

# The Cost of Card Payments for Merchants

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Photo: Hispanolistic – Getty Images

## Abstract

Data on merchants' costs of accepting card payments show large differences in payment costs across both merchants and card systems. Smaller businesses typically face higher payment costs than larger businesses, credit card transactions are generally more expensive than debit cards, and debit card transactions tend to be more costly for most merchants when processed through the international card schemes compared with the domestic debit scheme. Overall costs of accepting card payments have nevertheless declined over the past decade, following the implementation of various reforms by the Bank.

## Introduction

Merchants incur costs when they accept a payment from a customer. In the case of card payments, businesses are typically charged a 'merchant service fee' by their financial institution for processing each transaction.<sup>[1]</sup> These fees can differ depending on the type of card the customer chooses to pay with and the card network through which the transaction is processed. Merchants may recover these costs either through surcharging – where the cost of accepting a particular type of payment is passed on to the customer directly – or by factoring them into the prices of goods and services charged to all of their customers.

Cards are the most frequently used payment method in Australia, representing just over 60 per cent of the total number of consumer retail payments (Caddy *et al* 2020). Strong growth in card payments has been driven by the rising popularity of debit cards, which accounted for around 72 per cent of the total number of card payments in 2019, up from 57 per cent a decade ago. This shift towards debit cards would have helped reduce total merchant payment costs because debit cards tend to be less expensive for merchants to accept than credit cards. At the same time, however, the overall cost of debit card payments has increased. This has been driven by a shift in the share of transactions processed through the domestic eftpos network

towards the generally more expensive Visa and Mastercard debit networks.

The Reserve Bank’s Payments System Board has responsibility for promoting stability, efficiency and competition in the payments system. In line with its mandate, the Board has implemented a number of reforms that have contributed to a decline in merchant fees for card payments over the past two decades. These reforms included imposing caps on interchange fees (which are a key component of merchant service fees), improving the information available to merchants about their payment costs, and generally promoting competition between the card schemes. The Bank views merchant payment costs as an important issue to monitor, given the rapid growth in the use of electronic payment methods by Australian consumers and the possibility that smaller businesses may not be well served by the payments industry.

This article examines developments in merchant payment costs using various sources of data available to the Bank. Drawing on a database of merchant-level payment costs, the article shows how much the cost of accepting card payments varies not only across different card schemes, but also across different merchants. Most notably, smaller businesses tend to face significantly higher merchant fees than larger businesses. The data also confirm that debit cards are much cheaper for businesses to accept than credit cards, and that debit transactions tend to be more costly for merchants of all sizes when processed via the international card schemes.

### Insights from the Retail Payments Statistics

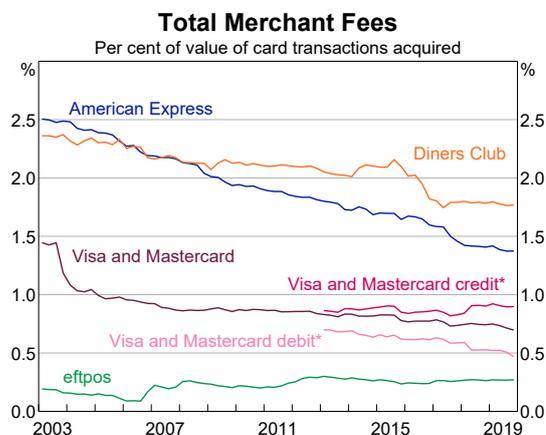
The Reserve Bank publishes quarterly data on average merchant fees for the main card systems operating in Australia.<sup>[2]</sup> The data show that the cost of accepting a card payment is highly dependent on the type of card used by the customer and the scheme through which the transaction is processed (Graph 1).<sup>[3]</sup> Payments made through the domestic debit scheme, eftpos, are generally the least expensive, costing merchants an average of 0.3 per cent of the transaction value in the December 2019 quarter. This compares with an average merchant fee of 0.5 per cent for Visa and

