THE APPROPRIATE SCOPE OF CREDIT CARD SCHEME REGULATION

prepared for

American Express International, Inc.

by

Access Economics Pty Limited

Canberra
June 2001

Foreword

Following the designation of "four-party" credit card schemes operated in Australia by Bankcard, MasterCard and Visa by the Reserve Bank of Australia (RBA) on 12 April 2001, American Express International, Inc. (American Express) has had a number of discussions with the RBA about the possible flow-on implications for "three-party" charge card systems such as those operated by American Express.

Recently, American Express has provided a submission on the issues involved to the RBA. In addition, American Express has commissioned Access Economics to prepare a Report analysing the economics and competition aspects of credit card and charge card systems, with particular reference to the case for or against regulatory intervention by government agencies.

While American Express has commissioned this Report, and has provided background information, the analysis therein, and the policy conclusions reached, are those of Access Economics.

Access Economics
Canberra
June 2001

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Executive Summary

This Report has been commissioned by American Express International, Inc. (American Express) as a contribution to the analysis of the economics and competitive aspects of credit card and charge card systems operating in Australia.

The Report is intended to be an input into the deliberations by the Reserve Bank of Australia (RBA) about what, if any, additional regulatory response is needed following the designation on 12 April 2001 of credit card systems operated in Australia by Bankcard, MasterCard and Visa.

The key reason for designation of credit card schemes is the suspicion (based on comparisons of highly aggregated data on the revenues and identifiable costs of operating the schemes) that merchant service fees are too high as a consequence of high interchange fees set by full members of the four-party schemes. That is, despite the strong competition in the retail market for credit card services, the dominant four-party schemes have used their power to set interchange fees to extract rents from merchants through merchant services charges that are higher than warranted by their costs.

It is likely that this situation has largely arisen because of the closed nature of a key element – the issuer/acquirer relationship and membership thereof – of the notionally "open" four-party schemes. The eligibility and net issuer requirements effectively put control of the four-party schemes in the hands of the core deposit-taking members and allow them to control competition from specialised issuers or acquirers who might otherwise have joined the schemes.

The particular issues that are addressed in this Report include:

- Collective price setting.
- Conditions for access to payments systems.
- The "no surcharge" rule.

In particular, two types of card systems are examined:

- The "four-party" credit card systems, which involve customers, merchants, card issuers and card acquirers as four separate entities. Bankcard, MasterCard and Visa are major players of this type in Australia.
- The "three-party" charge and credit card systems, which involve customers, merchants, and card issuers/acquirers, where the issuer/acquirer is the same entity. American Express and Diners are examples that operate in Australia.

Main findings

Collective price setting

Collective price setting is a feature unique to four-party credit card systems and involves the determination of the interchange fee. It give rise to concern – rightly or wrongly – because, while setting an interchange fee is necessary to make such networks effective, it is a practice that, in most other markets, would be regarded as anti-competitive.

Establishing whether or not the interchange fee can be exploited by banks to increase their profits and distort choice towards excessive use of credit cards is not possible in any *ex ante* or *general principles* sense. At the end of the day, it is an empirical matter.

Evidence about many dimensions of credit card scheme operations needs to be gathered and assessed in the broad context of the operation of electronic settlements (EFTPOS) networks, the whole range of available payments options (including the substitutability of credit cards for cash, with and without discounts) and the bundling of credit card and other services by financial institutions. Nevertheless, not all the data needed to assess whether interchange fees are being abused may be available and, even if it is, it may still prove to be inconclusive.

That said:

- where banks possess *some* market power, *and*
- customers face *imperfectly* substitutable alternative payment options, *and*
- price coherence is at least a *partial* reality

there is at least the *possibility* that distortions encouraging over-use of four-party credit cards exist (with the consequence that the cost of transacting is inefficiently high).

This is probably the firmest conclusion that can be reached given the present state of our knowledge.

