NOTES ON FURTHER MATTERS RELATED TO AUSTRALIAN CREDIT CARD REGULATION

prepared for

American Express International, Inc.

by

Access Economics Pty Limited

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Foreword

These notes address a number of matters raised in discussions between Access Economics, American Express International, Inc. and the Reserve Bank of Australia about the likely direction of regulation of Australian credit card schemes following the designation of those schemes in April this year, and in the light of the American Express submission to the Bank and Access Economics' June 2000 report on Australian credit card regulation.

As with our original report, while American Express has commissioned these notes, the analysis therein, and the policy conclusions reached, are those of Access Economics.

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Executive Summary

This further report briefly addresses five questions asked by the Reserve Bank of Australia (RBA), in a follow-up letter to American Express after the meeting with American Express International, Inc. (American Express) and Access Economics on 17 July 2001. American Express is responding to the remaining questions.

The detailed responses are presented in the main report. This Executive Summary presents an overview of Access Economics' findings:

Overview

- In general, the further analysis has not altered the thrust of the conclusions in our initial report.

Schmalensee's Analysis

- The additional analysis by Schmalensee is based on a simple model of imperfect competition between credit card issuers and acquirers. That analysis suggests that there is no *a priori* reason to expect interchange fees *necessarily* to be zero or to always flow from acquirers to issuers. Given that conclusion emerges from a simple framework, it is more likely to hold true once real world complications are considered. In that sense, the Schmalensee analysis supports our own caution about how difficult it may be for the RBA to regulate efficiently in relation to interchange fee levels.
- In part Schmalensee argues that the interchange fee is not a problem because it is not contracting the size of the market. Market contraction, moreover, is not the cause for concern in this context. Concern about the interchange fee relates to *over-use* of four party card payments systems.
- The Schmalensee assertion that regulation of three-party systems as well as four party systems neither follows from his framework, nor from the realities of market competition between systems. We remain of the view that there is no need to designate three party systems.

The ABA Proposal

- The greatest weakness of the ABA's outline of interchange fee setting methodology is that it discusses the fee as if it was a charge for service along the lines of the prices for other services. This fails to recognise that the cost of providing the payment service is already substantially (at least potentially) recovered through direct charges on cardholders and merchants. The only rationale for interchange fees is as a balancing item between issuers and acquirers to reflect interactions between their costs that cannot be (or cannot efficiently be) recovered directly or which are more efficiently (for both the credit card schemes and scheme users generally) shifted from one class of user to another.
- The ABA's discussion of pricing principles appears to have been adapted from a standard discussion of access pricing, such as might be found in any report from or submission to recent pricing inquiries in other industries, and without due consideration of what role the interchange fee is supposed to play. Although there is a brief discussion of externalities or network effects in card networks, these are treated as a rationale for adjustments to interchange fees set according to standard pricing guidelines, rather than the reason for the fees themselves.

- We do not believe that the ABA submission presents an adequate framework on which to build or assess future regulation of Australian credit card charges or interchange fees. The principles presented are very broad and, while some are applicable to regulation in general, the proposed framework does not appear to have been formulated with adequate consideration or allowance for the unique balancing role of interchange fees in four-party credit card network pricing.

Competition in Card Networks

- The market power of a credit card scheme does not result from the level of competition in issuing and acquiring activities, but the nature of this competition may influence the extent to which that market power might be exercised. That is, if there is less competition between network members in issuing and acquiring activities, scheme members may be more likely to cooperate to set interchange fees to extract rents through higher merchant services charges or to stimulate credit card use over other payments mechanisms.

1. Background

Following a meeting on 17 July 2001 between the Reserve Bank of Australia (RBA), American Express International, Inc. (American Express) and Access Economics to discuss the Access Economics' June 2001 report on *The Appropriate Scope of Credit Card Scheme Regulation*, the RBA asked a number of further questions in a letter to American Express. These notes briefly address five of those questions. American Express is responding to the remaining questions.

2. Other matters

2.1. ABA interchange fee proposal

- provide your views on the methodology for setting interchange fees proposed by the Australian Bankers' Association.