Mastercard debit card transactions, and 0.9 per cent for Visa and Mastercard credit card transactions. The three-party card schemes, American Express and Diners Club, are the most expensive, with average merchant fees of around 1.4 per cent and 1.8 per cent of the transaction value, respectively.<sup>[4]</sup>

The differences in the costs of accepting different types of cards reflect the pricing policies of both acquirers and the card schemes. One significant component of the merchant fee is the wholesale interchange fees paid from the merchant’s financial institution (the acquirer) to the cardholder’s financial institution (the issuer) for each transaction. Interchange fees are set by the card networks and can vary based on factors such as the type of card, the size and type of merchant, and the transaction size.<sup>[5]</sup> For example, cards that provide rewards to the cardholder (such as platinum credit cards) have higher interchange fees and are therefore typically more expensive for businesses to accept than non-rewards cards. More generally, credit cards tend to have higher interchange fees than debit cards and interchange fees for eftpos transactions are lower on average than those for Visa and Mastercard debit. Certain types of merchants – particularly very large merchants and those that the schemes may consider to be ‘strategic’ – may also qualify for lower interchange fees.

Another component of the merchant fee is the scheme fees that acquirers pay to the card schemes.

**Graph 1**



\* Prior to changes in reporting methodology in June 2018, the average fee reported for Visa and Mastercard debit cards was slightly overstated and the average fee reported for Visa and Mastercard credit cards was slightly understated; the overall average fee for Visa and Mastercard was unaffected by the reporting change

Source: RBA

There is little transparency around scheme fees, but there are indications that they have been increasing and putting upward pressure on merchant service fees in recent years.

The third key component of the merchant fee is the acquirer margin. This component is also likely to be driven by a range of factors, including the size of the merchant, the services being provided and the type of pricing plan (discussed further in the ‘Payment costs across merchants’ section below).

Some of the differences in the average merchant fees across schemes could also be explained by compositional differences in transaction types. For example, the merchant fee data for Visa and Mastercard debit cards, unlike those for eftpos, include transactions on foreign-issued debit cards, which have significantly higher interchange fees than domestic transactions. Also, as eftpos has yet to support remote transactions, all eftpos transactions are made at the point of sale (card-present). Visa and Mastercard, on the other hand, facilitate card-not-present transactions (such as online purchases), which may attract different interchange and/or scheme fees.

Taking a longer run perspective, there has been a significant decrease in economy-wide average merchant fees since the early 2000s (Graph 2). This reflects both the marked shift from credit cards towards debit cards, which tend to be less expensive, as well as the decline in average merchant fees for most payment systems (as seen in Graph 1). Most notably, there was a large drop in average merchant fees for Visa and Mastercard following the Bank’s initial card payments reforms in the early 2000s, which included the imposition of interchange fee benchmarks and removal of no-surcharge rules.<sup>[6]</sup> A reduction in the Bank’s interchange fee benchmark for debit cards in 2017 has contributed to a further decline in average fees in the Visa and Mastercard debit schemes in recent years. While not subject to the same regulations as four-party schemes, American Express and Diners Club have also significantly reduced their fees over this period as they sought to remain competitive with the other schemes.<sup>[7]</sup>

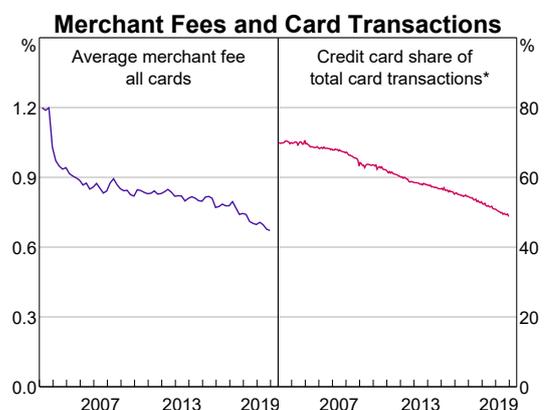
## Disaggregated Data on Merchant Payment Costs