If such distortions do exist, the mechanism driving them is the four-party card system interchange fee, and the processes through which that fee is determined. In that sense RBA designation of Bankcard, MasterCard and Visa on 12 April 2001 can be viewed as a precautionary response enabling greater scrutiny in this area.

There is nothing wrong with interchange fees *per se.* But because the interchange fee is the mechanism through which credit card distortions – if any – can be effected, the RBA decision not to designate three-party systems is sensible. If there is a problem distorting market choices, the effective policy response is to remove the problem, not seek to regulate all competitors whether or not they exhibit the problem.

Conditions for access to payments systems

Present conditions for access to four-party payment systems *may* be inappropriately restrictive:

- Maximising network effects – the efficiencies networks offer – may require fewer restrictions on membership
- But, whatever the membership of four-party card networks, an interchange fee will still be needed, and concerns about collective price-setting will remain.
- Indeed, the more dominant any four-party card network becomes, the more pervasive may such concerns become.

The "no surcharge" rule

It is possible to show, using simplified models, that, where a "no surcharge" rule is applied to merchants as a condition for accepting a credit card, *and that rule is effective, resulting in perfect price coherence*, then banks with market power can exploit that power via manipulation of the interchange fee, distorting customer choice towards excessive use of credit cards and raising bank profits.

In practice, however, "no surcharge" rules do not generate *perfect* price coherence:

- While formal surcharges for credit card use exist in Australia only in limited circumstances (taxis), their economic equivalent – discounts for cash – exist to varying degrees.

- No formal data are available about the extent to which such discounts exist, but anecdotal evidence and experience suggest that cash discounts are frequently offered and obtainable. To the extent that cash discounts can be had, the existence of cross-subsidisation effects and the probability of credit card use distortions is reduced.
- However, it is probable that *imperfect* price coherence exists, possibly driven in part by the costs of multiple pricing at the merchant level as much as by compliance with specific rules on card acceptance.

Consequently, the existence of "no surcharge" rules, at least in part, can contribute to credit card use distortions. But these rules can only do so by providing an opportunity for card association members (banks with market power) with the means to do so (exploitation of interchange fees) to engage in distorting behaviour.

Again, this leads to the conclusion that, *if* there is a market distortion because "no surcharge" rules are at least partially effective, then addressing this problem may require prohibition of such rules *by the card associations whose members could benefit from the existence of such rules.*

But this conclusion:

- Does *not* apply to three-party systems, because they do not have interchange fees
- Should *not* force merchants to display multiple prices for a product for each payment mechanism: that choice should be left to the merchants themselves.

Policy Implications

Access Economics' findings suggest the following policy implications.

1. Designation of four-party card systems by the RBA *may* be justified as a precautionary initiative.
2. Further policy action in relation to designated card systems might sensibly concentrate on two areas:
    - as a first priority, how the interchange fee is set (and whether broader access to credit card association membership could affect this); and
    - after that exercise is completed, and depending upon its results, consideration of whether the "no surcharge" rule for four-party card membership should be proscribed.
3. As regards the interchange fee, policy might sensibly start with monitoring and information-gathering, with a view to improving knowledge of the bases on which the fee is set. Depending upon the findings of this process, consideration might be given to regulation of the level of such fees. However, Access Economics considers that any intervention in fee-setting is fraught with difficulties, and attempts to optimise the fee by bureaucratic fiat will almost certainly fail.
4. If intervention is thought necessary, careful consideration should be given to the likely costs and benefits of any proposed regulation. This would not simply count the costs of existing distortions as automatic benefits of intervention, but would balance factors such as the extent to which regulation could realistically correct existing failures and the potential for regulation to itself impose additional costs – which, in the end, will probably fall on consumers.

5. As regards the "no surcharge" rule for four-party card systems, an alternative or complementary policy approach by the Reserve Bank is simply to proscribe such a rule for the designated card systems. This is a relatively "clean" policy approach which then allows market forces greater room to operate, increasing chances of optimal outcomes.