The Australian Bankers' Association (ABA) provided a submission to the Reserve Bank of Australia (RBA) (ABA, 2001) which details its view of the appropriate form of regulation to apply to Australian credit card networks following their designation by the Bank on 12 April 2001. Their preferred methodology for setting interchange fees is set out in Chapter 4 of the submission and an Attachment.

The greatest weakness of the ABA's outline of interchange fee setting methodology is that is discusses the fee as if it was a charge for service along the lines of the prices for other services. This fails to recognise that the cost of providing the payment service is already substantially (at least potentially) recovered through direct charges on cardholders and merchants[1]. The only rationale for interchange fees is as a balancing item between issuers and acquirers to reflect interactions between their costs that cannot be (or cannot efficiently be) recovered directly or which are more efficiently (for both the credit card schemes and scheme users generally) shifted from one class of user to another (see the discussion below of the paper by Schmalensee, 2001).

Indeed, as noted by Schmalensee (2001, page 21), "The interchange fee is not an ordinary market price: it is a balancing device". This balancing role and the joint determination of cardholders' and merchants' demand for credit card services mean the basis on which interchange fees are set will not necessarily be guided appropriately by conventional incremental or avoidable cost pricing principles. Those principles apply to the level and structure of fees and charges on cardholders and merchants, with the interchange fees set to correct any imbalances or inefficient incentives that that might create when issuer and acquirer costs are considered in isolation.

The ABA's discussion of pricing principles appears to have been adapted from a standard discussion of access pricing, such as might be found in any report from or submission to recent pricing inquiries in other industries, and without due consideration of what role the interchange fee is supposed to play. Although there is a brief discussion of externalities in card networks, these are treated as a rationale for adjustments to interchange fees set according to standard pricing guidelines, rather than the reason for the fees themselves.

The ABA then argues (pp. 47 – 48):

> *In summary, to be consistent with economic allocative efficiency, the ceiling for the interchange fee should be the* stand alone cost *of providing credit card payment services. The theoretical floor should be an amount higher than the incremental cost of providing those services, to take account of the credit card externality. This 'cushion'*

[1] That issuers will recover revenue from cardholders is acknowledged in the Attachment to the ABA submission (at page 80), but no method is proposed by which to assess the levels of these revenues jointly with the revenue from interchange fees (or to accounted for the difference between acquirers' payments of interchange fees and their merchant services charge revenues).

reflects another important allocative efficiency issue — that the relative prices of open and closed card schemes should not be distorted.

The greater the competitive threat posed by alternative credit card payment schemes, the larger this 'cushion' above the floor should be. Because they are close substitutes, even a small distortion in relative prices will have large effects i.e. the closed schemes will rapidly gain market share at the expense of the open schemes. Thus, relative prices which were distorted by regulation would distort competition in the market for credit card payment services, contrary to the stated meaning of public interest in the s.8 of the PSRA.

The reference to "the *stand alone cost* of providing credit card payment services" as the basis for setting the interchange fee highlights the ABA's misconception of its role. Although the unrelated statement regarding the importance of not distorting the relative prices of open and closed card schemes is correct, it does not follow from the arguments being made, nor does it otherwise follow that regulation of the interchange fees of open schemes would necessarily introduce such a distortion.

The logic of the next part of the ABA's argument above is also flawed. While the ABA claims, correctly, that alternative credit card schemes are close substitutes for the dominant four-party schemes and that the market share of the dominant schemes would suffer if their relative price rose, it is not clear why regulation should have that effect. If four-party interchange fees decreased and this flowed into the price of their services then, regardless of whether this was efficient, competition and close substitutability mean three-party scheme charges would have to decrease as well. The relative price of the two types of schemes, and their market shares, could move in either direction in the process. Contrary to the ABA's claim, regulation is more likely, at least initially, to make four-party charges relatively cheaper and increase their market share until the three-party schemes respond.

There is always a danger that regulation will change relative prices and distort the balance of competition or market shares. This does not automatically work against the public interest if the regulation also reduces the overall level of prices (that is, relative to other goods and services) so that the market as a whole is more efficient. Consumers could potentially gain more from regulation that lowers the overall cost of payment services, despite consequent distortions to the relative prices of some of those services. So, although the risk of introducing distortions needs to be considered when formulating a regulatory response to perceived problems with the cost of four-party credit card services, it does not necessarily constitute a public interest case for not regulating.