While the aggregate data allow us to compare average merchant fees across different schemes, they do not allow us to look at the distribution of payment costs across different merchants. Accordingly, in late 2019, the Bank asked eight large acquirers to provide anonymised merchant-level data on the costs to their merchants of accepting different types of cards.<sup>[8]</sup> For each merchant, the data included the total value of card payments processed through each of the four-party card schemes (eftpos, Debit Mastercard, Visa Debit, Mastercard credit, Visa credit and UnionPay) in the 2018/19 financial year, as well as the corresponding value of merchant fees charged by the acquirer. These data matched the information that acquirers are required to provide their merchants each year under the surcharging framework of the Bank and the Australian Competition and Consumer Commission.<sup>[9]</sup>

After some initial ‘cleaning’ of the dataset to remove outliers, we were left with a database of card acceptance costs for almost 672,000 merchant accounts, with a total of \$502 billion of transactions processed through the four-party card schemes in 2018/19.<sup>[10]</sup> The sample accounts for around 85 per cent of the total value of four-party credit and debit card transactions reported in the Retail Payments Statistics.<sup>[11]</sup>

The database had a high degree of variation in merchant size, allowing us to analyse how the cost

**Graph 2**



\* By value of transactions, seasonally adjusted  
Source: RBA

of accepting card payments varies across different businesses. Less than 1 per cent of the merchant accounts in the sample had annual (four-party scheme) card turnover of more than \$10 million; 88 per cent of merchant accounts had annual turnover of less than \$1 million; and 43 per cent had annual turnover of less than \$100,000 (Graph 3). The smallest 80 per cent of merchants (by number) accounted for only 15 per cent of the total transaction values in the database. However, the true size of merchants in the sample may be understated. This is because individual outlets within chains or franchises may be treated by some acquirers as separate merchant accounts and receive separate merchant statements, even if their payments contracts are arranged on a group basis.<sup>[12]</sup>

### Payment costs across merchants

Graph 4 shows how the cost of accepting card payments (averaged across all four-party card schemes) varies based on the size of the merchant. It is apparent from the darker areas in the heat map that merchants with a higher value of card transactions tend to pay less for accepting card payments than smaller ones. Almost all of the merchants in the sample with more than \$10 million of annual card transactions had average card acceptance costs of less than 1 per cent. In contrast, average payment costs for smaller merchants were typically higher and more widely dispersed. For example, half of the merchants with

annual card turnover below \$100,000 faced average payment costs in excess of 1.5 per cent of their transaction values.

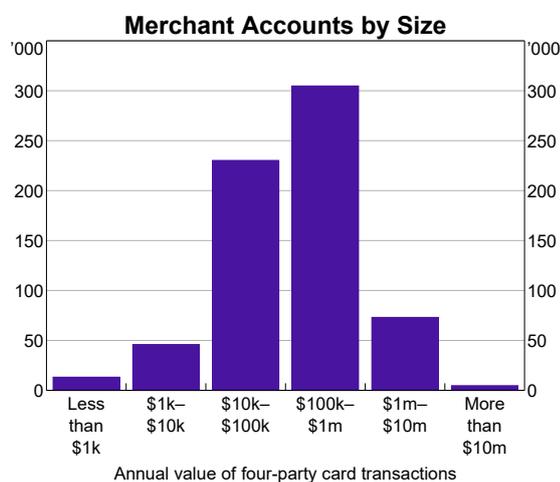
Further perspectives on payment costs can be obtained by dividing the sample of merchants into deciles, such that each decile contains 10 per cent of the total transaction values in the survey dataset. The first decile includes around 480,000 merchant accounts with average annual four-party card transactions of \$105,000; the 10th decile includes 31 merchant accounts, each averaging more than \$1.6 billion in card transactions per year. There were no eftpos transactions for any of the merchant accounts in the 10th decile, which suggests that they are all billers or online-only merchants (who are likely to have a single merchant account with their acquirer). It seems likely, however, that there are some similarly sized ‘bricks and mortar’ businesses that accept eftpos but they do not show up in the largest decile in the dataset because they have multiple merchant accounts with their acquirer.

