alternative make them unviable. Specifically, acquirers noted the additional costs to themselves and to the merchant from using FX markets and the complexity of implementing this alternative.
- 4.172** The acquirers that purchased this service indicated that there would be significant implications for their business if they did not purchase this service. None of these acquirers have been able to secure discounts, rebates or delays to proposed fee increases.

### Identity Solutions (Mastercard) and Acquirer 3DS Authentication (Visa)

- 4.173** Identity Solutions is a set of optional services provided by Mastercard and includes a number of services for acquirers and merchants. Identity Check is [redacted] service, which is Mastercard's EMV 3DS solution and is intended to authenticate the identity of cardholders when undertaking CNP transactions. The Identity Solutions services are intended to ensure CNP payments remain secure while minimising the number of genuine transactions declined. Acquirers have the choice of whether or not to use the various Identity Solutions services. Similarly, the choice of whether to use the Identity Check service is ultimately made by merchants. In this section, we have considered the competitive constraint that Mastercard faces for its Identity Check service, as this is [redacted] and is equivalent to Visa's Acquirer 3DS Authentication service.
- 4.174** Acquirer 3DS Authentication is an optional service provided by Visa. This is Visa's EMVCo 3DS solution and is a technology used by merchants to authenticate the identity of a cardholder with the issuer for CNP transactions. [redacted]. The choice of whether to use the service is ultimately made by merchants.
- 4.175** We have chosen to analyse these services together as both services are intended to authenticate the identity of cardholders when undertaking CNP transactions. These two services are the schemes' respective solutions for implementing the EMV 3DS standard to meet SCA requirements in Europe.

#### Mastercard's submissions

- 4.176** Mastercard submitted that it offers a wide array of services and features to enhance the safety of transactions in its network.<sup>288</sup> Identity Solutions for acquirers refers to some of these services, but there are others as well. While the Payment Service Regulations 2017 (PSRs 2017) mandate SCA for certain transactions, Mastercard stated that it does not mandate the services that can be used to comply with this. It is also the case that there are exemptions to SCA, such as for low-value or low-risk transactions.<sup>289</sup> Mastercard also submitted that it offers delegated authentication, which can be used for tokenised transactions. This means for example that transactions using digital wallets can be authenticated without using the Identity Check service.

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<sup>288</sup> Mastercard response to PSR questions dated 2 October 2023. [redacted].

<sup>289</sup> Exemptions to SCA include: (i) trusted payees (or whitelists); (ii) recurring transactions; (iii) low-value transactions; and (iv) low-risk transactions.

**4.177** Mastercard also submitted that its data shows that [X] of its CNP transactions between October 2022 and September 2023 were authenticated using Identity Check. This included transactions for which there was no SCA exemption applicable as well as transactions for which an SCA exemption was available. Acquirers and merchants can also make use of SCA exemptions. Between June and September 2023, around [X] of Mastercard's CNP transactions were initiated making use of SCA exemptions.<sup>290</sup> Mastercard submitted this shows that acquirers can use different ways of complying with PSD2 and manage risks and increase approval rates.

**4.178** In response to our interim report, Mastercard submitted that while PSD2 mandates SCA for certain transactions, it is the responsibility of issuers and acquirers to implement the mandate. Mastercard submitted that there are different ways of complying with these regulatory requirements and that it does not mandate that Identity Check must be used to meet these requirements. This flexibility allows issuers and acquirers to make use of SCA exemptions including:

1. trusted payees (or whitelists)
2. recurring transactions
3. low-value transactions
4. low-risk transactions

**4.179** Mastercard submitted that between June 2023 and September 2023, [X]% of its CNP transactions made use of SCA exemptions.<sup>291</sup>

#### **Visa's submissions**

**4.180** Visa submitted that merchant participation in 3DS is optional.<sup>292</sup> Merchant service providers and acquirers offer 3DS capability to allow merchants to benefit from the security and convenience of 3DS in CNP environments.

**4.181** Visa submitted that the 3DS service is one of a number of solutions that help participants authenticate transactions. Alternatives include:

- Using another method of secure authentication, such as biometric authentication provided by a digital front-end (e.g., Apple Pay or Google Pay) and validated by VTS.
- Using risk analysis and risk management solutions offered by merchant service providers and acquirers to reduce the need for secure authentication. Paragraph 4.58 above lists the providers of risk detection services.<sup>293</sup>
- E-commerce merchants can also develop in-house capabilities to undertake secure authentication for CNP transactions.

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290 Mastercard response to PSR questions dated 2 October 2023. [X]. See also Mastercard response to MR22/1.9 (21 May 2024), page 43.

291 Mastercard response to PSR 'Market review of scheme and processing fees Interim Report' MR22/1.9, page 43.

292 Visa response to PSR questions dated 27 September 2023. [X].

293 These providers include Fico, SAS, Feedzai, Feature Space, and Brighterion. Acquirers such as Barclaycard and Worldpay also offer risk detection services known as Direct-to-Authorisation solutions.

- Visa estimates that in 2022, less than [redacted] of e-commerce transactions on Visa-issued cards used Visa's 3DS service. Further, 3DS has been developed collaboratively with other industry players through EMVCo to create a standardised framework for the entire payments industry which any party can use to create and adopt its own service while maintaining interoperability. The use of the Visa Directory Server is not mandatory for Visa card transactions and in some markets (e.g., Spain and France), 3DS transactions are processed using alternative Directory Servers.

#### Visa's internal documents

- 4.182** An external report produced in January 2022 for Visa by an external consultancy sought to 'understand how [redacted]'.<sup>294</sup> Among other things, the report discussed [redacted].
- 4.183** The document states that [redacted].<sup>295</sup>
- 4.184** The document also notes that [redacted].<sup>296</sup> The document goes on to highlight [redacted]. The document notes that [redacted].

#### Acquirers' responses to the PSR's First Section 81 Notice

- 4.185** We asked acquirers how they decide which scheme and processing services to purchase from the schemes, which services to purchase from alternative suppliers, and which not to purchase at all.<sup>297</sup> One respondent told us that when deciding which services to purchase from Mastercard and which to purchase from alternative suppliers, it takes into consideration 'whether or not functionality is mandated by the networks (i.e. Mastercard Identity Check)' and separately 'whether or not the functionality is mandated by the networks (i.e. Visa 3DS)'.<sup>298</sup> This suggests that Mastercard Identity Solutions and Visa 3DS are not optional services from the perspective of the acquirer and are mandated by Mastercard and Visa respectively. Another respondent told us that it purchases EMV 3DS from Visa and went on to state that these services 'aren't available from alternative providers as they are directly linked to the flow of funds and from data relating to the specific scheme'.<sup>299</sup>
- 4.186** We also asked acquirers whether there are alternatives available for acquirers that wish to offer UK merchants the ability to accept Visa-branded cards, but want to use non-Visa providers where possible.<sup>300</sup> One respondent submitted that for fraud protection tools, such as EMV 3DS, there are additional providers, but they are usually contracted out directly by the merchant.<sup>301</sup> None of the other acquirers indicated that there are alternatives to Visa 3DS service.

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294 [redacted].

295 [redacted].

296 [redacted].

297 PSR information request dated 11 January 2023. [redacted].

298 Stakeholder response to PSR information request dated 11 January 2023. [redacted].

299 Stakeholder response to PSR information request dated 11 January 2023. [redacted].

300 PSR information request dated 11 January 2023. [redacted].

301 Stakeholder response to PSR information request dated 11 January 2023. [redacted].

## Acquirers' responses to the PSR's Second Section 81 Notice

- 4.187** In response to our Section 81 Notice, nine out of ten acquirers told us they had purchased both the Identity Solutions and Acquirer 3DS Authentication services in the last 12 months.<sup>302</sup> The remaining acquirer told us it does not purchase these services, but the services are offered to its merchant customers and the cost is passed through.<sup>303</sup>
- 4.188** In the Section 81 Notice, we asked the acquirers whether there are any alternatives to Identity Solutions and Acquirer 3DS Authentication services for acquirers and merchants. None of the acquirers stated there are any alternatives for themselves or merchants in response to these questions.<sup>304</sup>
- 4.189** We further asked acquirers what the implications would be for the acquirer if they didn't use the Identity Solutions service.<sup>305</sup> All ten acquirers noted that it would cause negative consequences if they could not offer this service. Six acquirers stated that they would be at a competitive disadvantage if they did not use this service.<sup>306</sup> Of the other acquirers, two acquirers stated that decline rates would increase<sup>307</sup> and two acquirers stated this service is a regulatory requirement or it is an industry standard.<sup>308</sup> Two acquirers specified that this would impact ecommerce payments the most, however, they explained that the impact could be reduced if issuers agreed to exemptions on the requirements.<sup>309</sup> One acquirer explained that not using the Identity Solutions service would limit its ability to offer acceptance of e-commerce transactions to its merchants.<sup>310</sup>
- 4.190** Similarly, we asked acquirers what the implications would be for the acquirer if they didn't use the Acquirer 3DS Authentication service.<sup>311</sup> All acquirers stated negative consequences from not using this service. Five acquirers said there would be a competitive disadvantage from not using this service.<sup>312</sup> Five acquirers said that fraud or declines would increase.<sup>313</sup> Five acquirers said that it would be against SCA or PSD2 rules to not use this service for some transactions.<sup>314</sup> Two acquirers said it could limit their ability to offer acceptance of e-commerce transactions for their merchants.<sup>315</sup> Two acquirers noted that payments could be completed if issuers apply exemptions.<sup>316</sup>
- 4.191** We then asked acquirers to explain, based on their knowledge, what the implications of not using the Identity Solutions service would be on the categories of merchants which commonly use the service.<sup>317</sup> Eight of the acquirers mentioned that there would be

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302 Stakeholder responses to PSR information request dated 27 November 2023. [3].

303 Stakeholder response to PSR information request dated 27 November 2023 [3]; call with stakeholder [3].

304 Stakeholder responses to PSR information request dated 27 November 2023. [3].

305 PSR information request dated 27 November 2023. [3].

306 Stakeholder responses to PSR information request dated 27 November 2023. [3].

307 Stakeholder responses to PSR information request dated 27 November 2023. [3].

308 Stakeholder responses to PSR information request dated 27 November 2023. [3].

309 Stakeholder responses to PSR information request dated 27 November 2023. [3].

310 Stakeholder responses to PSR information request dated 27 November 2023. [3].

311 PSR information request dated 27 November 2023. [3].

312 Stakeholder responses to PSR information request dated 27 November 2023. [3].

313 Stakeholder responses to PSR information request dated 27 November 2023. [3].

314 Stakeholder responses to PSR information request dated 27 November 2023. [3].

315 Stakeholder responses to PSR information request dated 27 November 2023. [3].

316 Stakeholder responses to PSR information request dated 27 November 2023. [3].

317 PSR information request dated 27 November 2023. [3].

negative consequences for merchants for not using this service. One acquirer stated that the merchant may potentially be placed at a competitive disadvantage due to the widespread use of the service.<sup>318</sup> Other acquirers explained specific reasons merchants would be disadvantaged. Four acquirers said fraud/chargebacks would be likely to increase.<sup>319</sup> Two acquirers explained that declines/payment abandonment would increase.<sup>320</sup> One acquirer said that merchants would have to stop accepting e-commerce payments.<sup>321</sup> Two acquirers explained that it would not be compliant with the SCA rules to not use the service.<sup>322</sup>

**4.192** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the Acquirer 3DS Authentication service would be on the categories of merchants which commonly use the service.<sup>323</sup> Nine acquirers said there would be negative impacts on merchants not using the service.<sup>324</sup> Four acquirers said that it would not be compliant with SCA/PSD2.<sup>325</sup> Of these four, three said that fraud or declines could increase.<sup>326</sup> One acquirer said it could stop merchants from being able to accept CNP transactions while another said merchants would not be able to accept recurring transactions.<sup>327</sup> One acquirer said that without this service merchants could not authenticate transactions with 3DS.<sup>328</sup> Two acquirers explained it would leave merchants at a competitive disadvantage.<sup>329</sup>

**4.193** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. Only one acquirer told us it had been able to obtain funding for Identity Check. [redacted].<sup>330</sup> [redacted].<sup>331</sup> [redacted].