We do not believe that the ABA submission presents an adequate framework on which to build or assess future regulation of Australian credit card charges or interchange fees. The principles presented are very broad and, while some are applicable to regulation in general, the proposed framework does not appear to have been formulated with adequate consideration or allowance for the unique balancing role of interchange fees in four-party credit card network pricing.

2.2. Schmalensee's framework

- provide your views on the relevance of Schmalensee's analytical framework for setting interchange fees.

Schmalensee (2001) analyses the level and efficiency of the interchange fee in credit card networks in a simple model of imperfect competition between issuers and acquirers. He demonstrates that there is a role for an interchange fee to ensure that members of open credit

card associations are able to maximise the combined private value of the scheme, something that, in his simple framework, also maximises the social value of the scheme. After allowing for the sequential setting of prices by issuers and acquirers, the interchange fee shifts costs (and therefore profits) between the two types of members to ensure that the prices charged to cardholders and merchants maximise the profitability of their use of card services. In the process he confirms the results of earlier analyses that the optimal level of the interchange fee is unlikely to be zero, and that the fee need not always flow from acquirers to issuers.

Schmalensee is aware of the problems of drawing conclusions from simplified models (see his footnote 3), and makes an important point that regulating card system merchant charges will increase welfare only by chance, given the many distortions in the markets for credit cards, payment systems and the goods and services purchased. That is, he appears to suggest that the complexity of the interaction between these markets and the absence of all the information needed to calibrate an appropriate analytical framework mean that regulators cannot be sure that their intervention is properly targeted or that controls are set at efficient levels.

Schmalensee then extends his line of reasoning to argue that welfare is less likely to be increased by regulating only the merchant services charges of four-party credit card schemes and not those of proprietary (three-party) schemes.

We disagree with this statement. While the second-best nature of the problem makes it difficult to be certain that regulation of four-party merchant services charges (through limits on interchange fees, for instance) will improve the efficiency of credit card services markets, it does seem likely that competition between card systems will still ensure that the effects of regulation will flow into the markets for three-party card services without the need for direct controls.

Similarly, Schmalensee claims (page 3), without supporting analysis or evidence, that:

> *The main economic role of the interchange fee is not to exploit the system's market power; it is rather to shift costs between issuers and acquirers and thus to shift charges between merchants and customers to enhance the value of the payment system as a whole to its owners.*

Although the importance of this role is well understood in the literature, there is nothing in Schmalensee's analysis to rule out or quantify the extent to which the interchange fee can *also* be used to exploit market power. Moreover, there is a strong possibility that enhancing the value of the payment system to its owners must come at a cost to cardholders and merchants, and possibly economic efficiency generally, unless value is somehow simultaneously being created for them.

The balancing role of the interchange fee also suggests that, over time, the rate and possibly the structure of the fee would vary with changes in economic circumstances. These would include changes in the costs of issuer and acquirer activities with the establishment and maturation of the networks and with advances in electronic collection and processing of transactions data, and changes in the demands for credit card services with their wider national and international acceptance and the emergence of alternative payments systems. Schmalensee notes (at page 1) without providing detail that there have been changes in interchange fees in the United States which have been reflected in roughly equal changes in merchant services charges. It would be useful to examine the level and timing of changes in these overseas interchange fees to see if they correspond with the broad variation of relevant economic circumstances as a test of the applicability of Schmalensee's model. More importantly, it flags the obvious question of why interchange fees for the dominant

Australian credit card schemes have not been varied since their inception, given almost certain changes in these "relevant" costs.

Schmalensee makes some comments[2] about the merchant services charges set by proprietary, three-party card schemes, particularly American Express, that suggest they are set independently of the charges levied by other card schemes and without regard to antitrust considerations. Although American Express cards are more widely held and accepted in the United States than in Australia, that and other three-party credit and charge card schemes collectively still have relatively small shares of the payments market compared with the four-party schemes. They are largely able to set their charges independently of antitrust concerns precisely because they do not dominate the market in the same way that the four-party schemes do. Nevertheless, the charges set by the four-party schemes do play a large part in determining the levels of charges, and associated required levels of service, that the three-party schemes can levy. That is, the three-party schemes do not act independently of the price and quality choices made by their close competitors. This is another reason why there is no direct antitrust concern with most of their pricing.

