

Commission published a study (the *Joint Study*) stating their initial findings.⁴ Industry participants were given the opportunity to comment on the study and offer support for, or objections to, its findings. The present report, commissioned by the Reserve Bank of Australia, analyses economic issues raised by the *Joint Study* and the responses to it.

3. The report is organized as follows. Sections II through IV set the stage for the later analysis. Section II provides an overview of the credit and charge card industry. Section III identifies benefits potentially enjoyed by consumers and merchants from the use of credit and charge cards. As discussed in Section IV, these benefits give rise to network effects. Moreover, because a card-based transaction affects both consumers and merchants, actions by one side of the transaction can affect the economic welfare of the other side. This fact raises the possibility of externalities, which also are defined in Section IV.

4. Sections V through VII analyse the effects of no-surcharge rules and interchange fees. Section V examines the market outcome when merchants can freely engage in surcharging. Section VI then examines the market outcome when merchants must set retail prices that are invariant with respect to the payment mechanism used. Section VII compares the market outcomes with and without surcharging to identify the net effects of no-surcharge rules on economic welfare.

5. After a brief concluding section, a technical appendix surveys several economic models that have been developed to shed light on interchange rate setting and no-surcharge rules. A second appendix discusses the definition of a relevant market and notes that there is no contradiction between the finding that credit and charge cards constitute a relevant market and the finding that distortions in credit and charge card prices can lead to excessive card use.

II. INDUSTRY OVERVIEW

6. Figure *A* provides an illustrative schematic of the credit and charge card industry. As shown in the diagram, consumers obtain credit and charge cards from card issuers. A card-holding consumer—either a household member or business employee—can use a credit or charge card to make purchases at merchants who accept that brand of card. To do so, the merchant must have a relationship with an acquiring institution. Card issuers and acquiring institutions interact with each other through the credit or charge card system to which they both belong. At the outset, it is important to recognize that each of the Bankcard, MasterCard, and Visa systems is an association of independent corporate entities, the member banks. In contrast, American Express and Diners Club each is a single corporate entity. Bankcard, MasterCard, and Visa often are referred to as *open systems*, while American Express and Diners Club are referred to as *closed systems*.

⁴ Reserve Bank of Australia and Australian Competition and Consumer Commission, “Debit and Credit Card Schemes in Australia, A Study of Interchange Fees and Access,” October 2000.

7. An acquirer and issuer's interaction through their common card system allows them to verify that the consumer is entitled to use the card to make the desired purchase (authorization) and to ensure that payments flow to the appropriate parties (settlement). It is worth considering acquirers, issuers, and systems in more detail.

A. CARD ISSUANCE

8. A card issuer offers cards with particular features, sets the financial terms (*e.g.*, the annual fee, interest rate on unpaid balances, grace period, and late fees), renders the bills to the consumer, extends credit, collects payments from the consumer, and provides ongoing customer service.

9. The Bankcard, MasterCard, and Visa associations do not themselves act as card issuers. Instead, the banks that are members of the associations do. Examples include ANZ and National Australia Bank. American Express and Diners Club also act as card issuers and thus compete with the issuing banks that are members of the two associations. In addition, American Express has one partner issuer in Australia, AMP.

10. Like the rest of the Australian banking sector, credit card issuance is concentrated. This is true whether one measures concentration using data on accounts, transactions, or advances outstanding. Data for 2000 show that the top four issuing banks accounted for 82.6 percent of credit card accounts, 86.8 percent of credit card transactions, 88.1 percent of the dollar value of credit card transactions, and 74.4 percent of credit card advances outstanding.⁵

B. MERCHANT ACQUISITION AND PROCESSING

11. The activities of so-called acquirers can be subdivided into *merchant acquisition* and *merchant processing*.⁶ In this typology, merchant acquisition refers to signing up merchants, installing point-of-sale terminals, and providing any necessary training of merchant employees. Merchant processing activities include routing transaction authorization requests from the merchant to the proper card issuing institution and relaying that issuer's reply back to the merchant, handling the flow of electronic and paper receipts, settling accounts, and providing ongoing services such as repairs, monitoring, and the provision of supplies.