#### Acquirer phone calls

**4.194** In our calls with acquirers, two indicated that there are no suitable alternatives to Identity Solutions and 3DS Authentication, while one indicated that there are potential alternatives:

- One acquirer said that for ecommerce transactions there is no way to obtain two-factor authentication other than via 3DS, because the other possible ways are not supported by issuers. Other potential methods of obtaining two-factor authentication (for example, biometrics on a phone) would be classed as a non-secure transaction and the merchant would be liable in case of fraud. Any alternative to 3DS would require the agreement of all issuers and the acquirer cannot justify the expenditure to develop an alternative capability.<sup>332</sup>

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318 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

319 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

320 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

321 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

322 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

323 PSR information request dated 27 November 2023. [redacted].

324 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

325 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

326 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

327 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

328 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

329 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

330 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

331 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

332 [redacted].

- Another acquirer told us it sees authentication fees as being mandatory due to the PSD2 regulations.<sup>333</sup>
- However, one acquirer said that it is aware of authentication alternatives in some larger acquirers and that there are alternatives to Identity Solutions either provided by third parties or that can be developed in-house.<sup>334</sup>

### Merchants' responses to our request for information

- 4.195** In response to the merchant RFI, five merchants (out of ten responses) told us that they use Mastercard's Identity Check service.<sup>335</sup> One of these five merchants told us that the Identity Check service is mandatory from its perspective, as it has no other means of complying with SCA.<sup>336</sup> Of the five that do not use the service, two said they have no need for the service,<sup>337</sup> and three said their needs are addressed through other means, without specifying how this is achieved.<sup>338</sup>
- 4.196** We asked merchants about the potential alternative of making use of SCA exemptions for certain transactions under the PSRs 2017.<sup>339</sup> Among the five merchants that use Identity Check there was some indication that SCA exemptions are an alternative, but not all merchants are able to take advantage of them. For example, one merchant told us that it is on a legacy platform where the fraud check is performed post-authorisation, which means it is not allowed to use SCA exemptions.<sup>340</sup> Another merchant said it is not using SCA exemptions yet, but it is planning to utilise them via its fraud provider and gateway.<sup>341</sup> There was evidence that some merchants do use SCA exemptions as an alternative, as one merchant said it uses SCA exemptions for lower transaction amounts.<sup>342</sup> Another merchant stated that, while SCA exemptions are an alternative, there are limitations to using them as exemptions are not valid for all transactions and that there is a cost associated with using exemptions. For example, it told us that not all issuers support whitelists or approved merchant lists. Furthermore, the merchant said that Mastercard will charge a fee (the Acquirer Authentication Exemption Indicator) when these exemptions are used via the 3DS flow and also charge a fee where an exemption is used outside of the 3DS flow (that is, in the direct-to-authorisation flow). So, while SCA exemptions are valid in some scenarios, they are not a viable wholesale replacement and come at a cost.<sup>343</sup> The final merchant that uses Identity Check told us that it does not consider it has a valid business case to perform exemptions.<sup>344</sup>

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333 [redacted].

334 [redacted].

335 [redacted].

336 [redacted].

337 [redacted].

338 [redacted].

339 These exemptions include:

1. trusted payees (whitelists)
2. recurring transactions
3. low-value transactions
4. low-risk transactions

340 [redacted].

341 [redacted].

342 [redacted].

343 [redacted].

344 [redacted].



- 4.197** All three merchants that said they do not use Identity Check because their needs are addressed through other means said that SCA exemptions are not viable for all transactions because there are restrictions on their use – for example, they cannot be used for high-value transactions.<sup>345</sup> One of the two merchants that said they do not use Identity Check because they have no need for the service said it undertakes a mandated SCA when a new user registers an open loop credit or debit card.<sup>346</sup> The other merchant did not respond to the question on SCA exemptions as a potential alternative to the service.<sup>347</sup>
- 4.198** We also asked merchants what the implications would be for their business if they did not use the Identity Check service. Two of the five merchants that use this service said this question is not applicable,<sup>348</sup> with one stating that it is a legislative requirement and there are no available non-proprietary alternatives covering the full scope of the activity.<sup>349</sup> One merchant said that this service (and thereby being able to support 3DS) is a mandatory requirement for ecommerce transactions in PSD2/ SCA applicable markets. Not using it would result in non-compliance with the PSD2 regulation, a likely higher level of declines by Issuers and, where transactions are authorised, merchant liability for these transactions due to the fraud liability protection for 3D authenticated transactions.<sup>350</sup> Another merchant similarly stated that not using the service would result in insecure transactions that would be declined for ecommerce transactions,<sup>351</sup> and another merchant said there would be a higher risk of chargebacks and transaction disputes.<sup>352</sup>
- 4.199** When asked about Visa’s Acquirer 3DS Authentication service, seven merchants (out of ten responses) told us that they use this service.<sup>353</sup> Two of the merchants said they do not use the service because they have no need for it<sup>354</sup> and one merchant said that its needs are addressed through other means without specifying what they are.<sup>355</sup>
- 4.200** We asked merchants about the potential alternatives available to them for Visa’s Acquirer 3DS Authentication. Specifically, we asked them about the following potential alternatives:<sup>356</sup>
- a. Using another method of secure authentication, such as biometric authentication provided by a digital front end (such as Apple Pay or Google Pay) and validated by the Visa Token Service.
  - b. Using risk analysis and risk management solutions offered by merchant service providers and acquirers to reduce the need for secure authentication. Risk detection service providers include Fico, SAS, Feedzai, Featurespace, and Brighterion. Acquirers such as Barclaycard and Worldpay also offer risk-detection services (known as ‘direct-to-authorisation’ solutions).

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345 [redacted].

346 [redacted].

347 [redacted].

348 [redacted].

349 [redacted].

350 [redacted].

351 [redacted].

352 [redacted].

353 [redacted].

354 [redacted].

355 [redacted].

356 See paragraph 4.16.



- c. For transactions that do not require secure authentication, using an alternative authentication solution offered by acquirers and merchant service providers, such as Riskified, Stripe, RSA, Broadcom, Modirum, Worldline, RiskShield, iSoft, Signifyd, Callsign, and NuData.
- d. E-commerce merchants can develop in-house capabilities to undertake secure authentication for CNP transactions.

**4.201** Among the seven merchants that use Acquirer 3DS Authentication, two noted that the decision about whether to use Apple Pay or Google Pay is within the gift of the customer, not the merchant.<sup>357</sup> One of these merchants also noted that when these mobile wallets are used, Visa's token service fee would apply, so there would be no financial benefit.<sup>358</sup> Another merchant noted that this alternative would be viable, but the decision about whether to accept these is based on cost and the benefits to the user and business.<sup>359</sup> However, one merchant stated that this alternative is not viable for all types of transaction<sup>360</sup> and another merchant said mobile wallets do not address the risk for card-on-file transactions.<sup>361,362</sup>

**4.202** When asked about risk analysis and risk management solutions offered by third parties, one merchant said it already uses a risk engine offered by its PSP<sup>363</sup> and another merchant said this would be viable, but the decision is based on the costs and benefits to the user and business.<sup>364</sup> Another merchant also said it already uses these services, but they do not eliminate 3DS Authentication fees, because fees are charged for:

1. 3DS authentication
2. an exemption passed via 3DS, or
3. an exemption passed direct to authorisation

**4.203** So whichever option the merchant chooses, a fee is levied by Visa.<sup>365</sup> Another merchant said that these third-party solutions are not viable for all types of transaction.<sup>366</sup> Two merchants did not respond on this potential alternative,<sup>367</sup> and [redacted].<sup>368</sup>

**4.204** When asked about alternative authentication solutions offered by acquirers and merchant service providers (where secure authentication is not required), one merchant said it already uses a risk engine offered by its PSP.<sup>369</sup> Another merchant also said this option would be viable, but the decision would be based on the costs and benefits to the user and business.<sup>370</sup> Similarly, another merchant said these services would not be introduced

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357 [redacted].

358 [redacted].

359 [redacted].

360 [redacted].

361 [redacted].

362 One merchant did not respond to the question on this alternative. [redacted].

363 [redacted].

364 [redacted].

365 [redacted].

366 [redacted].

367 [redacted].

368 [redacted].

369 [redacted].

370 [redacted].

for in-store transactions as they have a lower fraud risk profile. However, they would be more appropriate for MOTO transactions and their use (where authentication is not required) will depend on the costs and benefits of using these services.<sup>371</sup> One merchant said these services would be costly as they have higher per-transaction pricing.<sup>372</sup> [redacted]<sup>373</sup>, and two did not respond to the question regarding this alternative.<sup>374</sup>

**4.205** We also asked the seven users of Acquirer 3DS Authentication about the potential alternative of developing in-house capabilities to undertake authentication for CNP transactions. Two merchants noted that a lot of work would be required to implement such a capability and it would need approval from issuers or the schemes.<sup>375</sup> One noted that developing these capabilities would have a high cost.<sup>376</sup> Another merchant stated it is unclear about the viability of this option from a legal point of view under the PSRs, where merchants are generally neither a PSP or ASPSP, and in any case, the route to pass data to the issuer would be via 3DS or Visa's authorisation systems.<sup>377</sup> One merchant said it uses Cardinal, which is a Visa company, and that there are numerous other providers<sup>378</sup> that offer 3DS based on the same principles and requirements as Cardinal, such as FFS Technologies and Elavon Gateway.<sup>379</sup> [redacted],<sup>380</sup> and one merchant did not respond to the question on this potential alternative.<sup>381</sup>

**4.206** One of the three merchants that told us they do not use Acquirer 3DS Authentication stated that using another method of secure authentication (such as digital wallets), using risk analysis and risk management solutions offered by third parties, and developing in-house capabilities to undertake secure authentication, would add additional complexity and supplier management. It also stated it uses SCA when asked about using alternative authentication solutions offered by acquirers and merchant service providers.<sup>382</sup> Two merchants did not respond to the question on the viability of alternatives to 3DS.<sup>383</sup>

**4.207** We also asked merchants what the implications would be for their business if the Visa Acquirer 3DS Authentication service was no longer available. Of the seven merchants that use this service, two said they would have no other way of processing a transaction that complies with legislation.<sup>384</sup> Two merchants said there would be an increase in fraud risks,<sup>385</sup> two said there would be an increase in chargebacks,<sup>386</sup> and two merchants said there would be more transaction disputes or rejections.<sup>387</sup> One merchant also said that this

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371 [redacted].

372 [redacted].

373 [redacted].

374 [redacted].

375 [redacted].

376 [redacted].

377 [redacted].

378 The merchant referred to 'TPP' providers, but we have assumed it meant 'TPP', which stands for Third Party Payment service provider.

379 [redacted].

380 [redacted].

381 [redacted].

382 [redacted].

383 [redacted].

384 [redacted].

385 [redacted].

386 [redacted].

387 [redacted].

service (and thereby being able to support 3DS) is a mandatory requirement for ecommerce transactions in PSD2/ SCA applicable markets. Not using it would result in non-compliance with the PSD2 regulation, a likely higher level of declines by issuers and, where transactions are authorised, merchant liability for these transactions due to the fraud liability protection for 3D authenticated transactions.<sup>388</sup>

### Summary of evidence

- 4.208** Mastercard Identity Check and Visa Acquirer 3DS Authentication are both used to authenticate the identity of cardholders when undertaking CNP transactions.
- 4.209** A report produced in January 2022 for Visa by an external consultancy indicates that [X]. However, we do not consider this to be a competitive constraint because, in this case, [X] service that is ultimately still supplied by Visa. Therefore, this service is not a competitive constraint supplied by a third party.
- 4.210** Acquirer responses to our Section 81 Notices suggest that there are no alternatives to Identity Solutions or Acquirer 3DS Authentication, both from the perspective of acquirers and of merchants. The responses also suggest that there may be significant implications for merchants that choose not to purchase this service, and none of the acquirers have been able to secure discounts, rebates, or delays to proposed fee increases. However, a respondent to our first Section 81 Notice stated that there are additional providers for 3DS, but they are usually contracted out directly by the merchant.
- 4.211** In response to our merchant RFI, half of merchants told us they use Mastercard's Identity Check service.<sup>389</sup> The merchants indicated that SCA exemptions are a potential alternative to Identity Check. However, this requires them to use the Acquirer Authentication Exemption Indicator, which also attracts a fee from Mastercard. The responses also indicate that, for those merchants that do use this service, there would be significant implications if they did not use it, in particular because it is seen as a legislative requirement.
- 4.212** The majority of merchants that responded to our RFI also said they use Visa's Acquirer 3DS Authentication service.<sup>390,391</sup> Merchants indicated that the potential alternatives to this service are ineffective substitutes and are unlikely to meet their needs. One merchant said there are numerous other providers who offer 3DS, but it is not clear from its response whether they rely on Visa's rails. The responses also indicate that, for those merchants that do use Visa's service, there would be significant implications if they did not use it.