The higher merchant services charges usually set by the three-party schemes reflect both their lower economies of scale and the margins needed to compensate for the different nature of the payment services they provide. To the extent that they concentrate on charge card activities, three-party schemes carry a higher cost of funds to offer the same interest free period as cards with similar periods but associated revolving lines of credit. The interest paid on these lines of credit goes some way towards covering the cost of all outstanding balances, whereas charge card schemes receive no interest on outstanding balances. The role played by three-party scheme charge cards is, in effect, to facilitate the provision by merchants of a line of credit to their customers. Direct comparison of the merchant services and cardholder charges of the different schemes is therefore always likely to be misleading.

Schmalensee's analysis concentrates on the welfare effects of a single payment system with alternative levels of market power over issuer and acquirer prices, and different objectives for the level of the interchange fee. It also suggests that for simple demand forms, and in the absence of competition from other payment schemes, *dominant* proprietary card schemes will lead to more distorted and less efficient outcomes than when cooperative four-party schemes exercise market power. This approach does not support his conclusions about the welfare consequences of not directly regulating proprietary (three-party) credit card schemes. Schmalensee concludes (page 23):

> *Barring collective interchange fee determination would create strong incentives for large institutions to abandon the cooperative bank card systems and create proprietary systems. … all else equal a movement from cooperative to proprietary systems is likely to reduce total system output. All in all, there is no economic defense for an antitrust policy favoring proprietary payment systems over cooperative payment systems pursuing broadly similar strategies.*

Barring collective interchange fee setting is an extreme response to the possibility that the fee serves as a means of exercising market power, and is unlikely to be an appropriate form of regulation. While it is true that adopting this measure would create incentives for large banks to establish their own proprietary schemes, the domestic and international dominance of the existing four-party schemes would work against them. They are therefore unlikely to shift to

[2] In particular at pages 3 and 23.

proprietary schemes if they are not directly regulated. Even if the large banks abandoned the dominant cooperative schemes, Schmalensee's analysis says nothing about the effects of a shift in the share of market transactions from four-party to three-party schemes, since these are examined in isolation. That is, he does not explicitly examine competition between payments schemes or place his analysis of a dominant cooperative scheme in the context of competing schemes. His analysis therefore does not shed light on the consequences for competing payments schemes of directly regulating only four-party interchange fees.

Moreover, by concentrating his analysis on one form of payment system at a time, Schmalensee draws attention away from the issue of potential overuse of credit cards stimulated by "excessive" cost shifting from cardholders to merchants and to users of other forms of settlement (particularly cash and direct debit).

It is clear from the work that has already been done that a general economic analysis of the market for credit cards (allowing for decisions about card holding, use and acceptance and for competition between credit card schemes and other payments mechanisms) will be extremely complicated. Even if such a model was tractable it still may not yield any general rules about when market power might exist, how it might be exploited or how it could be regulated. This likelihood only serves to emphasise the caution that should be exercised when applying the conclusions of a necessarily simplified model of credit card schemes to circumstances beyond its framework.

2.3. Competition in card networks

- assess the nature and extent of competition in the card network relevant to the interchange fee and how market power would be defined as a result.

The balancing role of the interchange fee means it is influenced, *inter alia*, by the costs of issuers and acquirers and the levels of competition in these activities *within each credit card scheme*. This is the case regardless of whether it is being set efficiently to maximise the social value of the credit card network or to maximise the returns to members of the card association (where these outcomes imply different levels of interchange fees).

The market power possessed by a particular credit card scheme is associated with dominance of the provision of credit card payment services, something that arises naturally because of economies of scale in transactions processing and, more importantly, network effects. The larger the share of credit card transactions processed by a given scheme, the lower are its unit processing costs, allowing it to charge cardholders and merchants less than its competitors, and the greater are the network effects that, other things equal, encourage cardholders and merchants to join that scheme instead of competitors' schemes.

The market power of a credit card scheme does not result from the level of competition in issuing and acquiring activities, but the nature of this competition may influence the extent to which that market power might be exercised. That is, if there is less competition between them in issuing and acquiring activities scheme members may be more likely to cooperate to set interchange fees to extract rents through higher merchant services charges or to stimulate credit card use over other payments mechanisms.