12. Several members of the Bankcard, MasterCard, and Visa associations engage in merchant acquisition and processing. There are significant economies of scale in merchant processing, and a merchant acquirer may outsource merchant processing activities to a so-

⁵ Data provided by Reserve Bank of Australia.

⁶ Industry participants sometimes use the term *merchant acquisition* to include merchant processing as well.

called third-party processor, of which there are relatively few. American Express serves as the sole merchant acquirer and processor for its network in Australia.⁷

13. Acquirers charge merchant service fees in both fixed annual amounts (*e.g.*, terminal rental fees) and on per-transaction bases. Per-transaction charges generally are on an *ad valorem* basis (*i.e.*, are levied as a percentage of the retail transaction value) but may also contain a flat amount per transaction.

14. Credit card acquiring is highly concentrated in Australia. The top four acquiring banks accounted for 90.9 percent of credit card transactions and 91.8 percent of the dollar value of credit card transactions in 2000.⁸ To some extent, this is to be expected because of the large economies of scale in this industry. The *Joint Study*, however, raises the possibility that this concentration is increased by restrictive membership rules of the three associations.⁹

C. SYSTEMS SERVICES

15. Credit and charge card systems provide services to issuing and acquiring entities that make it possible for them to offer their services and products to consumers and merchants. Core system services include authorization and settlement protocols and standards that allow systems of a large number of different issuers and acquirers to work together to provide services to consumers and merchants. The set of merchants honoring a given credit and charge card system's cards constitute that system's acceptance network and is also a core system service. The size and coverage of its acceptance network is one of the most important characteristics of a credit and charge card system. The leading credit and charge card systems also engage in extensive brand-building and other activities in support of their members.

16. Credit and charge card systems levy a variety of assessments and fees on issuers and acquirers who use their systems services. Some fees cover non-transaction-related costs, such as brand promotion and innovation. Other fees cover the costs incurred to process transactions over authorization and settlement networks.

17. As noted in the introduction, in addition to charging members for network services, the Bankcard, MasterCard, and Visa associations stipulate the payment of interchange fees. Members of the associations collectively set the default rates in Australia.¹⁰ Although stipulated at the network level, an interchange fee does not go to the network itself. The fee is a transfer between members: It is paid by a merchant's acquiring institution and received by the cardholder's issuing institution. American Express does not have a formal interchange fee.

⁷ American Express, "Competition in Payment Systems," Submission to Reserve Bank of Australia, June 2001 (hereafter *American Express Submission*), at 5.

⁸ Data supplied by Reserve Bank of Australia.

⁹ *Joint Study*, §5.4.

¹⁰ It is my understanding that member banks have the right to negotiate different interchange rates among themselves, but that they do not do so.

However, American Express and its issuing partner, AMP, have an agreement that links AMP's compensation to the merchant fees collected by American Express.¹¹ This compensation is the economic analog of an interchange fee.

18. The Australian credit and charge systems market is highly concentrated. Survey data indicate that the Bankcard, MasterCard, and Visa schemes together accounted for 93.3 percent of the general purpose consumer credit and charge cards on issue in Australia in 2000. American Express and Diners Club combined had only a 6.7 percent share of cards on issue.¹² Because American Express and Diners Club have higher average transaction values than Bankcard, MasterCard, and Visa, share measurements using the dollar value of transactions yield somewhat different results. According to Visa, about 12 percent of the dollar value of transactions is accounted for by the closed general purpose credit and charge card schemes.¹³ Thus, Bankcard, MasterCard, and Visa have an 88 percent market share, which is still highly concentrated.