6. The following measures are *not* indicated:

   - designation of three-party card systems: any cost/price effects flowing from 3. and 5. above will flow on to such systems, and other payment mechanisms, via competitive market forces and the close substitutability between card schemes. The RBA has stated its intention to concentrate on wholesale credit card scheme charges, and three-party schemes only set their prices (merchant and card holding fees) in the retail market;
   - prohibition of any "no surcharge" rules in three-party card systems; and
   - mandating multiple pricing for each product by merchants: multiple pricing should be at the discretion of merchants themselves.

Access Economics considers that these policy recommendations focus on the core elements of the market distortion problem and, when in place, allow greater scope for competitive market forces to generate efficient pricing outcomes.

1. Focus of Report

This Report has been commissioned by American Express International Inc. (American Express) as a contribution to the analysis of the economics and competitive aspects of credit card and charge card systems operating in Australia.

The Report is intended to be an input into the deliberations by the Reserve Bank of Australia (RBA) about what, if any, additional regulatory response is needed following the designation on 12 April 2001 of credit card systems operated in Australia by Bankcard, MasterCard and Visa.

The particular issues, from a potential regulatory perspective, that are addressed in this Report include:

- collective price setting;
- conditions for access to payments systems; and
- the "no surcharge" rule.

In particular, two types of card systems are examined[1]:

- The "four-party" credit card systems, which involve customers, merchants, card issuers and card acquirers as four separate entities. Bankcard, MasterCard and Visa are major players of this type in Australia.
- The "three-party" charge and credit card systems, which involve customers, merchants, and card issuers/acquirers, where the issuer/acquirer is the same entity. American Express and Diners are examples of these that operate in Australia.

1.1. Background

Prior to April this year, responsibility for the regulatory oversight of credit card schemes was shared between the Australian Competition and Consumer Commission (ACCC) and the RBA. The schemes were not formally regulated and the division of responsibilities was based on a memorandum of understanding between the two authorities.

Following the release of the RBA/ACCC joint study, *Debit and Credit Card schemes in Australia* (RBA/ACCC 2000), in October 2000 and subsequent public consultation, responsibility for regulatory oversight was passed by the ACCC entirely to the RBA. On 12 April 2001, the RBA designated three four-party credit card schemes operating in Australia: Bankcard, MasterCard and Visa.

The RBA is now considering the scope, form and extent of the regulation it will apply to these credit card schemes. In addition, the RBA is considering whether or not it should encompass "closed" three-party charge card systems such as those operated by American Express in any regulatory oversight.

[1] The key issue in both of these systems is the relationship between issuers and acquirers. In three-party systems this is generally collapsed into the activities of one firm. In four-party systems the joint supply of settlement naturally requires some cooperation between firms that are otherwise competitors, either for the credit card business of cardholders and merchants, or in the markets for other banking services. Despite their similarities, the references to the issuer/acquirer relationship in credit card systems in the following do not apply to ATM and debit card networks where, although some form of cooperation is necessary (ie on standards), charges are all bilaterally negotiated.

1.2. American Express brief to Access Economics

The American Express brief to Access Economics is straightforward.

Access Economics has been asked to prepare a Report that:

- presents an independent, and as rigorous as possible, analysis of the economics and competitive aspects of credit card and charge card systems operating in Australia;
- provides an assessment and, where necessary, critique of the main analyses provides by others in relation to credit card and charge card systems in Australia;
- provides brief references, as appropriate, to international practice in relation to regulation of credit cards and charge cards; and
- presents conclusions on the case for or against regulation of credit card systems in Australia, and the case for any extension of such regulation to charge card systems, having regard for the economics of such systems.