The analysis of payment costs across the deciles confirms that, for the different four-party card schemes, average payment costs generally decline as merchant size increases (Graph 5).<sup>[13]</sup>

There are several possible explanations for why smaller businesses tend to have higher average payment costs:

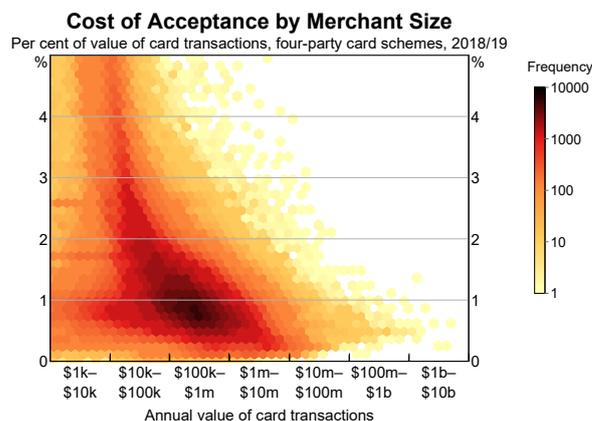
- There are some fixed costs associated with providing payment services to merchants (such as the provision of terminals) and smaller

**Graph 3**



Source: RBA

**Graph 4**



Source: RBA

businesses have a lower volume of transactions to spread these over.

- Larger merchants are more likely to benefit from favourable interchange rates from card schemes (such as ‘strategic’ rates or particular industry rates).
- There may be some impediments to competition in the acquiring market for smaller merchants. One of these impediments may be high barriers to switching. For example, the costs of searching for, and switching to, another acquirer may outweigh the benefits for a business with low transaction volumes. The practice of bundling acquiring services with other business banking services (such as loans) may also contribute to actual or perceived costs of switching to another acquirer. More broadly, smaller merchants may have less negotiating power in relationships with their acquirers and may be less likely to choose, or be offered, plans that would minimise their payment costs.

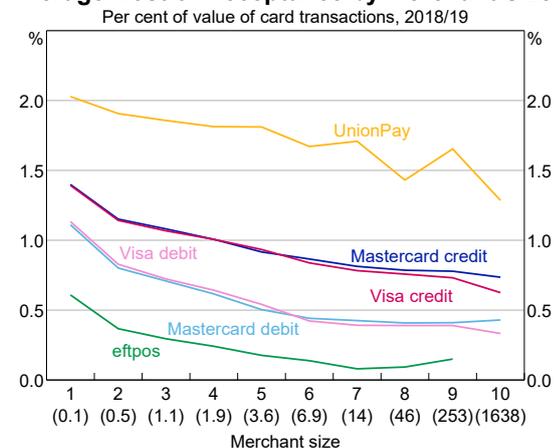
Acquirers typically offer several types of pricing plans to their customers, which differ in how individual card transactions are priced. At one end of the spectrum is ‘interchange-plus-plus’ pricing, where the cost to the merchant of each transaction is made up of the applicable interchange fee, the scheme fee that the acquirer has to pay to the card scheme, and an acquirer margin. There are also blended-rate plans, where the merchant is charged

a specified per-transaction fee either for each scheme (e.g. a single rate for all Visa debit and credit transactions) or for multiple schemes (e.g. a single rate for all Visa and Mastercard transactions). Another option is the fixed-rate or ‘simple merchant plan’, which charges a fixed monthly fee for a certain value of card transactions, irrespective of the card type or network. These simple merchant plans – which are typically reserved for smaller businesses – may be easier to understand for some merchants. They also reduce the month-to-month volatility of payment costs for the merchant. However, the fixed price means that merchants would pay the same rate for a debit card transaction as for a credit card transaction, even though debit transactions normally cost the acquirer much less to provide.