19. Another notable feature of the Australian marketplace is the high degree of overlap in the ownership and governance of the three major credit card associations. Bankcard, MasterCard, and Visa are managed by full-time professional staffs and governed by their members. The four largest banks in Australia serve on the boards or executive committees of all three major open credit card schemes. ANZ, Commonwealth, National Australia Bank, and Westpac serve on the boards or executive committees of Bankcard, MasterCard, and Visa.¹⁴ The board or executive committee of each scheme has the authority to approve interchange fees and other policies within the scheme. This extensive overlap of system governance, coupled with highly concentrated issuing and acquiring, raises very significant questions about the degree of competition in the Australian credit and charge card industry.

20. The association structure is relevant to the analysis of the effects that various practices have on competition and consumer welfare. To date, Bankcard, MasterCard, and Visa have not been operated as profit centers.¹⁵ The governing members, however, generally are for-profit entities. Because issuers and acquirers control the associations, association policies can be used to effect economic agreements among horizontal rivals. And because, to date, the associations have not been operated as standalone profit centers, the exercise of association market power is not aimed at elevating the service prices charged to members in order to

¹¹ *American Express Submission* at 5.

¹² Roy Morgan Research data provided by the Reserve Bank of Australia.

¹³ Visa International Service Association, "Delivering a Level Playing Field for Credit Card Payment Schemes," prepared by Network Economics Consulting Group Pty Limited, August 2001 (hereafter *Delivering a Level Playing Field*), footnote 54 at page 51.

¹⁴ Data provided to the Reserve Bank of Australia by Bankcard, MasterCard, and Visa.

¹⁵ The structure of MasterCard may be changing. See "MasterCard and Europay Plan to Combine into a Global Payments Organization with a Private Share Ownership Structure," MasterCard press release, 6 June 2001. Available at www.mastercardintl.com/about/press/pressreleases.cgi?id=427 on 4 August 2001.

generate association profits. Instead, market power is exercised to allow members to earn greater profits.

III. CONSUMER AND MERCHANT BENEFITS OF CARDHOLDING AND USE

21. Much of the public interest analysis of interchange rates and no-surcharge rules flows from the effects these policies have on the realization of economic benefits by consumers and merchants. Hence, it is useful to begin with a careful review of the potential sources of those benefits.

A. CONSUMER BENEFITS

22. Credit and charge cards serve both as a *payment mechanism* and—for many consumers—a *source of credit*. The term payment mechanism refers to any medium that can be used to effect a transaction. Examples include cash, cheques, debit cards, and credit and charge cards. Several payment mechanisms are various types of cards. A *general purpose credit card* is a plastic card that can be used at a wide variety of merchants to make purchases on a revolving credit line.¹⁶ A *proprietary credit card* is a credit card that is accepted as payment only at a specific merchant or small set of merchants that issue the card (*e.g.*, a David Jones credit card). Credit cards offer two sources of credit. One, they offer unsecured, revolving lines of credit. Second, they offer a float comprising the time between when a purchase is made and when the consumer has to pay his or her credit card bill, which typically occurs monthly. A *charge card* offers only the second type of credit. Like a credit card, a charge card allows deferred payment, but instead of being allowed to run a balance, the user must pay his or her account in full after a set period, usually about one month.¹⁷ The American Express Green card is the most well known charge card.

23. Another type of plastic payment card does not extend credit facilities. A holder of a *debit card* has the amounts purchased using the card deducted from his or her designated deposit account by the card issuer on a pay-as-you-buy basis, with a lag ranging from a few seconds to a few days.¹⁸ A debit card typically can be used to make purchases at retailers (also known as EFTPOS) or to withdraw cash from automatic teller machines.

¹⁶ Merchants can include supermarkets, department stores, other retailers, hotels, restaurants, airlines, and government agencies, among others.

¹⁷ Charge cards are sometimes referred to as travel and entertainment, or T&E, cards because of their historical origins as cards used by travellers.

¹⁸ *On-line debit* refers to debit cards that require the buyer to type his or her Personal Identification Number (PIN) on a PIN pad as part of the authorization process. *Off-line debit* refers to debit cards that rely on a signature as part of the security process for authorization, the way credit and charge cards typically do. Visa supports off-line debit cards in Australia. Despite the name, off-line debit cards usually make use of electronic