Similarly, centralised setting of the interchange fee does not by itself generate market power, but is a prerequisite for the exercise of that power when it has been generated by other means. It is also necessary that the card association members are then able to agree on a level of a uniform interchange fee that will generate rents at a level and with a distribution that is mutually acceptable, given the rules of the association. This may require that the internal processes of the association are dominated by a few institutions.

2.4. Network effects in credit card networks

- identify the network effects that you think each agent in the credit card network both generates and experiences;
- provide your views on whether you think these network effects diminish over time; and
- identify which of the network effects that you think gives rise to externalities.

Network effects affect decisions to join rather than use the credit card network, although the size of a credit card network will influence the opportunities for consumers to choose to use a card. Use increases transactions volumes and lower unit costs through increased economies of scale, but it is also subject to charges that could internalise these effects.

As we noted in our previous report:

> *Network economies exist because the greater the number of card holders and accepting merchants, the greater are the benefits of participation for new and existing card holders and merchants.*

This suggests network effects flowing between new cardholders and existing merchants, and between new merchants and existing cardholders.

Table 2-1 summarises our intuitive assessment of the network effects that generate the sixteen potential categories of externalities between the four classes of agents involved in credit card networks. In many cases there will be no effect (0 in the relevant cell), for instance, when a new cardholder joins a network this gives no additional direct incentive for other consumers to apply for the scheme's card. It will, however, increase (however marginally) the benefit to merchants of accepting the scheme's cards (+ in the relevant cell). There are similar and symmetrical effects when a merchant joins a scheme (no effect on other merchants but positive benefits to all existing cardholders). Both of these effects also benefit issuers and acquirers. Greater merchant acceptance of a card increases demand for it from consumers and therefore benefits issuers. Conversely, greater consumer holding of a card increases demand to accept it and therefore benefits acquirers.

Table 2-1: Potential flow of credit card network externalities

		Externality recipients			
		Cardholders	**Merchants**	**Issuers**	**Acquirers**
Externality Generator	**Cardholders**	**0**	**+**	**0/-**	**+**
	Merchants	**+**	**0**	**+**	**0/-**
	Issuers	**0/+**	**0**	**0/-**	**0/+**
	Acquirers	**0**	**0/+**	**0/+**	**0/-**

Greater issuer numbers increases competition and may benefit cardholders and harm existing issuers, although perfect competition between them would imply that marginal entry has no effect (hence 0/+ and 0/– in the relevant cells, and similarly with the entry of new acquirers affecting merchants and existing acquirers).

The size of network effects will change over time, primarily with the emergence of dominant credit card networks. Once a network is established as "almost ubiquitous" the network effect on the decisions of new cardholders or accepting merchants will be at its strongest. Choosing to join another card scheme (provided this is at the expense of the dominant scheme – cardholding need not be exclusive, even when cardholder fees apply) then imposes

the greatest cost of foregone opportunities for use for consumers or the greatest impact on access to customers and markets for merchants.

Conversely, dominance means that the externalities associated with the network effects are likely to be at their smallest. The marginal gains to existing card scheme participants will then be smallest so, leaving aside the cost shifting of an interchange fee, the private and social net costs of additional cardholders or merchants should be closely aligned. This will not be the case when the card scheme is growing and the impetus to join a weakly dominant scheme is small, but additional cardholders or merchants will then generate relatively large external benefits to existing scheme participants.

It could be argued that if the interchange fee is set to ensure that cardholder and accepting merchant numbers are optimised, new cardholders or merchants will not generate any external costs or benefits. Optimal cardholding and merchant services fees (allowing for the interchange fee) will have internalised all external effects, including those between issuers and acquirers.

3. References

Australian Bankers' Association (ABA) (2001), Credit Card Networks in Australia: An Appropriate Regulatory Framework, Submission to the Reserve Bank of Australia, July, http://www.bankers.asn.au/RBA_CrCards.pdf.

Schmalensee, Richard (2001), *Payment systems and interchange fees*, National Bureau of Economic Research Working Paper 8256, Cambridge, MA, April, http://www.nber.org/papers/w8256.