### Mastercom (Mastercard)

- 4.213** Mastercom is the Mastercard system for administering chargebacks and dispute resolution. The choice of whether to use the service is ultimately made by acquirers.<sup>392</sup>

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388 [X].

389 Two merchants said they have no need for the service and three said their needs are addressed through other means.

390 We acknowledge that fewer merchants which responded to our RFI use the Mastercard Identity Solutions service than use the Visa Acquirer 3DS Authentication service. We would expect that the same number (and the same merchants) would use both as they are equivalent services.

391 Two of the merchants said they do not use this service because they have no need for it and one said its needs are addressed through other means.

392 Visa's equivalent service, Visa Resolve Online (VROL), was not included in the list we received from Visa. As a result, we did not specifically ask acquirers about it. However, the service was mentioned as an additional optional service by acquirers in response to our Section 81 Notice. See Table 6 in Annex A below.

## Mastercard's submissions

- 4.214** Mastercard submitted that issuers and acquirers can agree their own systems for managing disputes, which could include the appointment of a third party to assist them in the matter.<sup>393</sup> Disputes in payments are broader than chargebacks. Many differences can be settled before engaging in a formal chargeback process. For example, if there is a dispute about the product or services purchased, then these are often resolved outside of the Mastercard network.
- 4.215** Mastercard further submitted that third-party vendors also offer a range of different 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. These solutions aim to resolve chargebacks outside of the network's formal chargeback process.

## Mastercard internal documents

- 4.216** A document from 2016 discusses Mastercard Dispute Resolution initiative, which it was developing at the time.<sup>394</sup> A slide in this document discusses [redacted]. It also goes on to say: [redacted]. The document also discusses the background to the launch of Mastercard's new Dispute Resolution initiative, explaining that Mastercard is a 'legacy product originating in 1988' and that Mastercard is 'executing a new chargeback strategy to remain competitive, address evolving industry needs, and preserve & grow market share and revenue'.
- 4.217** A 2020 document comparing Mastercard's services to [redacted].<sup>395</sup>

## Visa internal documents

- 4.218** A Visa internal spreadsheet titled [redacted].<sup>396</sup> [redacted].<sup>397</sup> [redacted].<sup>398</sup>

## Acquirers' responses to our First Section 81 Notice

- 4.219** We asked acquirers whether there are alternatives available for acquirers that wish to offer UK merchants the ability to accept Mastercard or Visa-branded cards, but want to use non-Mastercard and non-Visa providers where possible.<sup>399</sup> One of the respondents stated that chargeback processing can only be offered by the network.<sup>400</sup>

## Acquirers' responses to the PSR's Second Section 81 Notice

- 4.220** In response to our Section 81 Notice, nine out of ten acquirers told us that they had purchased this service in the last twelve months.<sup>401</sup> The remaining acquirer told us it does not purchase this service, but uses this service for its acquiring business and passes the cost through to its merchant customers.<sup>402</sup>

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393 Mastercard response to PSR questions dated 2 October 2023. [redacted].

394 [redacted].

395 [redacted].

396 [redacted].

397 [redacted].

398 [redacted].

399 PSR information request dated 11 January 2023. [redacted].

400 Stakeholder response to PSR information request dated 11 January 2023. [redacted].

401 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

402 Stakeholder response to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

**4.221** In the Section 81 Notice, we asked acquirers whether there are any alternative services which could address the same business need as Mastercom. One respondent stated that Verifi (which is owned by Visa) and Chargebacks 911 were both alternative services.<sup>403</sup> The acquirer stated that it is not aware of any differences between these alternatives and Mastercom, but also has no experience of using these alternatives. The remaining acquirers stated that there are no alternatives to Mastercom. We also asked acquirers whether there are, to the best of their knowledge, alternative services that merchants could use instead of Mastercom in the UK. Eight of the ten respondents told us that this service is not used by merchants and therefore did not provide a response to this question.<sup>404</sup> The remaining two acquirers stated that they are not aware of any alternative services.<sup>405</sup>

**4.222** We further asked acquirers what the implications would be for the acquirer if they didn't use the service.<sup>406</sup> Eight of the ten acquirers stated that their offering would be negatively impacted or customers would choose alternatives if the acquirer did not offer this service.<sup>407</sup> Of these eight acquirers, five said that acquirers could not manage chargebacks without the service.<sup>408</sup> One of these stated that the service is mandatory for acquirers.<sup>409</sup> Three of the ten acquirers suggested that they could operate without buying this service, albeit there would be greater friction when managing chargebacks.<sup>410</sup>

**4.223** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed fee increases for Mastercom.<sup>411</sup>

### Summary of evidence

**4.224** Mastercom is the Mastercard system for administering chargebacks and dispute resolution.

**4.225** 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.

**4.226** One of the respondents to the first Section 81 Notice stated that chargeback processing can only be offered by the network. While this may be the case, this does not exclude that other mechanisms or options are available to acquirers to resolve disputes outside of the chargeback process. One of the respondents to our second Section 81 Notice stated that there are some third-party alternatives to Mastercom, including Visa's Verifi service.<sup>412</sup> A Mastercard internal document shows that it compares its Mastercom service with Verifi

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403 Stakeholder response to PSR information request dated 27 November 2023. [3].

404 Stakeholder responses to PSR information request dated 27 November 2023. [3].

405 Stakeholder responses to PSR information request dated 27 November 2023. [3].

406 PSR information request dated 27 November 2023. [3].

407 Stakeholder responses to PSR information request dated 27 November 2023. [3]. The other two [3] made general statements that they use this service to manage chargebacks but did not explicitly state the impact of not using it.

408 Stakeholder responses to PSR information request dated 27 November 2023. [3].

409 Stakeholder response to PSR information request dated 27 November 2023. [3].

410 Stakeholder responses to PSR information request dated 27 November 2023. [3].

411 Stakeholder responses to PSR information request dated 27 November 2023. [3].

412 Stakeholder response to PSR information request dated 27 November 2023. [3].

and both schemes are investing in their respective services. This could show that Mastercard is responding to competitive pressures in the market to improve its product and does suggest that Mastercard sees Visa as a competitor. However, it should be noted that the remaining respondents to our second Section 81 Notice stated that there are no alternatives to the Mastercom service, and the respondent which suggested there are third-party alternatives stated it had not used these alternatives itself.

- 4.227** The responses to our second Section 81 Notice also suggest there are significant implications for acquirers which do not purchase this service and none of the acquirers have been able to secure discounts, rebates or delays to proposed fee increases.

### Multi-Currency Settlement (Mastercard)

- 4.228** Multi-currency settlement applies if the transaction currency does not match the acquirer's settlement currency and it is not available as one of Mastercard's 30 regional settlement currencies. The decision about whether to use this service is ultimately made by merchants.<sup>413</sup>

#### Mastercard's submissions

- 4.229** Mastercard submitted that this fee would only be applied if a UK merchant chooses to offer transactions to their customers in minor currencies which are not one of Mastercard's 30 regional settlement currencies.<sup>414</sup> In general, when a customer wishes to obtain funds in a larger number of currencies, there are at least two additional levels of choice beyond Mastercard currency services to consider:
- One option is that acquirers have access to a range of providers of foreign exchange trading and hedging. Acquirers could then offer this service to their merchants in turn – for example, through Dynamic Currency Conversion.
  - If a customer still wishes to receive settlement from Mastercard in multiple currencies based on transaction criteria, they could also choose to bundle transactions of a certain type within ICAs and BIN ranges and settle these transactions in different regional settlement currencies. This would not attract a separate fee.
- 4.230** Following the publication of our interim report, Mastercard submitted that on several occasions, acquirers appear to have responded to the Section 81 Notice with incorrect information. Mastercard specifically noted that two acquirers responded to the PSR stating that they would not be able to support merchants that want to process transactions that do not use the same local currency as the merchant, and four acquirers stated that they would be unable to process or settle non-sterling transactions without the multi-currency settlement service. Mastercard stated that this is incorrect.<sup>415</sup>
- 4.231** Mastercard also submitted that, based on the Section 81 responses received from acquirers, FX markets are a viable alternative available to acquirers for Currency Services (which encompasses Dynamic Currency Matching and Multi Currency Settlement). Mastercard submitted that the statements made by acquirers to the PSR suggests that acquirers are aware of the option to use FX markets and the fact that [3] acquirers choose not to purchase this service suggests that it is an optional service. Finally, Mastercard

413 Visa's equivalent service, Multi-Currency Settlement, was not included in the list we received from Visa. As a result, we did not specifically ask acquirers about it. However, the service was mentioned as an additional optional service by acquirers in response to our Section 81 Notice. See Table 8 in Annex A below.

414 Mastercard response to PSR questions dated 2 October 2023. [3].

415 Mastercard response to MR22/1.9 (21 May 2024), page 34.



submitted that the statement that the choice of whether to use currency services may be driven by acquirers' business models is not supported by any evidence.<sup>416</sup>

### Acquirers' responses to the PSR's Second Section 81 Notice

- 4.232** In response to our Section 81 Notice, eight out of ten acquirers told us that they had purchased this service in the last twelve months.<sup>417</sup> Two acquirers told us that they had not purchased this service in the last twelve months,<sup>418</sup> with one of the acquirers telling us it does not purchase this service, but uses the service within its acquiring business and passes the cost through to its merchant customers.<sup>419</sup> While Mastercard told us that the choice of whether to use this service is ultimately made by merchants, three of the eight acquirers which had purchased this service in the last 12 months told us they do not make this service available to merchants,<sup>420</sup> and a further two acquirers told us that this is a service for acquirers rather than merchants.<sup>421</sup>
- 4.233** In the Section 81 Notice, we asked the acquirers whether there are any alternatives available to acquirers or merchants. None of the acquirers indicated there are any alternatives for themselves or merchants.<sup>422</sup>
- 4.234** We further asked acquirers what the implications would be for themselves if they didn't use the service.<sup>423</sup> All of the acquirers noted that there would be a negative impact on their competitiveness or ability to offer products if they could not use this service.<sup>424</sup> In particular, four acquirers said they would be unable to process or settle non-sterling transactions.<sup>425</sup> However, one of these acquirers explained that it does not support UK merchants to settle in other currencies.<sup>426</sup> Two acquirers explained that this would lead to a loss of foreign exchange revenue to the acquirer.<sup>427</sup>
- 4.235** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the Multi-Currency Settlement service would be on the categories of merchant which commonly use the service.<sup>428</sup> Of the four acquirers which offer this service to merchants and told us it is a merchant service, two said not using this service would expose merchants to foreign exchange risk,<sup>429</sup> one said merchants would not be able to process transactions in non-local currencies,<sup>430</sup> and one said merchants would be able to accept transactions in non-local currencies, but not be able to settle them.<sup>431</sup>

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416 Mastercard response to MR22/1.9 (21 May 2024), page 39.

417 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

418 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

419 Stakeholder response to PSR information request dated 27 November 2023 [3-]; call with stakeholder [3-].

420 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

421 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

422 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

423 PSR information request dated 27 November 2023. [3-].

424 Five acquirers [3-] stated a negative competitive impact. Six acquirers [3-] stated that they would not be able to offer non-Sterling settlement. Stakeholder responses to PSR information request dated 27 November 2023. [3-].

425 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

426 Stakeholder response to PSR information request dated 27 November 2023. [3-].

427 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

428 PSR information request dated 27 November 2023. [3-].

429 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

430 Stakeholder response to PSR information request dated 27 November 2023. [3-].

431 Stakeholder response to PSR information request dated 27 November 2023. [3-].

**4.236** We asked acquirers whether, for the services they have chosen not to purchase, it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider.<sup>432</sup> One acquirer told us it does not support Multi-Currency Settlement for merchants domiciled in the UK, so has no requirement for this service.<sup>433</sup>

**4.237** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed fee increases for Multi-Currency Settlement.<sup>434</sup>

#### Acquirer phone calls

**4.238** We asked acquirers how Multi-Currency Settlement works in practice. They told us that Multi-Currency Settlement allows merchants to receive settlement in the currency on which the transaction is based, so long as it is one of Mastercard's core currencies. If acquirers or merchants do not use Multi-Currency Settlement, merchants will receive settlement in their base currency and the exchange rate will be determined by Mastercard. Even if acquirers and merchants do use Multi-Currency Settlement, if the transaction takes place in a currency other than one of Mastercard's core currencies, merchants will receive settlement in their base currency.<sup>435</sup> We note that this description is not consistent with the description of the service provided by Mastercard.