In brief, the analysis points to the following general conclusions:

- Having regard to the substantial competition between credit card and charge card systems, and between these and other payments systems, the *economic* case for regulation of four-party credit card systems is difficult to establish with absolute confidence.
- A lack of information and transparency in relation to the processes by which *one* charge – the interchange fee between card issuers and acquirers – is set gives rise to concerns about possible anti-competitive effects that may disadvantage merchants and consumers. There is no economic case for a zero interchange fee in an efficient credit card system, but whether current fee levels are optimal is not clear. *Perceptions* of anti-competitive processes are the strongest case, at present, arguing for regulatory oversight of four-party credit card systems.
- There is at least some question about the appropriateness of the access conditions for membership of credit card associations, and greater transparency in this area would help to determine whether or not access conditions themselves are a potential or actual source of anti-competitive effects. If this proves to be the case, the appropriate form of regulatory intervention is to change the access conditions themselves, rather than to attempt to regulate their pricing symptoms.
- No formal evidence has been found about the extent to which consumers not using card payment systems can obtain discounts (eg, for use of cash), despite anecdotal evidence and experience suggesting that cash discounts are frequently offered and obtainable. Without substantive evidence, and in light of the rapid increase in the use of card payments anyway, the suggestion that non-card users are effectively subsidising card users under "no surcharge" card access rules is at best not proven.
- Whatever the case for regulatory oversight of four-party credit card systems, the inherent structure of three-party charge card systems – and in particular the fact that, in such systems, the card issuer and acquirer are the same entity – means that there is no case for extending such oversight to three-party systems.

1.3. Structure of Report

The remainder of this Report is structured as follows:

- Section 2 sets out Access Economics' analytical framework, covering transactions costs and economic efficiency, payments mechanisms and the role of credit card/charge card systems, the economics of credit card/charge card systems, interchange fees and transparency, "framing" and consumer decision-making, "unconditional" ticketed prices, appropriate forms of regulation, and international card system oversight.
- Section 3 briefly reviews the RBA/ACCC joint study on these matters.
- Section 4 presents an assessment and critique of other studies of these matters.
- Section 5 considers other issues, including loyalty programs, the American Express/AMP relationship, point of sale access and pricing, and tax evasion issues.
- Section 6 presents Access Economics' main findings and policy implications.
- A listing of references is presented at the back of the Report.

2. Analytical background

2.1. Transactions costs and economic efficiency

What is special about credit card payments systems?

Consider both three- and four-party systems, which, as noted above, are defined as follows:

- "Four-party" credit card systems involve customers, merchants, card issuers and card acquirers as four separate entities.
- "Three-party" charge and credit card systems involve customers, merchants, and card issuers/acquirers, where the issuer/acquirer is the same entity.

A key feature of both system is the "jointness" of credit card transactions costs.

Card system transaction costs are *shared*: that is, they are joint costs borne by both buyer and seller in a trade. While, as in Baxter (1983), there is a *theoretical* optimal distribution of these costs that ensures an efficient level of demand, it is likely that, for all *practical* purposes, any formal allocation of transaction costs to one party to trades rather than the other makes little difference to the efficiency of the markets for either the goods or services traded or the particular means of settlement[2].

This is because the actual burden or incidence of such costs can vary substantially from the formal burden or incidence.

Transaction costs, like taxes, don't necessarily "stick" where they are collected. The incidence (the effect on final prices paid by purchasers and received by merchants) will depend on the nature of the supply and demand relationships and the level of competition in the markets for the goods or services traded.