A number of reforms implemented by the Payments System Board in recent years are likely to have put downward pressure on the cost of card payments, particularly for smaller merchants. Most notably, new standards implemented in July 2017 reduced the weighted-average interchange fee benchmark for debit card transactions and introduced caps on individual interchange fees in both the credit and debit card schemes.<sup>[14]</sup> As noted earlier, larger merchants typically benefit from low (or ‘strategic’) interchange fees on all their card transactions. Smaller merchants, on the other hand, usually bear the full cost of high interchange fees on premium and commercial cards issued in the Visa and Mastercard systems. Capping interchange fees should therefore have brought down the costs of accepting such payments for smaller merchants. When we compare the 2018/19 data against a corresponding dataset collected by the Bank for the 2016/17 financial year, we see that there has been a modest fall in smaller merchants’ average costs of accepting Visa and Mastercard credit cards since the implementation of the interchange fee caps (Graph 6). There was also a small decrease in the average cost of Visa and Mastercard debit transactions (5 basis points on average across all merchant size deciles), though this was concentrated among mid-sized merchants. Since mid 2017, acquirers have also been required to provide merchants with easy-to-understand information about their costs of accepting

**Graph 5**

**Average Cost of Acceptance by Merchant Size\***



\* Merchants ranked in value deciles, with the average annual value of card transactions (\$m) in 2018/19 for each decile shown in parentheses  
Source: RBA

payments through each of the card schemes regulated by the Bank. This information is primarily designed to assist businesses in their surcharging decisions, although greater transparency about payment costs may also help them in negotiating a better deal with acquirers.

**Payment costs across card schemes**

The merchant-level data can be used to measure the average difference in the costs of different types of cards when holding merchant size constant; this is represented by the gap between the lines in Graph 5. The analysis indicates that eftpos is on average around 37 basis points less expensive than Visa and Mastercard debit, which, in turn, are around 36 basis points cheaper than Visa and Mastercard credit. Notably, the cost differential between eftpos and the international debit networks tends to be largest for small merchants (52 basis points for the smallest merchants, compared to 25 basis points for the largest merchants that have eftpos transactions). UnionPay costs are significantly higher than those of all the other four-party schemes, although this may not be surprising since most UnionPay transactions in Australia are made with overseas-issued cards, which attract higher interchange fees than domestic cards.<sup>[15]</sup>

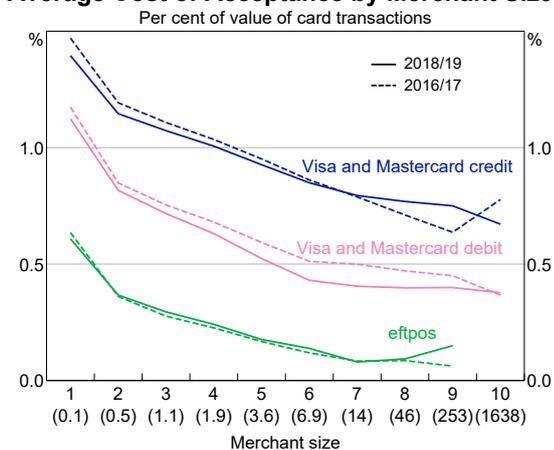
The data also allow us to examine how compositional differences in transaction types affect debit costs. Specifically, the impact of card-not-

present transactions (which currently cannot be processed through the eftpos network) on payment costs can be estimated by dividing the merchant accounts into those with transactions from all three debit networks, and those with just Visa and Mastercard transactions. The former group are more likely to be ‘regular’ point-of-sale merchants, whereas the latter are likely to be billers or online businesses. The results show that Visa and Mastercard debit costs are broadly similar (and on average around 36 basis points higher than eftpos) regardless of whether the merchant also accepts eftpos or not (Graph 7). This implies that card-not-present transactions are not the main factor explaining the cost difference between eftpos and the international schemes.<sup>[16]</sup>