**4.239** We also asked whether the decision about whether to use the service is made by acquirers or merchants:<sup>436</sup>

- One acquirer said that the decision is ultimately made by acquirers, but in practice the decision is more of a joint decision between acquirers and merchants. This is because the ability to use this service would be a core request of merchants in some sectors and acquirers would have to offer it in order to compete for those merchants. The acquirer provided the example of airline merchants, which would expect this service as part of an acquirer's core offering.<sup>437</sup>
- One acquirer stated that larger CNP merchants who want to transact with customers outside their own country want Currency Services because their costs are in a foreign currency, or because they want to manage the exchange rates themselves rather than relying on Mastercard's exchange rates.<sup>438</sup>
- Another acquirer said some businesses want like-for-like currency and large businesses would prefer to work with one acquirer that can meet their needs in different countries rather than having different acquirers in different countries.<sup>439</sup>

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432 PSR information request dated 27 November 2023. [redacted].

433 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

434 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

435 [redacted].

436 These submissions match those at 4.166 because the same answers were given for both services.

437 [redacted].

438 [redacted].

439 [redacted].



- Finally, one acquirer said the decision about whether to use the service is made by the acquirer. The acquirer said the service is primarily to support like-for-like currency settlement for merchants that wish to transact in functional currencies and receive settlement in those currencies. It offers settlement in a number of currencies in the UK and Europe. Where a merchant wishes to receive settlement outside these currencies, the acquirer will receive settlement from Mastercard [redacted].<sup>440</sup>

**4.240** Finally, we wanted to understand whether FX markets are a suitable alternative to Currency Services for acquirers:<sup>441</sup>

- One acquirer stated that merchants could receive settlement in non-base currencies without Currency Services, but the cost of developing the required systems would be too high and FX work would be needed, so the cost is prohibitive. The acquirer told us that from a basic transactional point of view, it is not possible for FX markets to be an alternative to Multi-Currency Settlement.<sup>442</sup>
- Another acquirer said it is possible to use FX markets internally as an alternative, but this would be quite unfavourable as banks would charge a mark-up on FX transactions.<sup>443</sup>
- Similarly, another acquirer said that it is possible for it to settle transactions in non-sterling currencies using FX markets, but this has not been a focus for it as the offering it has from the schemes fits its needs and is easy to take up.<sup>444</sup>
- Another acquirer stated that while it is technically possible to use FX markets as an alternative, it would be extremely complex operationally and likely to be more expensive as it would require more FX transactions before funds reach the merchant.<sup>445</sup>
- One acquirer said it uses FX markets to convert currencies [redacted]. However, it said that FX markets are complementary to the Multi-Currency Settlement service rather than a substitute.<sup>446</sup>

### Summary of evidence

**4.241** Multi-Currency Settlement allows acquirers to settle transactions in currencies other than the 30 Mastercard regional currencies.

**4.242** Acquirers stated that, while FX markets are a potential alternative, the practicalities of using FX markets as an alternative make them unviable. Specifically, acquirers noted the additional costs to themselves and to the merchant from using FX markets and the complexity of implementing this alternative. One acquirer stated that FX markets are complementary to this service, rather than being a substitute.

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440 [redacted].

441 Some of these points match those at 4.168 because the same answers were given for both services.

442 [redacted].

443 [redacted].

444 [redacted].

445 [redacted].

446 [redacted].

**4.243** Further, the acquirers that responded to our Section 81 Notice indicated that there would be significant implications if they chose not to purchase this service. In particular, not offering this service may reduce their ability to compete for merchants in certain sectors, such as airlines. None of the acquirers have been able to secure discounts, rebates, or delays to proposed fee increases.

### Pre-Authorisation (Mastercard)

**4.244** A Pre-Authorisation is an authorisation for a transaction to be completed at a later time and is typically used by merchants that do not know, at the time of Pre-Authorisation, what the final amount of the transaction will be. This service is commonly used by car rental companies, automated petrol pumps, and hotels. The choice of whether to use the service is ultimately made by merchants.<sup>447</sup>

#### Mastercard's submissions

**4.245** Mastercard submitted that merchants have alternative options within the Mastercard network that fulfil the same or all of this service's features. For example, merchants could use ASI to confirm the validity of the card's records, which would mitigate some of the payment risk to the merchant. Merchants could also charge the customer upfront and then, if necessary, process a partial refund or additional authorisation once the service has been delivered.

**4.246** Mastercard further submitted that merchants which use Pre-Authorisation to manage payments risks have multiple alternatives depending on the characteristics of each business. For example, this could be through:

- 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

**4.247** Mastercard also submitted data which shows that the use of the Mastercard Pre-Authorisation service varies significantly between different merchants, even those within the same merchant category. The data was presented for hotel, petrol station, and grocery merchants. It showed that some merchants are heavy users of the Pre-Authorisation service, for example [X], whereas other merchants in the same merchant category seldom use the service, for example [Y]. Mastercard submitted that this confirms that merchants take different approaches to their use of the options available to them which we have described above. We believe this evidence is more likely to show that different merchants have adopted different business models, even within the same sector. For example, among petrol stations, some merchants will choose to operate a 'pay at the pump' system which uses Pre-Authorisation, while some will choose to operate a model where customers pay in the kiosk after refuelling.

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<sup>447</sup> Visa's equivalent service, Estimated and Incremental Authorisations, was not included in the list we received from Visa. As a result, we did not specifically ask acquirers about it. However, the service was mentioned as an additional optional service by acquirers in response to our Section 81 Notice. See Table 6 in Annex A below.

- 4.248** In response to our interim report, Mastercard submitted that acquirers appear to have responded to our Section 81 Notice with incorrect information. In relation to the Pre-Authorisation service, Mastercard noted that the report said 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. However, Mastercard submitted data showing that merchants in some of these sectors do not use the Pre-Authorisation service, which suggests these merchants do not require it.<sup>448</sup>

#### Internal documents

- 4.249** A Mastercard document [redacted].<sup>449</sup>
- 4.250** The same document shows that the Pre-Authorisation fee in the UK is [redacted]. The difference according to the document is [redacted]. Mastercard also comments in the document that ‘conditions are different from country to country (e.g. different practices, different structures, different competitive situations – e.g. the Mastercard processing share is very different in, say, the UK and Germany)’.<sup>450</sup>
- 4.251** A separate internal document containing a planning session for 2023 indicates that [redacted].<sup>451</sup>

#### Acquirers’ responses to our second Section 81 Notice

- 4.252** In response to our Section 81 Notice, nine out of ten acquirers told us that they had purchased this service in the last twelve months.<sup>452</sup> The remaining acquirer told us it does not purchase this service, but the service is offered to its merchant customers and the cost is passed through.<sup>453</sup>
- 4.253** In the Section 81 Notice, we asked the acquirers whether there are any alternatives available to the Pre-Authorisation service for acquirers or merchants. None of the acquirers indicated there are any alternatives for themselves or merchants in response to these questions.<sup>454</sup>
- 4.254** We further asked acquirers what the implications would be for the acquirer if they didn’t use the service.<sup>455</sup> Seven acquirers stated that not using this service would negatively impact their acquiring business.<sup>456</sup> Three other acquirers stated that not using this service would lead to fines by the schemes for not adhering to the rules regarding final authorisation.<sup>457</sup> Two of the acquirers noted the importance of the service in some industries and not offering the service could lead to loss of business among these merchants.<sup>458</sup> Two other acquirers noted it would not be able to support merchant transactions where the final transaction value is unknown.<sup>459</sup>

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448 Mastercard response to MR22/1.9 (21 May 2024), page 34.

449 [redacted].

450 [redacted].

451 [redacted].

452 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

453 Stakeholder response to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

454 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

455 PSR information request dated 27 November 2023. [redacted].

456 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

457 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

458 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

459 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

- 4.255** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the Pre-Authorisation service would be on the categories of merchants which commonly use the service.<sup>460</sup> Eight of the acquirers mentioned negative consequences to merchants of not using the service.<sup>461</sup> 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.<sup>462</sup> Two acquirers noted that there would be increased risk of declines or funds not being paid.<sup>463</sup> Two acquirers said merchants would have increased difficulty complying with scheme rules if they did not use this service.<sup>464</sup> One acquirer explained that merchants would be at a competitive disadvantage from not using this service.<sup>465</sup>
- 4.256** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed increases in fees for this service.<sup>466</sup>

#### **Acquirer phone calls and written submission**

- 4.257** We spoke to three acquirers following Mastercard's submissions post-interim report where it suggested that not all merchants require Pre-Authorisation.
- 4.258** The acquirers told us that Pre-Authorisation is an important service for merchants in some sectors and is fundamental to the way they operate – for example, in hospitality and travel. Therefore, if acquirers did not offer the Pre-Authorisation service, they may not be able to compete for these merchants.
- 4.259** We asked one acquirer to explain its response to our second Section 81 Notice, where it stated it may be unable to support certain merchants or merchant categories without Pre-Authorisation.<sup>467</sup> The acquirer explained that Pre-Authorisation is an integral part of acceptance, similar to standard authorisation. Its primary use case is with hotels or merchants where goods are delayed and additional spend may occur. The acquirer told us that this service is fundamental to the way hotels operate, and if it did not offer this service it would not be able to fulfil the requirements of merchants in this sector (and other sectors with staggered delivery times and delayed charges).<sup>468</sup>
- 4.260** We asked the other acquirers about the importance of Pre-Authorisation to merchants in the travel and hospitality sector. One acquirer similarly said it is not realistic for the hospitality sector to seek workarounds for Pre-Authorisation – for example, by charging for services each time at the point of sale (POS).<sup>469</sup>

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460 PSR information request dated 27 November 2023. [3-].

461 One of the acquirers which uses Pre-Authorisation ([3-]) did not respond to this question.

462 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

463 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

464 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

465 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

466 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

467 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

468 [3-].

469 [3-].

- 4.261** We also asked another acquirer about its response to our Section 81 Notice, where it said that merchants operating with travel MCCs (merchant category codes) expect Pre-Authorisation as standard functionality. The acquirer explained that hotels charge customers upfront, but keep authorisation on file to capture additions to the original transaction. The acquirer told us that this is common in the travel industry, but it is also opening up in other industries.<sup>470</sup>
- 4.262** One acquirer responded that the current model (which uses Pre-Authorisation) reduces friction, improves the customer experience, and is regarded as convenient. It stated that there are specific scheme rules in place, with Pre-Authorisation and incremental transactions being heavily embedded in the scheme rules as the approach to be used in these sectors. The acquirer said that Pre-Authorisation is deemed optional by Mastercard because not all merchants require it, but in some merchant sectors acquirers are expected to provide it. The acquirer told us that a large number of fintechs are now operating in the acquiring space, driving innovation. This means that, for some services, acquirers previously had a choice about whether to offer them or not, but now they are seen as a core service which they must offer.<sup>471</sup>
- 4.263** We went on to ask the acquirers about the potential alternatives to Pre-Authorisation that were suggested by Mastercard.
- 4.264** One acquirer said these are not viable without taking some sort of credit risk on the transaction. The acquirer said the most straightforward way to address this risk is for merchants to charge upfront, but this would require a change in consumer behaviour and in the way the travel industry operates. The acquirer also said that the alternative of merchants charging upfront and partially refunding would come under scrutiny from acquirers and schemes.<sup>472</sup>
- 4.265** Another acquirer provided a written submission in lieu of a phone call. It told us that merchants which do not use Pre-Authorisation may have to break down a single transaction into multiple transactions, as used to happen with debit transactions. In the past, prior to the schemes harmonising their rules across debit, credit and prepaid products, these merchants would only accept credit card transactions due to the greater flexibility of credit transactions and processing restrictions on debit transactions. The acquirer said Pre-Authorisation is most commonly used by hotels, car-hire operators, cruise liners, taxis, ride sharers (e.g., adding a tip after authorisation has taken place), and in ecommerce transactions where stock is not checked until after the authorisation has taken place (which could be in a number of ways). The acquirer said that, to its knowledge, there are currently no market alternatives available to merchants for Pre-Authorisation in these sectors.<sup>473</sup>

#### **Merchants' responses to our request for information**

- 4.266** In response to the merchant RFI, five merchants (out of ten responses) told us that they use Mastercard's Pre-Authorisation service.<sup>474</sup> The remaining five merchants said they don't use the service because they do not need it.<sup>475</sup>

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470 [3].

471 [3].

472 [3].

473 [3].

474 [3].

475 [3].