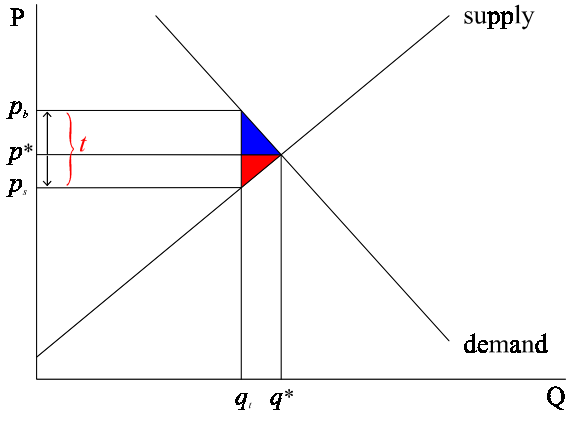
Transaction costs are borne only by one party to a trade only in extreme cases. For instance, in purely competitive markets, transaction costs will be eventually be borne entirely by buyers when demand is perfectly inelastic (a fixed quantity is bought regardless of price), or where supply is perfectly elastic (ie, where all supply is only forthcoming at a particular price), even if the costs are nominally paid by suppliers. Conversely, only in the extreme and impractical case where demand for the products in question is *infinitely* responsive to price, or where supply is completely *unresponsive* to price, will the transactions costs be borne entirely by the seller. In practice, where both demand and supply are to some extent responsive to price, and even though consumers may not "see" merchant fees when they buy with credit cards, the cost of those schemes is passed on to them to some extent.

The presence of transaction costs means that the conventional textbook notion of "frictionless" market equilibrium no longer applies. In such markets, equilibrium occurs where quantities demanded equal quantities supplied, and the buying price equals the selling price (where that price makes the last unit of supply *just* worth producing – and *just* worth purchasing).

[2] The key assumption is that the gains from trade available to each party are more than sufficient to cover the transaction costs. The allocation of costs between the parties will always be relevant at the margin, but the welfare gain from attempting to allocate these costs efficiently may well be outweighed by the costs of doing so. The best feasible solution therefore is to adopt a convention about who notionally bears the costs, accepting that some marginal distortion is always inevitable but too costly to avoid.

In reality, markets clear not when buyer and seller marginal valuations (prices) are equal, but when their *difference* equals the marginal transaction cost. This equilibrium and the incidence of a transaction cost is illustrated in Figure 2-1 for a simple market for a good or service.

Figure 2-1: Incidence of unavoidable transaction costs



Demand and supply are drawn before transaction costs are considered, and the "frictionless" equilibrium quantity is q^*. In practice buyers and sellers have to bear various costs (delivery, settlement) which, if minimised, necessarily put a wedge of size t between buyers' and sellers' marginal valuations in the feasible equilibrium at quantity q_t. Total transaction costs, tq_t, are shared between buyers and sellers. Compared with the "frictionless" equilibrium buyers pay ($p_b - p^*$) more and sellers receive ($p^* - p_s$) less[3], but there is no market distortion and the shaded triangles normally associated with deadweight costs are not a burden on the economy.

Provided the transaction costs are minimised, the efficiency benchmark for distortions to the market is the feasible equilibrium, since it is not possible to improve the welfare of either side of the transaction without making the other side worse off (no Pareto improvements are possible).

The fact that credit card transaction costs may be hidden from consumers does not mean that the form or level of merchant service fees is irrelevant.

By definition, *all* goods and services are supplied subject to a cost structure covering all the inputs that go into producing and distributing them. Transactions costs are just part of this overall cost structure. The central issue is whether or not the *market processes* determining the magnitude of transactions costs are themselves competitive and thereby ensure the lowest cost – most efficient – outcomes.

If the transaction cost is controlled (even in part) by another agent apart from the buyer and (competitive) seller of the product concerned (such as a credit card association between card issuers and acquirers who service the card network), there may be potential for these costs to be increased beyond the (efficient) resource cost to the economy so that the intermediary – in