While the merchant-level data show that eftpos is the lowest-cost scheme for the large majority of merchants, there is a small share of merchants for which this is not the case (Table 1). Visa and Mastercard pricing is usually percentage-based, while eftpos is typically priced on a cents-per-transaction basis. This means that businesses with low average transaction values (such as coffee shops) may see little difference in their payment costs and, in some circumstances, may face higher acceptance costs for eftpos. The merchant-level data suggest that Visa and Mastercard debit is materially less expensive for around 9 per cent of merchants (which account for about 5 per cent of the value of card transactions), and there is little

**Graph 6**

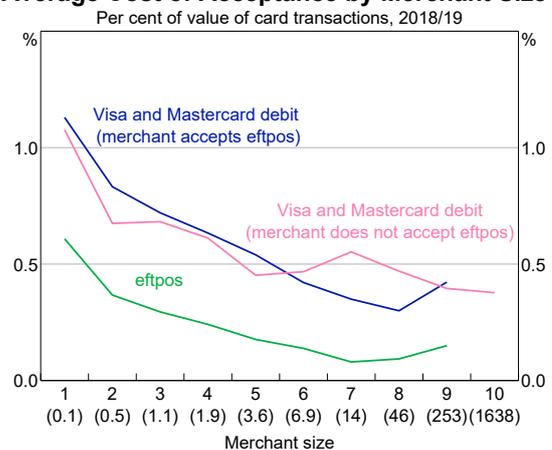
**Average Cost of Acceptance by Merchant Size\***



\* Merchants ranked in value deciles, with the average annual value of card transactions (\$m) in 2018/19 for each decile shown in parentheses  
Source: RBA

**Graph 7**

**Average Cost of Acceptance by Merchant Size\***



\* Merchants ranked in value deciles, with the average annual value of card transactions (\$m) in 2018/19 for each decile shown in parentheses  
Source: RBA

**Table 1: Difference in Debit Costs**

Per cent of sample, 2018/19

	By value of transactions	By number of merchants
Visa/Mastercard debit cheaper than eftpos by >10bps	4.8	8.8
Cost difference within $\pm 10$ bps	12.2	15.4
eftpos cheaper than Visa/Mastercard debit by >10bps	83.0	75.9

Source: RBA

difference between the costs of the debit networks for a further 15 per cent of merchants. The latter group would presumably include merchants on the 'simple pricing plans' offered by some acquirers, where all transactions cost the same regardless of the network through which they are processed. More than 90 per cent of merchants that pay the same fee for all card types are in the smallest size decile, consistent with simple merchant plans largely being targeted at smaller businesses.

### Debit Cards and Least-cost Routing

With debit cards emerging as the most frequently used payment method in Australia, the cost to merchants of accepting these cards has been an important area of focus for the Payments System Board.

A key feature of the Australian card market is that most domestically issued debit cards are dual-network debit cards. These cards allow point-of-sale transactions to be routed either through eftpos or one of the other debit networks (Visa Debit or Debit Mastercard). When a cardholder inserts their dual-network debit card into a terminal to make a payment, they are asked to select the network for processing the transaction (for example, by pressing CHQ or SAV for eftpos or CR for Debit Mastercard or Visa Debit). In contrast, if the cardholder makes a contactless ('tap-and-go') payment, the default is for the transaction to be automatically routed to the network which has been programmed as the default by the issuing financial institution. Until around 2016, contactless payments were only available through the two international networks, which completed their rollout of contactless cards around 2012. With those networks being generally more expensive for merchants, the increasing use of contactless functionality by consumers resulted in a

marked increase in payment costs for some merchants. Now that eftpos has also enabled contactless functionality, there is scope for merchants to choose to send contactless dual-network debit card transactions via the network that costs them the least to accept. This functionality is known as least-cost routing.