**4.267** We asked merchants about the potential alternatives available to them for Pre-Authorisation and whether each alternative is capable of meeting their business's needs. Specifically, we asked them about the following potential alternatives:<sup>476</sup>

- a. Merchants could provide a checkout option after purchase instead of using Pre-Authorisation. For example, petrol stations could charge the exact amount to customers after refuelling, and hotels could charge customers for extras such as food and drink at the point of sale.
- b. Merchants could limit customer usage to a pre-set amount. For example, petrol stations could limit the amount of fuel customers can purchase.
- c. Merchants could charge customers a deposit to cover expenses. For example, car rental companies could charge customers a deposit to cover potential damage.
- d. Merchants could charge customers at the point where goods or services are consumed rather than Pre-Authorise and settle later. For example, hotels with restaurants and bars could charge at the POS rather than when a customer checks out.
- e. Merchants could charge customers upfront, then (partially) refund for any services not used or conduct an additional authorisation where the customer consumes more. For example, an online supermarket could charge the customer when the order has been finalised, then issue a refund where an item is not in stock.

**4.268** Among the five merchants which use Pre-Authorisation, three said the alternative of charging customers a deposit to cover expenses is not relevant to their business.<sup>477</sup> Of the remaining two, one said customers can leave a cash deposit, but they may need to top it up while using their services,<sup>478</sup> and the other said they already do this when customers make CNP payments through their app.<sup>479</sup>

**4.269** When asked about charging customers at the POS rather than using Pre-Authorisation, two merchants said this is not viable, with one saying there is an increased risk of theft<sup>480</sup> and one saying the nature of its business means its POS devices may be out of communications range.<sup>481</sup> However, two merchants suggested this is viable, with one stating that it offers customers different payment options, including paying in advance,<sup>482</sup> and one saying it offers Merchant Initiated Transaction payments (which are paid after consumption) within its mobile payments app.<sup>483, 484</sup>

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476 See paragraph 4.16.

477 [redacted].

478 [redacted].

479 [redacted].

480 [redacted].

481 [redacted].

482 [redacted].

483 [redacted].

484 One merchant did not respond to this question on this specific alternative as it is not applicable to its business. [redacted].

- 4.270** When asked about the potential alternative of charging customers upfront and then partially refunding for goods or services not used, three out of the five merchants that use Pre-Authorisation noted that this would probably result in higher costs.<sup>485</sup> Of the remaining two, one said this is unviable, as its charges can range from zero up to £20,000,<sup>486</sup> and [redacted].<sup>487</sup>
- 4.271** When asked about the potential alternative of limiting customer usage to a pre-set amount, [redacted].<sup>488</sup> [redacted].<sup>489</sup> One merchant said the risk of fraud would still exist, regardless of the limit set, and there is also a danger of setting the limits at levels which exclude some customers.<sup>490</sup> One merchant said this is not an option in the sector which it operates in (fuel) as Mastercard have recently introduced additional costs and charges for fuel and electric vehicle MCCs.<sup>491</sup> The final merchant did not respond to this question regarding this potential alternative.<sup>492</sup>
- 4.272** Finally, we asked the five merchants which use Pre-Authorisation whether they could provide a checkout option after purchase instead of using Pre-Authorisation. Three of the merchants noted this option carries a potential risk of non-payment – for example, due to theft or due to lack of funds in a customer account.<sup>493</sup> [redacted].<sup>494</sup> However, the fifth merchant said that it offers customers a choice of payment options, one of which allows them to pay upfront for their services.<sup>495</sup>
- 4.273** Among the five merchants that do not use Pre-Authorisation, only one responded to the question on the viability of potential alternatives. The merchant told us that providing a checkout option after purchase instead of Pre-Authorisation is not viable, as customers may not have sufficient funds in their account. The merchant also said that charging customers at the POS rather than using Pre-Authorisation is the current model used in its sector, but there may be a risk of customers having insufficient funds in their account for merchants in other sectors. In response to the alternative of merchants charging customers upfront and then partially refunding for any goods or services not used, it said ecommerce merchants currently ring-fence the estimated value of the basket (and some add 10% to cover any changes in price) and the customer is only charged the final amount, while refunds add friction to the customer journey. Finally, the merchant said charging customers a deposit to cover expenses is not applicable to its business.<sup>496</sup>

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485 [redacted].

486 [redacted].

487 [redacted].

488 [redacted].

489 [redacted].

490 [redacted].

491 [redacted].

492 [redacted].

493 [redacted].

494 [redacted].

495 [redacted].

496 [redacted].



**4.274** We also asked merchants what the implications would be if they did not use the Pre-Authorisation service within their business and what action they would take if it was no longer available. Of the five merchants which use the Pre-Authorisation service, two said there would be an increased risk of theft or fraud<sup>497</sup> and one said it would not be able to charge customers that do not turn up to use its services.<sup>498</sup> Another merchant said there would be an increase in declined transactions,<sup>499</sup> and another that it would have to rely on holding cash or use direct bank transfers.<sup>500</sup>

### Summary of evidence

- 4.275** Pre-Authorisation is typically used by merchants that do not know, at the time of Pre-Authorisation, what the final amount will be.
- 4.276** One of Mastercard's internal documents indicates that [redacted]. We note that these differences in prices may be partly due to competition. The document adds that [redacted]. However, the document does not explain to what degree competition is a factor in pricing compared to the other factors listed in the document, i.e. different practices and structures.
- 4.277** The responses to our second Section 81 Notice indicate that acquirers consider that they, and merchants, do not have any alternatives to this service and there are significant implications for merchants that choose not to use this service.
- 4.278** The responses to the Section 81 Notice indicate that none of the acquirers have been able to secure discounts, rebates, or delays to proposed fee increases. However, a Mastercard internal document provides some indication that [redacted]. 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 constraints on Mastercard. In addition, the internal document relates to Mastercard's European business and [redacted].
- 4.279** Our phone calls with acquirers confirmed their views that there are unlikely to be any credible alternatives to Pre-Authorisation. In particular, the acquirers we spoke to suggested that any potential alternatives would require changes to the business models of merchants in sectors that are significant users of this service, such as hotels.
- 4.280** In response to our merchant RFI, half of the merchants told us that they use Pre-Authorisation while the other half told us they do not use the service because they do not need it. The merchant responses also indicated that the potential alternatives mentioned by the schemes are only viable for certain types of merchant or business model, and that they still rely on other Mastercard services. Among the merchants that use Pre-Authorisation, we were told that if they did not use it there would be an increased risk of theft, fraud, or declined transactions, and some merchants may find card payments unattractive.

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497 [redacted].

498 [redacted].

499 [redacted].

500 [redacted].



## Reports (Mastercard)

- 4.281** Mastercard delivers reports through a web-based portal to acquirers (the Reports service). These reports contain a wide range of information, but may [redacted]. The reports, in most cases, are based on the acquirer's own transaction, event, and billing data. The choice of whether to use the Reports service is ultimately made by acquirers.

### Mastercard's submissions

- 4.282** Mastercard submitted that customers can opt-in to receive specific reports which they believe will provide value to them. If no active decision is taken, they will not receive the report and will not incur the associated fee.
- 4.283** The insights provided 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.
- 4.284** Mastercard expects that most customers will receive insights from third parties, either to complement Mastercard's offering or as a direct alternative. Third parties which provide these services include RBR, Lafferty, as well as the acquirers themselves. These providers offer different service propositions, but all seek to provide data analytics and customer insight.

### Acquirers' responses to the PSR's First Section 81 Notice

- 4.285** We asked acquirers whether there are alternatives available for acquirers that wish to offer UK merchants the ability to accept Mastercard-branded cards, but want to use non-Mastercard providers where possible.<sup>501</sup> One of the acquirers which responded said there are alternatives to Mastercard's reporting service, since acquirers could use their own data to create reports.<sup>502</sup>

### Acquirers' responses to the PSR's Second Section 81 Notice

- 4.286** In response to our Section 81 Notice, eight out of ten acquirers told us that they had purchased this service in the last 12 months.<sup>503</sup> One of the remaining acquirers told us it does not purchase this service, but uses the service for its acquiring business and passes the cost through to its merchant customers.<sup>504</sup>
- 4.287** In the Section 81 Notice, we asked the acquirers whether there are any alternative services which could address the same business needs as the Reports service in the UK. None of the acquirers indicated there are any alternatives in response to these questions.<sup>505</sup>

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501 PSR information request dated 11 January 2023. [redacted].

502 Stakeholder responses to PSR information request dated 11 January 2023. [redacted].

503 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

504 Stakeholder response to PSR information request dated 27 November 2023 [redacted]; call with stakeholder [redacted].

505 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

- 4.288** We further asked acquirers what the implications would be for themselves if they didn't use the service.<sup>506</sup> Nine out of the ten acquirers mentioned that not using the service would harm their proposition or make them less competitive.<sup>507</sup> Nine of the ten acquirers stated that not using this service would mean they would find it more difficult to accurately reconcile and identify transactions which incurred fees.<sup>508</sup> One of these acquirers noted that they may be able to use internal reports, but these could not have an equivalent amount of data.<sup>509,510</sup>
- 4.289** We asked acquirers whether, for the services they have chosen not to purchase, it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider.<sup>511</sup> One acquirer told us it does not purchase the Reports service because its business and its merchant customers do not require it.<sup>512</sup>
- 4.290** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services.<sup>513</sup> One acquirer told us it was able to obtain funding for its Merchant Billing Report [redacted].<sup>514</sup> The remaining acquirers told us they had not been able to secure any discounts, rebates, or delays to fee increases from Mastercard.

### Summary of evidence

- 4.291** Mastercard delivers reports through a web-based portal to acquirers (the Reports service). These reports contain a wide range of information, but may [redacted]. The reports, in most cases, are based on the acquirer's own transaction, event and billing data.
- 4.292** An acquirer which responded to our first Section 81 Notice stated that acquirers could use their own data to create their own reports.<sup>515</sup> A different acquirer, which responded to our second Section 81 Notice, told us that they may be able to use their own internal reports, but these would not have the equivalent amount of data compared to Mastercard's.<sup>516</sup>
- 4.293** Mastercard also submitted that there are third parties which can provide reporting services to acquirers. However, none of the respondents to our second Section 81 Notice mentioned these third parties, or any other alternative service.
- 4.294** The majority of respondents to our second Section 81 Notice indicated that there would be significant implications if they did not use the Mastercard Reports service. Further, the majority of acquirers stated that they were unable to secure discounts, rebates, or delays to increases in fees from Mastercard.

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506 PSR information request dated 27 November 2023. [redacted].

507 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

508 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

509 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

510 Another stakeholder [redacted] made general statement that they use the service for its intended use.

511 PSR information request dated 27 November 2023. [redacted].

512 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

513 PSR information request dated 27 November 2023. [redacted].

514 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

515 Stakeholder responses to PSR information request dated 11 January 2023. [redacted].

516 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

## SMS Raw Data and Reports (Visa)

**4.295** SMS Raw Data and Reports are services that provide acquirers with transaction-level settlement details to support reconciliation, research, and billing. The choice of whether to use the service is ultimately made by acquirers.

### Visa submission's

**4.296** Visa submitted that its SMS Raw Data and SMS Reports service is one of a range of tools that exist to support acquirers with their internal business operations, including reconciliation, treasury funds management, and billing.<sup>517</sup> Acquirers typically undertake these activities in-house by leveraging their transaction data and commercial experience.

**4.297** Visa also submitted that there is a range of third-party service providers in the market who support acquirers to analyse their transaction data. For example, RS2 provides reconciliation services for SMS transactions.

### Acquirers' responses to the PSR's Second Section 81 Notice

**4.298** In response to our Section 81 Notice, seven out of ten acquirers told us that they had purchased this service in the last 12 months.<sup>518</sup> One of the remaining acquirers told us it does not purchase this service, but uses the service within its acquiring business and passes the cost through to its merchant customers.<sup>519, 520</sup>

**4.299** In the Section 81 Notice, we asked the acquirers whether there are any alternative services which could address the same business needs as the SMS Raw Data and Reports service in the UK. None of the acquirers indicated there are any alternatives in response to this question.<sup>521</sup>

**4.300** We further asked acquirers what the implications would be for themselves if they didn't use the service.<sup>522</sup> Six acquirers said that not using the service could negatively impact acquirers.<sup>523</sup> Two of the respondents did not provide a response, one of which told us they do not purchase the service.<sup>524</sup> Three of the acquirers explained that this service is essential to use the Visa Direct service.<sup>525</sup> One of these explained that the Visa Direct service is mandated for gambling merchants.<sup>526</sup> In addition to these three acquirers, one other acquirer said it would be unable to service gaming merchants without this service.<sup>527</sup> Two of the merchants said not using the service would be a competitive disadvantage.<sup>528</sup> One acquirer said the service is essential to normal operations and it could not operate the business without it.<sup>529</sup> There was only one acquirer which said that not using the service would have no impact on its business because none of its merchant customers require the service.<sup>530</sup>

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517 Visa response to PSR questions dated 27 September 2023. [3].