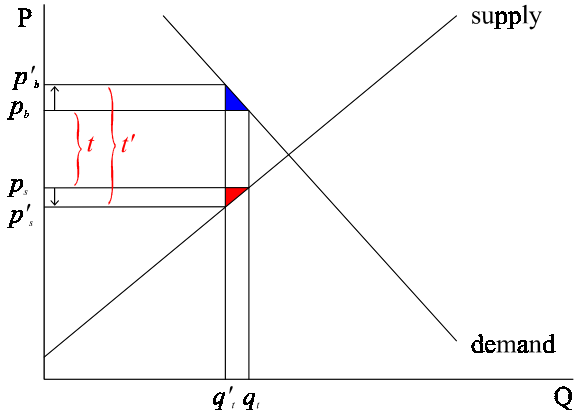
[3] Strictly speaking, the trade occurs at either p_b or p_s, if the seller or the buyer, respectively, bears nominal responsibility for the transaction cost. In credit card transactions the marginal cost of settlement is legally borne by the merchant, but some part of the incidence of that cost necessarily falls on buyers.

this case the card association – extracts economic rents by appropriating consumer and producer surplus at the margin. Amongst the consequences of this *economically inefficient* process are:

- higher prices faced by buyers;
- lower prices faced by sellers;
- lower output of products; and
- lower economic efficiency and economic welfare for the economy as a whole.

These consequences of excessive transaction costs are illustrated in Figure 2-2. The costs of settlement have increased from t to t', and this is divided in the new equilibrium between the buyer and seller as changes in the prices paid and received. Quantity traded decreases from q_t to q'_t and there is now an efficiency cost compared with the original feasible equilibrium, represented by the two shaded triangles.

Figure 2-2: Efficiency loss from distorted transaction costs



These triangles represent the gains from trade no longer realised when the higher marginal transaction cost has jointly to be recovered by the buyer and seller. The sellers of transaction services in this market gain $[q'_t(t' - t) - t(q_t - q'_t)]$ net additional revenue, save on total costs of providing settlement and so profits increase. The size of the efficiency cost will increase the more elastic (price responsive) is either supply or demand, as a greater quantity change will be needed to open a wedge to accommodate the higher transaction costs.

The price/quantity outcome in the final product market is *distorted* because the quantity traded is reduced below the level achieved inclusive of the efficiently-determined, but otherwise unavoidable, costs of the transaction. This result will still hold true even if there are many alternative means of settling transactions, as long as one of those means actually used in equilibrium is priced above its resource cost and, as a result, unnecessarily increases the marginal cost of transactions.

To the extent that a conventional partial equilibrium equates supply and demand defined to be inclusive of necessary transaction costs, a distortion of transaction costs could simply be thought of as the introduction of a wedge that creates the standard deadweight cost triangles, along the lines illustrated in Figure 2-1 above. Nevertheless, the examples illustrated in the Figures above serve to emphasise the distribution of transaction costs in the standard equilibrium model.

Regardless of the nature of the underlying market and the initial incidence of transaction costs across buyers and sellers, an increase in those costs above the minimum (efficient) resource costs of provision will cause welfare losses. This will be the case even if the distortion is in the cost of only *one* of the relevant means of settlement, provided all others are imperfect substitutes. The presence of the distortion is a *prima facie* case for regulation, to the extent that intervention can restore the minimum transaction cost.

This discussion leads to two findings that are central to this Report:

1. Where transactions costs are higher than efficient resource use requires, the economy incurs economic losses that cannot be offset by competition or other processes elsewhere in the system.
2. Where such higher costs are found to exist, the appropriate policy response is to determine their causes and act to remove those causes, rather than to suppress their symptoms: the latter course is more likely to increase unnecessary transactions costs (*deadweight losses*, in economists' jargon) than to reduce them.

For the purposes of this Report, the relevant question then is: under what circumstances are credit card associations or card systems generally able to raise the prices of their services to merchants and consumers above the efficient resource costs of provision?

An answer to this question requires some understanding of the nature of the costs of credit card associations and other card systems; the types of restrictions and rules that need to govern members to ensure the viability of the association in the presence of other means of settlement; and the manner in which those rules might be manipulated to confer market power on the association.