Least-cost routing can help merchants reduce their payment costs and can also increase competitive pressure between the debit schemes, providing greater incentives for them to lower their fees. The possible economy-wide reduction in payment costs is potentially very large, given that merchant fees for debit card transactions totalled \$1.3 billion in 2019. Furthermore, in most cases, cardholders will be indifferent about which network processes their transactions. The three debit networks offer similar protections to cardholders from fraud and disputed transactions and all of them typically draw funds from the same deposit account.<sup>[17]</sup> However, to the extent that customers do have preferences regarding card networks, they can override the merchant's choice of network by inserting their card and selecting their preferred network rather than tapping the card.

Recognising the benefits that least-cost routing could have for competition and efficiency in the payments system, the Payments System Board has been encouraging the industry to provide this functionality to merchants. However, industry progress has been disappointingly slow. While a few smaller acquirers began offering least-cost routing to their merchants in the first half of 2018, the major banks (which acquire around 77 per cent of the total value of debit card transactions) only launched this capability between March and July of 2019. There are also some key differences in the functionality offered by acquirers. For example, only

some acquirers offer a version that maximises merchant savings by enabling routing based on transaction size as well as payment network.<sup>[18]</sup> In addition, some acquirers have not made their least-cost routing functionality available on all the payment terminals they support, and some banks only offer the functionality to merchants on select pricing plans (typically those used by larger merchants). The Board has highlighted its expectation that acquirers will promote least-cost routing to all of their merchant customers, since merchant awareness is an important factor affecting the degree of downward pressure on payment costs across the economy that can be realised from this initiative.

More broadly, the Board will continue monitoring the industry's progress on providing least-cost routing to merchants, and will seek to ensure that schemes and financial institutions do not respond in a way that undermines the potential benefits to competition. The Bank will also be considering this issue as part of the current Review of Retail Payments Regulation. In particular, the Bank has sought stakeholder views on the functioning of least-cost routing to date, and whether additional regulatory action is required to enhance competition and efficiency in the debit card market (RBA 2019).

## Footnotes

[\*] The author is from the Payments Policy Department, and thanks Tony Richards, Chris Thompson, Gerard Kelly and Cameron Dark for their contributions to this work.

[1] The financial institution that provides services to a merchant to allow it to accept card payments, usually a bank, is known as the 'acquirer'. In the case of American Express and Diners Club, merchant fees are paid directly to the card scheme.

[2] The RBA's Retail Payments Statistics are available at <<https://www.rba.gov.au/payments-and-infrastructure/resources/payments-data.html>>.

[3] These data are the average merchant fees for each system, including any per-transaction fees and other fees (such as the costs of renting a terminal to accept cards and monthly or annual account fees) charged to merchants by their financial institutions. Visa and Mastercard merchant fees are combined in this data set.

[4] A typical card transaction involves four parties – the cardholder, the cardholder's financial institution (the

## Conclusions

There has been a broad-based decline in average merchant fees across the economy over the past two decades reflecting various reforms introduced by the Reserve Bank's Payments System Board. However, significant differences in merchant fees for the different card networks remain, with transactions processed through the domestic debit scheme, eftpos, being materially cheaper on average for most merchants than the international debit schemes. Merchant-level data also show that smaller businesses typically face much higher card payment costs than larger merchants.

Some ongoing developments, such as the continued rollout of least-cost routing functionality to merchants, are expected to facilitate greater competition between card schemes and acquirers. In turn, the Bank expects to see further downward pressure on payment costs faced by businesses. The Bank will also be assessing the state of competition in the acquiring market as part of the current Review of Retail Payments Regulation, with a particular focus on whether the needs of smaller merchants are being sufficiently met by acquirers.<sup>[19]</sup> ❖

issuer), the merchant and the merchant's financial institution (the acquirer). In a three-party card network, the scheme is both the issuer and the acquirer.