518 Stakeholder responses to PSR information request dated 27 November 2023. [3].

519 Stakeholder response to PSR information request dated 27 November 2023 [3]; call with stakeholder [3].

520 Two acquirers [3] stated that they did not purchase this service.

521 Stakeholder responses to PSR information request dated 27 November 2023. [3].

522 PSR information request dated 27 November 2023. [3].

523 Stakeholder responses to PSR information request dated 27 November 2023. [3].

524 Stakeholder responses to PSR information request dated 27 November 2023. [3].

525 Stakeholder responses to PSR information request dated 27 November 2023. [3].

526 Stakeholder responses to PSR information request dated 27 November 2023. [3].

527 Stakeholder responses to PSR information request dated 27 November 2023. [3].

528 Stakeholder responses to PSR information request dated 27 November 2023. [3].

529 Stakeholder responses to PSR information request dated 27 November 2023. [3].

530 Stakeholder response to PSR information request dated 27 November 2023. [3].

**4.301** We asked acquirers whether, for the services they have chosen not to purchase, it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider.<sup>531</sup> Both of the acquirers which told us they did not purchase this service told us this is because they do not require it.<sup>532</sup>

**4.302** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed fee increases for this service.<sup>533</sup>

### Summary of evidence

**4.303** SMS Raw Data and Reports is a service where the decision about whether to use it is ultimately made by acquirers.

**4.304** Visa submitted that acquirers have a range of options available to them to support their internal business operations. None of the acquirers that responded to our Section 81 Notice mentioned these alternatives. In addition, acquirers highlighted that there are significant implications if acquirers do not use the service and none of the acquirers have been able to secure discounts, rebates or delays to proposed fee increases.

### TC33 Clearing and Settlement Advice (Visa)

**4.305** TC33 Clearing and Settlement (CAS) Advice is a service that provides acquirers with transaction-level settlement details to support reconciliation, research, and billing. The choice about whether to use the service is ultimately made by acquirers.

### Visa's submissions

**4.306** Visa submitted that the CAS Advice service is one of a range of tools that exist to support acquirers with their internal business operations, including reconciliation and treasury funds management.<sup>534</sup> Acquirers typically undertake these activities in-house by leveraging their transaction data and commercial experience.

**4.307** Visa also submitted that acquirers can additionally choose to purchase optional CAS Advice reports to support their business operations or choose not to use Visa's CAS Advice service.

**4.308** Finally, Visa submitted that there is a range of third-party providers in the market who support acquirers to analyse their transaction data. Some examples of these providers include Sage, Trintech, RS2, and Kani.

### Acquirers' responses to the PSR's Second Section 81 Notice

**4.309** In response to our Section 81 Notice, seven out of ten acquirers told us that they had purchased this service in the last 12 months.<sup>535, 536</sup>

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531 PSR information request dated 27 November 2023. [3-].

532 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

533 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

534 Visa response to PSR questions dated 27 September 2023. [3-].

535 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

536 Three acquirers [3-] did not purchase this service.

- 4.310** In the Section 81 Notice, we asked the acquirers whether there are any alternative services which could address the same business needs as the TC33 CAS Advice service in the UK. None of the acquirers indicated there are any alternatives in response to this question.<sup>537</sup>
- 4.311** We further asked acquirers what the implications would be for themselves if they didn't use the service.<sup>538</sup> Three acquirers said that they do not use the service.<sup>539</sup> One acquirer said it would not be able to operate its business,<sup>540</sup> another said not using it would impact its service performance,<sup>541</sup> and one acquirer said it stopped purchasing the service as it is no longer utilised.<sup>542</sup> Of the remaining seven acquirers, three of these said that they would struggle to correctly bill interchange payments.<sup>543</sup>
- 4.312** We also asked acquirers for each of the services they have chosen not to purchase, whether it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider. One acquirer explained that it does not purchase TC33 CAS Advice from Visa because it uses alternative data from its internal platforms and the Visa Analytics Platform.<sup>544</sup> The acquirer stated that it uses these alternatives due to the excessive cost of TC33 CAS Advice (circa £2 million per annum). [redacted]. Another acquirer explained that it does not purchase TC33 CAS Advice because it has built this ability within its own systems so does not require these reports.<sup>545</sup> The remaining respondents stated they had not purchased the service because they did not require it.
- 4.313** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. [redacted].<sup>546</sup> [redacted].<sup>547</sup> [redacted].

#### Acquirer phone calls

- 4.314** In our phone calls with acquirers, one acquirer mentioned the TC33 reports provided by Visa as an example of a reporting service for which there are no alternatives. The acquirer said it needed these reports to understand its compliance with scheme rules and to identify which merchants are responsible for non-compliance, so that it can bill them appropriately.<sup>548</sup> Another acquirer noted that whether an acquirer needs a report depends on how an acquirer is set up.<sup>549</sup> For example, it said some acquirers have developed an 'interchange engine' which they can use to calculate interchange fees themselves, but they are difficult to maintain and have large overheads. However, those acquirers that do not have an interchange fee engine are wholly dependent on getting that information from the schemes, especially if they have merchants set up on IC++ contracts.

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537 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

538 PSR information request dated 27 November 2023. [redacted].

539 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

540 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

541 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

542 Stakeholder response to PSR questions dated 08 February 2024. [redacted].

543 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

544 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

545 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

546 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

547 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

548 [redacted].

549 [redacted].

## Summary of evidence

- 4.315** TC33 CAS Advice is a service where the decision about whether to use it is ultimately made by acquirers.
- 4.316** Three of the acquirers that responded to our Section 81 Notice told us that they do not use this service.<sup>550</sup> Two of these acquirers further clarified that they do not purchase this service because they are able to use their own internal data as an alternative.<sup>551</sup> The remaining acquirer said it has not purchased the service because it is not aware of it and neither it nor its merchants require it.<sup>552</sup>
- 4.317** Visa submitted that there are a range of third-party providers in the market which support acquirers to analyse and better utilise their transaction data, although none of the acquirers listed these as alternatives to the TC33 CAS Advice service. We also note that one acquirer told us that it decided not to purchase this service as the cost of purchasing it was significantly higher than the service which it replaced.<sup>553</sup>
- 4.318** [redacted].<sup>554</sup> [redacted].

## TC33 POS Advice (Visa)

- 4.319** TC33 POS Advice is a service that allows acquirers to receive authorisation and authorisation reversal details on a subscription basis. The choice of whether to use the service is ultimately made by acquirers.

### Visa's submissions

- 4.320** Visa submitted that payment intermediaries will sometimes authorise card transactions on behalf of the acquirer and subsequently share details of these authorisations (and reversals) with the acquirer.<sup>555</sup> The acquirer will supplement these details with further information from its own systems before submitting the transaction data to Visa for clearing.
- 4.321** Visa further submitted that there is a range of proprietary solutions, technical formats, and protocols that acquirers and payment intermediaries can use for this purpose. Visa's TC33 POS Advice is one of the many solutions that enables acquirers to receive authorisation and reversal details.
- 4.322** Finally, Visa submitted that in the UK, the service is only used for [redacted] of Visa card transactions (approximately [redacted] of UK transaction volume). Acquirers can and do use other solutions to receive authorisation and reversal details from payment intermediaries, including on Visa transactions. Visa noted that acquirers typically manage this activity in-house and Visa does not have visibility of the other solutions available.

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550 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

551 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

552 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

553 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

554 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

555 Visa response to PSR questions dated 27 September 2023. [redacted].



## Acquirers' responses to the PSR's Second Section 81 Notice

- 4.323** In response to our Section 81 Notice, four out of ten acquirers told us that they had purchased the service in the last 12 months.<sup>556,557</sup>
- 4.324** In the Section 81 Notice, we asked the acquirers whether there are any alternative services which could address the same business needs as the TC33 POS Advice service in the UK. None of the ten acquirers indicated there are any alternatives in response to this question.<sup>558</sup>
- 4.325** We further asked acquirers what the implications would be for themselves if they didn't use the service.<sup>559</sup> Four acquirers did not respond to this question.<sup>560</sup> One acquirer said there may be competitive disadvantages from not using this service,<sup>561</sup> and another acquirer said not offering the service to merchants may place the acquirer at a competitive disadvantage due to its widespread use.<sup>562</sup> One acquirer explained that it would not be able to bill interchange payments correctly.<sup>563</sup> One said it would not be able to match certain authorisations to clearing which could lead to authorisation/clearing mismatching and data integrity penalties.<sup>564</sup>
- 4.326** We also asked acquirers for each of the services they have chosen not to purchase, whether it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider. One acquirer explained that it does not purchase TC33 POS Advice because it has built this ability within its own systems so does not require these reports.<sup>565</sup> The remaining respondents stated they had not purchased the service because they did not require it.
- 4.327** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they have been able to secure discounts, rebates, or delays to proposed fee increases for TC33 POS Advice.<sup>566</sup>

## Acquirer phone calls

- 4.328** In our phone calls with acquirers, one acquirer mentioned the TC33 reports provided by Visa as an example of a reporting service for which there are no alternatives. The acquirer said it needed these reports to understand its compliance with scheme rules and to identify which merchants are responsible for non-compliance, so that it can bill them appropriately.<sup>567</sup> One acquirer also noted that reporting needs to be obtained from the relevant scheme, but whether an acquirer needs a report depends on how an acquirer is set up.<sup>568</sup>

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556 Stakeholder responses to PSR information request dated 27 November 2023. [3].

557 Six acquirers [3] told us they did not purchase this service.

558 Stakeholder responses to PSR information request dated 27 November 2023. [3].

559 PSR information request dated 27 November 2023. [3].

560 Stakeholder responses to PSR information request dated 27 November 2023. [3].

561 Stakeholder responses to PSR information request dated 27 November 2023. [3].

562 Stakeholder responses to PSR information request dated 27 November 2023. [3].

563 Stakeholder response to PSR information request dated 27 November 2023. [3].

564 Stakeholder response to PSR information request dated 27 November 2023. [3].

565 Stakeholder responses to PSR information request dated 27 November 2023. [3].

566 Stakeholder responses to PSR information request dated 27 November 2023. [3].

567 [3].

568 [3].



## Summary of evidence

- 4.329** TC33 POS Advice is a service where the decision about whether to use it is ultimately made by acquirers.
- 4.330** While acquirers did not suggest any alternatives to this service in response to our Section 81 Notice, only four out of ten acquirers have purchased this service in the last 12 months, with the majority stating that this is because they do not require the service and one stating they have built this capability using their own systems.
- 4.331** Among the four acquirers that did purchase this service, none of the acquirers managed to delay proposed fee increases to the service.

## Visa Settlement Service Reports (Visa)

- 4.332** Visa Settlement Service (VSS) Reports provide clients with information on their net settlement positions. [3-]. The choice about whether to use this service is ultimately made by the acquirer.

### Visa's submissions

- 4.333** Visa submitted that VSS is one of a range of tools that exist to support acquirers with their internal business operations, including reconciliation and treasury funds management.<sup>569</sup> Acquirers typically undertake these activities in-house by leveraging their transaction data and commercial experience.
- 4.334** Visa is not aware of any third-party providers who are currently offering the same functionality to acquirers in the UK for Visa card transactions.

### Acquirers' responses to the PSR's Second Section 81 Notice

- 4.335** In response to our Section 81 Notice, all ten acquirers told us that they had purchased this service in the last 12 months.<sup>570</sup>
- 4.336** In the Section 81 Notice, we asked the acquirers whether there are any alternative services which could address the same business needs as the VSS Reports service in the UK. One respondent stated that there are alternatives to Visa's VSS Reports. The respondent stated that it would in theory be possible to enter into bilateral agreements with issuers for settlement and therefore bypass the Visa Clearing and Settlement platform.<sup>571</sup> However, the respondent noted this would require bilateral agreements with each bank, so would be impractical in practice.<sup>572</sup> None of the remaining acquirers stated that there are any alternatives to the VSS Reports service in the UK.<sup>573</sup>

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569 Visa response to PSR questions dated 27 September 2023. [3-].