2.2. Payments mechanisms and the role of credit card schemes

Australian consumers have access to a variety of payments mechanisms. These include:

- Cash
- Cheques
- Credit cards[4]
- Charge cards[5]
- Debit cards[6]

[4] Credit cards allow consumers to settle immediately with a merchant, by generating a liability with their card issuer and a corresponding merchant claim on the merchant's acquiring financial institution. The terms attached to different credit cards vary and may include annual cardholder fees, different lengths of interest free periods after the (monthly) card statement is issued and various levels of interest rates on outstanding balances. Purchasers may simply defer payment by settling at the end of the interest free period or use the card to access a revolving line of credit. Merchants pay fees to their acquiring institution to accept credit cards, generally set as a fixed percentage of the transaction value. Credit card transactions can be electronic or paper-based, although the former is rapidly becoming the norm.

[5] Charge cards generally offer the same settlement and interest free deferred payment facilities as a credit card, without the option of access to a revolving line of credit.

[6] Debit cards facilitate direct electronic transfers between purchaser and merchant accounts, provided both hold those accounts with financial institutions that have access to the transfer network. Unlike charge and credit cards, almost all processing of debit card transactions relies on the availability of appropriate telecommunications links and terminal equipment (there is only paper-based settlement for some Visa

With this wide range of payments options, won't card systems have to price themselves competitively – for example, to ensure cash does not become a preferred option? In general the answer is "yes", but the reality is complicated by the relative costs and benefits of different payments mechanisms. These influence the acceptable cost differential between payments mechanisms for consumers.

For example, consumers can be "locked in" to using credit cards by the availability of credit as one of the services such cards offer. Even when consumers use only the interest-free period and effectively treat their credit card as a deferred debit card, the ability to bring forward a month or more of additional consumption by committing expenditures to a credit card means that reverting to alternative settlement mechanisms (cash or debit cards, for instance) carries the "cost" of delaying that consumption.

A more extreme case of commitment by time shifting consumption is if a long-term stream of potential future consumption is effectively amortised when consumers bring it all forward by building debt on their credit card up to (and sometimes beyond) the level that can be supported by their flow of disposable income or their card credit limit.

Use of a credit card does not necessarily tie the consumer to a particular issuer (charge and credit card issuers frequently hold "balance transfer" promotions), but it does impose a cost of switching to other means of settlement. When the credit card is used for time shifting of consumption, reverting to alternative forms of more immediate settlement will impose a corresponding cost of lost short-term consumption.

More generally, a number of considerations work for and against various payments mechanisms. For example:

- cash is most widely acceptable but most at risk of loss;
- cheques reduce risk but are somewhat less widely acceptable for normal transactions;
- debit cards offer convenience at some additional cost, but no credit;
- credit cards offer convenience plus (at a cost) the option of credit access; and
- charge cards offer convenience and a short interest-free credit period.

The latter card options may also offer benefits via loyalty programs as well.

In short, the various card systems generally are not *just* alternative payments mechanisms: they entail other costs, and benefits, as well. It is not surprising then that consumers may regularly use more than one of these mechanisms, and will tailor that use to their specific circumstances and the characteristics of the particular types of cards they hold.

Without detailing the supporting arguments, we will draw later on the following proposition:

- while credit card are and other payments systems are substitutes, they are not *perfect* substitutes.

This is important because it means it is not possible simply by looking at merchant fees to say whether one payments system is more or less efficient than another. The relative merits of alternative systems will also hinge on the benefits to consumers afforded by their other

transactions). In Australia debit, credit and charge cards all generally operate over the same electronic funds transfer at point of sale (EFTPOS) network, the cost of which is shared between the various payments systems that use it.

properties (including, *inter alia*, immediate versus delayed settlement, time shifting of consumption, level of interest costs, length of interest-free period, annual holding fees and access to loyalty scheme rewards).

2.3. Economics of credit card schemes

Credit card schemes exhibit scale and network economies:

- Scale economies exist because unit costs (per transaction costs) are generally lower the larger the number of transactions completed.
- 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.