[5] The card schemes publish interchange fee schedules on their websites.

[6] A summary of the Bank's card reforms can be found in RBA (2015) and RBA (2019).

[7] American Express and Diners Club are not subject to the Bank's interchange standards that apply to the four-party schemes. However, the two schemes have modified their surcharging rules to be consistent with the Bank's standard on merchant pricing, which gives merchants the right to surcharge card payments up to their cost of acceptance for each scheme. The ability of merchants to surcharge more expensive payment methods can put competitive pressure on schemes and acquirers to lower their merchant fees.

- [8] This was an update on a data collection first undertaken in 2017, the results of which were presented in Richards (2017).
- [9] Since mid 2017, acquirers and payment facilitators have been required to provide merchants with periodic statements that clearly set out their average cost of acceptance for each of the card payment systems regulated by the Bank. For further information, see <<https://www.rba.gov.au/payments-and-infrastructure/review-of-card-payments-regulation/q-and-a/card-payments-regulation-qa-conclusions-paper.html>>.
- [10] The raw data contained a number of outlier values where the cost of acceptance was reported as either negative or extremely large. It is likely that these outliers were either calculation errors or anomalies, and so convey little information about merchants' payment costs in normal circumstances. Many of the observations removed through the data cleaning process represented inactive merchant accounts with very small transaction amounts.
- [11] The Retail Payments Statistics includes data from a broader range of acquirers (including Coles Group Limited and Woolworths Group Limited, which self-acquire), but excludes UnionPay.
- [12] For simplicity, the remainder of this article will use the terms 'merchant' and 'merchant account' interchangeably.
- [13] Given the similarities between the average merchant fees charged by acquirers for Visa Debit and Debit Mastercard transactions, and for Visa and Mastercard credit card transactions, we combine the costs of these two schemes for the remainder of this discussion. Mastercard and Visa merchant fees are not able to be separately identified in the Retail Payments Statistics (for example, as shown in Graph 1).
- [14] For further information, see <<https://www.rba.gov.au/payments-and-infrastructure/review-of-card-payments-regulation/q-and-a/card-payments-regulation-qa-conclusions-paper.html>>.
- [15] There are currently no restrictions on the interchange fees levied on transactions made using foreign-issued cards.
- [16] The data do not allow us to say how much of the remaining gap is due to some Visa and Mastercard transactions being on foreign-issued debit cards, which are more expensive. However, this is unlikely to account for a significant part of the gap since available data suggest that only around 2 per cent of debit transactions acquired in Australia are made using foreign-issued cards. (This is the share as reported by financial institutions to the Bank in the Retail Payments Statistics collection. The actual share of transactions made on foreign-issued debit cards may be a little higher though, because some reporting institutions have difficulties differentiating foreign-issued debit and credit cards and report all such transactions as part of their credit card data.)
- [17] However, the Bank is aware that a few, mainly smaller, financial institutions still offer legacy deposit account products where the cardholder may be charged a fee for exceeding a specified number or value of eftpos transactions each month, with no equivalent fee for international scheme transactions. Such account structures may have been understandable a decade ago but would not appear to have any justification now given that the direction of interchange payments (from acquiring towards issuing institutions) have been the same for eftpos and the two international debit schemes since around 2012.
- [18] For example, a merchant might derive the most benefit from least-cost routing if transactions below a certain value are processed through Visa or Mastercard (which have percentage-based pricing), and transactions above that value are routed through eftpos (which is typically priced on a cents-per-transaction basis).
- [19] Information related to the Bank's Review of Retail Payments Regulation is available at <<https://www.rba.gov.au/payments-and-infrastructure/review-of-retail-payments-regulation/>>.

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