570 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

571 Stakeholder response to PSR information request dated 27 November 2023. [3-].

572 We believe this may be an alternative to core processing services which is covered in Annex 3.

573 Stakeholder responses to PSR information request dated 27 November 2023. [3-].

**4.337** We further asked acquirers what the implications would be for themselves if they didn't use the service.<sup>574</sup> Seven acquirers mentioned negative consequences from not using the service. One acquirer said that not offering this service to merchants may place the acquirer at a competitive disadvantage due to its widespread use.<sup>575</sup> Six acquirers explained that they would not be able to manage funding and payments to clear and settle transactions.<sup>576</sup> Of these, four said that there is no alternative to this service for Visa transactions.<sup>577</sup>

**4.338** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. None of the acquirers told us they had been able to secure discounts, rebates, or delays to proposed fee increases for this service.<sup>578</sup>

### Summary of evidence

**4.339** Visa submitted that VSS is one of a range of tools that exist to support acquirers with their internal business operations, including reconciliation and treasury funds management. However, none of the acquirers proposed any viable alternatives to the service and the one acquirer which did suggest an alternative indicated it would be impractical to implement. Further, acquirers indicated that there would be significant implications for them if they did not purchase this service and none of the acquirers have been able to secure discounts, rebates or delays to proposed fee increases.

### Visa Token Service Acquirer Authentication (Visa)

**4.340** The Visa Token Service (VTS) allows ecosystem participants (e.g. merchants, acquirers, issuers) to secure payments by replacing sensitive account information with a unique digital identifier known as a token. A fee is levied where VTS is used to facilitate or verify authentication data sent by a digital front-end. The choice of whether to use this service is ultimately made by merchants.<sup>579</sup>

### Visa's submissions

**4.341** Visa submitted that [redacted] fees for using VTS to tokenise transactions in the UK.<sup>580</sup> The VTS Acquirer Authentication Fee is levied on acquirers for transactions where VTS is used to facilitate or verify authentication data sent by a digital front-end.

**4.342** Visa also submitted that the main alternatives to VTS include non-tokenised authentication methods. Many merchant service providers and acquirers offer upfront risk management and authentication services for transactions made in more 'traditional' CNP environments. Alternatives to Visa include: Riskified, Stripe, RSA, Broadcom, Modirum, Worldline, RiskShield, iSoft, Signifyd, Callsign, and NuData among others.

**4.343** Visa also submitted that merchants can choose to develop authentication capabilities in-house. Large firms in the technology and retail sectors can leverage direct consumer relationships to enter or expand into providing authentication services which compete with Visa.

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574 PSR information request dated 27 November 2023. [redacted].

575 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

576 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

577 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

578 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

579 We have not been able to identify an equivalent service provided by Mastercard in this instance.

580 Visa response to PSR information request dated 26 September 2023. [redacted].

- 4.344** Visa also submitted that digital payment front-ends have a large presence in retail purchases and also typically hold a lot of information about the person initiating the transaction. They can therefore also validate customer identity. For example, a customer making a payment using a mobile digital wallet can verify their identity by entering their biometric information on a mobile device, thus facilitating authentication. However, we consider that this would require merchants to steer their customers towards these payment methods, which may not be possible.
- 4.345** Finally, Visa submitted that it has developed, in collaboration with EMVCo, an industry-wide standardised token framework. Any party can use this open framework to create and adopt its own token programme.

#### Internal documents

- 4.346** A report produced in January 2022 by an external consultancy for Visa sought to [redacted].<sup>581</sup> Among other things, the document discussed [redacted].
- 4.347** The external report makes [redacted]. The VTS is a network token which anonymises customer account information with a unique digital identifier that cannot be easily used to commit fraud if intercepted or stolen. On the other hand, a provider token is a service offered by an individual acquirer which anonymises customer account information between the merchant and the acquirer.
- 4.348** The external report states that [redacted]<sup>582</sup> [redacted].<sup>583</sup>

#### Acquirers' responses to the PSR's First Section 81 Notice

- 4.349** We asked acquirers how they decide which scheme and processing services to purchase from Visa, which to purchase from alternative suppliers, and which not to purchase at all.<sup>584</sup> One respondent told us that it purchases EMV 3DS and card tokenisation services from Visa and went on to state that these services 'aren't available from alternative providers as they are directly linked to the flow of funds and from data relating to the specific scheme'.<sup>585</sup>

#### Acquirers' responses to the PSR's Second Section 81 Notice

- 4.350** In response to our Section 81 Notice, nine out of ten acquirers told us that they had purchased this service in the last 12 months.<sup>586</sup>
- 4.351** In the Section 81 Notice, we asked the acquirers whether there are any alternatives available to the VTS Acquirer Authentication service for acquirers. None of the acquirers indicated there are any alternatives for themselves in response to this question.<sup>587</sup>

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581 [redacted].

582 [redacted].

583 [redacted].

584 PSR information request dated 11 January 2023. [redacted].

585 Stakeholder response to PSR information request dated 11 January 2023. [redacted].

586 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

587 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

- 4.352** We also asked acquirers whether there are any alternatives available to the VTS Acquirer Authentication service for merchants.<sup>588</sup> One respondent indicated that there are potential alternatives to Visa's VTS Acquirer Authentication service.<sup>589</sup> The respondent stated that there are no third-party services merchants could use in order to get the benefits out of CNP transactions. Merchants have the option of managing their tokens directly in their payments environment by either using the acquirer's Token Management Service, or by going directly to the card issuer. However, the acquirer stated that going direct to the issuer is a significant technical burden and not viable for the vast majority of merchants. None of the remaining acquirers mentioned any potential alternatives for merchants to the VTS Acquirer Authentication service.
- 4.353** We further asked acquirers what the implications would be for the acquirer if they didn't use the service.<sup>590</sup> Seven of the ten acquirers noted negative impacts from not using this service. Of the remaining three, one acquirer does not purchase the service<sup>591</sup> and two did not provide responses.<sup>592</sup> Three acquirers explained there would be competitive disadvantages to not using the service.<sup>593</sup> One acquirer said that fraud and decline rates could increase.<sup>594</sup> One said it would be unable to support tokenised transactions for merchants.<sup>595</sup> One said it would have difficulty in correctly pricing tokenised transactions to merchants.<sup>596</sup>
- 4.354** Similarly, we asked acquirers to explain, based on their knowledge, what the implications of not using the VTS Acquirer Authentication service would be on the categories of merchants which commonly use the service.<sup>597</sup> Six acquirers explained issues for merchants which do not use this service.<sup>598</sup> Three said decline rates would be likely to increase.<sup>599</sup> One said that merchants would be unable to offer tokenised transactions at the gateway level.<sup>600</sup> One said that fees to merchants would increase, and merchants would be charged extra for not using the service.<sup>601</sup> One acquirer said most merchants do not use this service because it is relatively new, but it expects usage to grow substantially over the next five years.<sup>602</sup>
- 4.355** We asked acquirers whether, for the services they have chosen not to purchase, it was because they, or their merchant customers, did not require the service, or because they purchased an equivalent service from an alternative provider.<sup>603</sup> One acquirer which told us it did not purchase this service told us this is because [redacted].<sup>604</sup>

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588 PSR information request dated 27 November 2023. [redacted].

589 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

590 PSR information request dated 27 November 2023. [redacted].

591 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

592 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

593 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

594 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

595 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

596 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

597 PSR information request dated 27 November 2023. [redacted].

598 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

599 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

600 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

601 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

602 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

603 PSR information request dated 27 November 2023. [redacted].

604 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

**4.356** Finally, we wanted to assess the countervailing buyer power that acquirers have when purchasing optional services. [redacted].<sup>605</sup> [redacted].<sup>606</sup> [redacted]. None of the remaining respondents told us they had been able to secure discounts, rebates, or delays to proposed increases in fees for this service.<sup>607</sup>

#### Acquirer phone calls

**4.357** In our phone calls with acquirers, two acquirers said that tokenisation is an example of a service which has gone from being a service where they had a choice of whether to use it, to one where they had no choice.<sup>608</sup> However, the feedback from other acquirers suggests that use of this service is optional, but fees are charged irrespective of whether the merchant uses the service or not. One acquirer said tokenisation is a service to which there are no alternatives due to the schemes' fee structures. The acquirer said there is a fee for using the schemes' token services, but there is also a behavioural fee for the instances where merchants have not tokenised a transaction. Therefore, the merchant ends up paying the same amount, irrespective of whether the transaction is tokenised or not.<sup>609</sup> Similarly, another merchant told us that tokenisation, while not classified as mandatory, has fees associated with not using it.<sup>610</sup> Finally, one acquirer stated that, in its experience, schemes respond to market dynamics if they see a material movement towards alternative providers for a particular optional service by charging a behavioural fee for not using a scheme-provided service, with tokenisation being an example of this.<sup>611</sup>

#### Merchants' responses to our request for information

**4.358** In response to the merchant RFI, only one merchant (out of ten responses) told us that it uses VTS Acquirer Authentication.<sup>612</sup> Of the nine merchants which told us they do not use VTS Acquirer Authentication, three told us it was because they had no need for the service.<sup>613</sup> Of the remaining six, two said they use tokenisation either through their PSP or through their payments gateway,<sup>614</sup> three said their needs are addressed through other means without specifying,<sup>615</sup> and one said it was for another reason which it did not specify.<sup>616</sup>

**4.359** We asked merchants about the potential alternatives available to them for VTS Acquirer Authentication and whether each alternative is capable of meeting their business's needs. Specifically, we asked them about the following potential alternatives:

- a. Non-tokenised authentication methods provided by third parties such as Riskified, Stripe, RSA, Broadcom, Modirum, Worldline, RiskShield, iSoft, Signifyd, CallSign, and NuData.

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605 Stakeholder response to PSR information request dated 27 November 2023 [redacted].

606 [redacted].

607 Stakeholder responses to PSR information request dated 27 November 2023 [redacted].

608 [redacted].

609 [redacted].

610 [redacted].

611 [redacted].

612 [redacted].

613 [redacted].

614 [redacted].

615 [redacted].

616 [redacted].

- b. Merchants can develop their own authentication capabilities in-house.
- c. Digital payment front ends can be used to validate a customer's identity – for example, via a mobile wallet making use of biometric information.

**4.360** When asked about these alternatives, the one merchant that uses VTS Acquirer Authentication said that non-tokenised authentication methods provided by third parties would not be viable because Visa is driving merchants towards using tokens, so the volume and acceptance of non-tokenised transactions will decline over time. The merchant also said the potential alternative of merchants developing their own authentication capabilities in-house is unclear. Finally, the merchant said that digital front-ends such as mobile wallets are not an alternative because Apple Pay or Google Pay also use VTS Acquirer Authentication.<sup>617</sup>

**4.361** When the remaining nine merchants that do not use VTS Acquirer Authentication were asked about the potential alternatives, three responded to the question. One merchant said that a lot of administrative work would be required to develop authentication capabilities in-house and that there is a complicated approval process from Visa,<sup>618</sup> while another merchant said it would 'prefer to include in PSP supplier arrangement'.<sup>619</sup> When asked about digital payment front ends to validate a customer's identity, one merchant said it already uses digital payment front ends to validate a customer's identity.<sup>620</sup> Finally, one merchant said it uses a third-party vault or wallet for tokenising, storing and encrypting payment card information.<sup>621</sup>

**4.362** Finally, we asked merchants what the implications would be for their business if they did not use VTS Acquirer Authentication and what actions they would take. The one merchant which uses VTS Acquirer Authentication told us that it would not be able to accept Apple Pay or Google Pay transactions on its website as the service is a requirement to accept these payment methods.<sup>622</sup>

### Summary of evidence

**4.363** VTS Acquirer Authentication allows ecosystem participants to secure payments by replacing sensitive account information with a unique identifier known as a token. A fee is levied where VTS is used to facilitate or verify authentication data sent by a digital front end.

**4.364** Visa's internal documents, including externally produced reports, indicate that [redacted]. The document notes that [redacted]. Only one of the acquirers that responded to our Section 81 Notice suggested acquirer tokens as an alternative to the VTS.

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617 [redacted].

618 [redacted].

619 [redacted].

620 [redacted].

621 [redacted].

622 [redacted].

- 4.365** The majority of acquirers that responded to our Section 81 Notices also stated that there are no alternatives to VTS Acquirer Authentication. One acquirer confirmed that merchants have the option of managing their tokens directly with the card issuer, but also said this is not viable for the vast majority of merchants.<sup>623</sup> The respondents to our second Section 81 Notice also stated that there would be likely to be significant implications for acquirers and merchants that do not purchase this service. We also note that the majority of acquirers have not secured discounts, rebates, or delays to proposed fee increases. [redacted].<sup>624</sup>
- 4.366** Phone calls with acquirers confirmed that there are no alternatives to VTS Acquirer Authentication and that Visa charges a fee for using the service and a behavioural fee for not using the service.
- 4.367** In response to our merchant RFI, only one merchant told us that it uses VTS Acquirer Authentication.<sup>625</sup> It indicated that the potential alternatives are likely to be weak substitutes.<sup>626</sup> Six of the merchants which responded to our RFI indicated that their needs are addressed through other means.<sup>627</sup> When asked about the implications of not being able to use VTS Acquirer Authentication, the one merchant which uses this service said it would not be able to accept Apple Pay or Google Pay payments.<sup>628</sup>

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623 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

624 Stakeholder responses to PSR information request dated 27 November 2023. [redacted].

625 [redacted].

626 [redacted].

627 [redacted].

628 [redacted].



## Annex A – Additional optional services

**4.368** In addition to the optional services we analysed above, we asked acquirers whether Mastercard and Visa provide any other services which the scheme consider optional from the perspective of the acquirer and for which either: (i) the acquirer had spent more than £10,000 in the previous year; or (ii) the acquirer's merchant customers had collectively spent more than £100,000 in the previous year.<sup>629</sup>

**4.369** The responses we received from acquirers are outlined below.

### Additional Mastercard services

**4.370** In response, six acquirers listed optional services in addition to those submitted to us by Mastercard.<sup>630</sup> In total, these six acquirers listed 42 additional Mastercard services which Mastercard considers to be optional and met the above thresholds.

**4.371** Having reviewed these submissions, we consider that not all of the services are necessarily optional. In particular, we consider the following are not within the scope of our analysis:

- One acquirer ([redacted]) listed 13 fees which we believe to be behavioural fees rather than optional services, as well as one service which we have chosen to deprioritise and one which is out of scope of our analysis.<sup>631</sup>
- One acquirer ([redacted]) listed seven fees which are outside the scope of our analysis.<sup>632</sup>
- Two acquirers ([redacted] and [redacted]) listed the MATCH (Mastercard Alert To Control High-Risk Merchants) service. Mastercard submitted that aspects of this service are not optional, thus we have not considered it to be optional.<sup>633</sup>
- Two acquirers ([redacted] and [redacted]) listed the Mastercard Payment Transactions service. This has been excluded from our analysis because we consider it is a real-time payments service rather than a card-based service and it is therefore out of scope of this market review.<sup>634</sup>

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629 PSR information request dated 27 November 2023. [redacted].

630 The acquirers were: [redacted].

631 These were: (i) three fees are part of the 'Processing Integrity Program' which are charged for non-compliance with certain scheme requirements; (ii) Four fees which are part of the 'Transaction Processing Excellence Program'. These fees are designed to encourage or discourage certain behaviours; (iii) Excessive Chargeback Violation Assessment; (iv) GCMS Processed Message Rejects; (v) Data Integrity Monitoring Program; (vi) High Excessive Chargeback Merchant Violation Assessment; and (vii) MCC Miscoding fee. We have also excluded the [redacted] from this service, and the Strategy Program because this is a mandatory service.

632 These were: (i) The Acquirer Performance Development Assessment – which we consider to be a behavioural fee; (ii) The E-com Security and Quality Fund – which does not seem to apply to the UK; (iii) The Franchise Management Program Customer Remote Review – which we consider to be a mandatory service; (iv) Transaction Investigator – which we have already considered and chosen not to investigate further [redacted]; (v) [redacted] (vi) Strategy Program – which is a mandatory fee, (vii) [redacted].

633 Mastercard response to PSR questions dated 2 October 2023. [redacted].

634 One acquirer ([redacted]) also mentioned [redacted], which we have excluded because Mastercard generates [redacted] from the service. The same acquirer ([redacted]) also stated that the Mastercard Payments Transaction service is mandatory for merchants in the gambling sector, but optional for others. One acquirer ([redacted]) mentioned Merchant Advice Codes, which are part of the Transaction Processing Excellence program, which we have excluded because it is a behavioural fee.

**4.372** In addition, some of the services mentioned by acquirers are a part of the services we have already analysed in this annex.<sup>635</sup>

**4.373** Once we have excluded these services from the analysis and taken account of duplicates, the respondents have identified five unique additional Mastercard optional services. These are presented below in Table 7.

**Table 7: Additional optional fees and services provided by Mastercard, as indicated by acquirers**

|   |   |
|---|---|
| <b>Acquiring Dynamic Linking Validation Service Fee</b> | This service is provided (and a fee is charged) to facilitate the processing of transactions that require delegated authentication (e.g. through Apple Pay), but are not authenticated through Identity Check.  |
| <b>Early Reconciliation Service Fee</b>                 | A per-transaction fee for the Early Reconciliation Service.   |
| <b>Mastercard Cyber Security Merchant Fee</b>           | Cyber Secure is a program to create transparent cybersecurity information on bank and merchant online profiles. This includes an assessment of the cyber risk of all merchants with a public URL known to Mastercard, which acquirers are given access to.  |
| <b>Location Services Program Fee</b>                    | The Location Services Program gives issuers and acquirers access to the location of all acceptance points connected to the Mastercard Network. Customers are charged a monthly fixed fee per active ICA (Interbank Card Association Number – unique identifier assigned to issuers, acquirers and other members by Mastercard), which allows for 100,000 API calls. |
| <b>Instalments</b>                                      | Service giving merchants the ability to accept Mastercard BNPL (Buy Now, Pay Later) transactions.   |

## Additional Visa services

**4.374** In response to our Section 81 Notice, six acquirers listed 49 additional Visa services which Visa considers optional and met the above thresholds specified in paragraph 4.367.

**4.375** Having reviewed these submissions, we consider that not all of the services are necessarily optional. In particular, we consider that the following are not within the scope of our analysis:

- One acquirer ([3]) listed eight fees which we consider to be behavioural fees.<sup>636</sup>
- One acquirer ([3]) listed the System Integrity Fees Report, which we also consider to be a behavioural fee, and CBPS, which we consider to be out of scope.<sup>637</sup>

<sup>635</sup> These services are: Authentication Detail Report Bulk, Risk Acquirer Loss Data, and the Monthly Summarised Billing Report, which are part of the Reports service.

<sup>636</sup> Six fees that are part of the 'System Integrity Program': the Secure Credential Integrity Fee; Visa Stop Payment Service (VSPS) Repeat Authorisation Decline Fee.

<sup>637</sup> [3].

- One acquirer ([redacted]) listed the Secure Credential Fee CNP, which we also consider to be a behavioural fee.
- One acquirer ([redacted]) listed the Visa Merchant Screening Service (VMSS) Subscription Service, which we consider to be a mandatory service.
- Two acquirers ([redacted] and [redacted]) both listed Visa Direct.<sup>638</sup> This has been excluded from our analysis because we consider it is a real-time payments service rather than a card-based service and is thus out-of-scope of this market review. One acquirer ([redacted]) also listed the Visa Network Merchant Initiated Transaction Service, which we consider to be out of scope.<sup>639</sup>

**4.376** In addition, some of the services mentioned by acquirers are a part of the services we have already analysed in this annex or are out of scope of our analysis.<sup>640</sup>

**4.377** Once we have excluded these services from the analysis and taken account of duplicates, the respondents have identified 12 unique additional Visa optional services. These are presented below in Table 8.

**Table 8: Optional fees and services provided by Visa, as indicated by acquirers**

|   |   |
|---|---|
| <b>Estimated and Incremental Authorisations</b> | This is used where the merchant does not know the final amount of a transaction. In these cases, the merchant must 'pre-authorise' the transaction.   |
| [redacted]                                      | [redacted]  |
| <b>Non-Local Currency Settlement Fee</b>        | The fee is applicable to acquirers settling in one non-local currency, specifically when the acquirer has chosen to settle with Visa in a currency that is different from the merchant country currency where the transaction was completed.  |
| <b>Card Verification Value 2 (CVV2) Fee</b>     | This is charged when a merchant wishes to confirm the Card Verification Value 2 details provided by the cardholder and validate these against those expected by the issuing bank.   |
| <b>Visa Account Updater (VAU)</b>               | VAU is a service that allows merchants (through their acquirers) to securely access updated account information for their customers. For example, when a card held 'on file' by a merchant (e.g., for a subscription) expires, the merchant can receive updated information through its acquirer on the replacement without having to request this from the cardholder. |
| <b>Visa Analytics Platform</b>                  | Visa Analytics Platform is a self-service, web-based analytics solution, providing Visa clients with payments data and insights.  |

638 One acquirer ([redacted]) also stated the Visa Direct service is mandatory for merchants in the gambling sector, but optional for others.

639 [redacted].

640 [redacted].

|   |  |
|---|--|
| <b>Visa Online Monthly Subscription</b> | Visa Online (VOL) Monthly Subscription is a secure, internet-based communications channel for delivering information to clients for Visa products, systems, and services.  |
| <b>Visa Resolve Online (VROL)</b>       | Visa offers a range of chargeback management services. VROL offers Visa's issuing and acquiring clients a way to access, manage and resolve disputes. It tracks the life cycle of a dispute online by ensuring that all the necessary documentation is available electronically from the initial transaction inquiry through to the receipt of the final rulings.  |
| <b>VBASS Access Fee</b>                 | Bank Identification Numbers (BINs) are six-to-eight-digit numbers licensed to Visa by issuers. BIN Attributes provide information such as the BIN's product issuer, licensed country, and more. The Visa BIN Attribute Sharing Service (VBASS) enables the sharing of BIN Attributes, whether directly from Visa or indirectly through an acquirer, processor, or other third parties. There are several fees that Visa may charge to acquirers providing merchants with up-to-date Visa BIN information, depending on the data shared and the mechanism used to provide it.   |
| <b>ADVT Testing</b>                     | Acquirer Device Validation Toolkit (ADVT) is a legacy product that was designed to assist acquirers with the testing of card accepting devices and related chip infrastructure.  |
| <b>Dynamic Currency Conversion</b>      | <p>Visa operates the Dynamic Currency Conversion (DCC) programme, which allows acquirers to register their chosen DCC solution or provider with Visa. DCC solutions give cardholders the option to pay in their home currency (rather than local currency) when using their card abroad, thus helping cardholders to avoid foreign exchange fees.</p> <p>For example, DCC solutions can enable international cardholders in the UK to convert the transaction amount from sterling to their home currency to avoid foreign exchange fees. This is a service that is especially attractive to merchants with international customers/cardholders.</p> |
| <b>Multiple FTSRE Fee</b>               | Visa rules state that members that process transactions through the International Settlement Service, the National Net Settlement Service, or the Area Net Settlement Service will be permitted only one fund transfer settlement report entity (FTSRE) per settlement currency, per settlement service. The Multiple FTSRE Fee will apply if a member has multiple FTSREs supporting multiple settlement currencies.  |

## Analysis of additional optional services highlighted by acquirers

- 4.378** As mentioned above, acquirers identified a further five Mastercard optional services and 12 Visa optional services in response to our Section 81 Notice in addition to those that we have already identified. We asked acquirers whether (i) there were any alternative services that could address the same business need from the perspective of acquirers; and (ii) whether there are any alternative services that merchants could use instead of the optional services. The majority of respondents told us that there are no alternatives to these additional optional services provided by Mastercard and Visa.
- 4.379** There was, however, one exception. One acquirer highlighted Mastercard's Instalments service. The acquirer explained that this service gives merchants the ability to offer buy now, pay later functionality.<sup>641</sup> The acquirer also explained that Klarna is an alternative service that could address the same business need.<sup>642</sup>
- 4.380** We also asked acquirers whether, in the last five years, they have been able to either: (i) negotiate reductions to the fees charged for optional services, (ii) obtain payments or funding which offset (partially or wholly) the magnitude of the fees charged for the optional services, or (iii) reject or delay any proposed increases in fees charged for optional services.
- 4.381** The majority of responses indicated that acquirers have been unable to achieve any of these in the last five years. There was, however, one exception to this as one acquirer managed to obtain a [redacted] discount for a group licence for Visa's Analytics Portal.<sup>643</sup>

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641 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

642 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

643 Stakeholder response to PSR information request dated 27 November 2023. [redacted].

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© The Payment Systems Regulator Limited 2025

12 Endeavour Square

London E20 1JN

Telephone: 0300 456 3677

Website: [www.psr.org.uk](http://www.psr.org.uk)

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