The *technical/physical* costs of the credit card system are substantially fixed and sunk. The marginal cost of effecting each transaction is relatively small and generally unrelated to the size of the transaction (although it may be higher for large transactions warranting additional authorisation), but the credit cost carried by the issuer until settlement of each transaction effected is almost directly proportional to the value of the transaction.

Although the cost of credit grows roughly in proportion to the value of transactions, the fixed costs of establishing card networks mean that *short-run* unit costs are lower the larger is the number of transactions processed. Moreover, there are also likely to be *long-run* economies of scale in the size of credit card networks. That is, the unit costs a network are likely to be lower as it grows larger (that is, as it is able to process the normal volume of transactions for larger numbers of merchants and cardholders). There will be economies of scale in data processing facilities, brand promotion and management activities, and possibly advantages in the cost of funds.

Consumers and merchants who have decided to participate in a credit card scheme will consider the direct differences between credit card schemes (such as the financial costs of participation and the availability of loyalty programs) when choosing which scheme (or schemes) to join. However, a predominant factor will be the perception of the acceptability of the card (for a consumer) and the volume of additional custom it generates (for merchants).

This network effect ensures these benefits are larger as the network is larger, so there is a natural tendency for a few schemes to dominate a credit card market. This effect is reinforced (or at least not substantially offset) by the economies of scale in transaction processing. Smaller credit card schemes will only exist to the extent that they can specialise in providing tailored services to niche markets (concentrating on particular merchants, such as restaurateurs, or cardholders, such as corporations and/or high spending individuals). Alternatively, smaller *credit* card schemes may only exist to the extent that they run in parallel with a *charge* card scheme that is more substantially differentiated by its financial terms of participation.

Both scale and network economies suggest a natural (and productively efficient) tendency for dominance of the market for credit card services by a few large schemes.

2.3.1. Open and closed schemes

The beginning of this Section considered the effect of the jointness characteristic of credit card payments systems, and noted that they fall into two categories: four-party and three-party systems. The key difference between four-party and three-party schemes is that issuing and acquiring is generally undertaken by the same entity in the latter schemes. By their

nature, four-party schemes are supposed to be "open" to new members to enhance network effects and ubiquity. Because the issuer/acquirer is the usually same entity in three-party schemes, these are not usually "open" to be joined by other institutions. This does not mean that the terms "three-party" and "closed" can be used synonymously. Closed card schemes can still involve four distinct parties.

For instance, although American Express generally acts as both issuer and acquirer for its cards, it has negotiated arrangements with AMP to issue American Express cards. Frontier Economics (2001) notes (page 38):

> *"In Australia, American Express has recently entered into relationships with third parties (e.g. Suncorp-Metway, Macquarie Bank, AMP Banking, and HSBC) to issue American Express cards. It has been reported that American Express has about 15 institutions acting as distributors of its Blue (credit) Card."*

This overstates the extent to which American Express works through other institutions. At present American Express only allows AMP to issue its cards onto the American Express network in Australia. Separate arrangements exist by which other (not necessarily financial) institutions make American Express Blue (credit) cards available to their members and customers, by distributing offers to hold co-branded American Express cards. These cards also carry the logo of the distributing institution, but present to merchants the same as any other American Express card. American Express is the issuer of these cards.

Although the agreement with AMP makes the American Express card scheme notionally four-party, it is still "closed". American Express is still responsible for its network of acquirers, promotion and brand management, and still controls the cost of its services.

The key differences between the four-party activities of American Express and the "open", four-party credit card systems are that:

- American Express is a separate corporate entity controlling the scheme;
- dealings with independent issuers are on a bilateral basis and give them no rights of control over the scheme; and
- the rules of association of the "open", four-party schemes in Australia make them relatively closed (less amenable to new participants) than the notionally "closed" schemes.

Although American Express naturally is selective about with whom it negotiates issuer agreements, it is (in principle) "open" to approaches from any organisation willing to participate on appropriate terms. Importantly however, and unlike the "open", four-party card schemes, those terms do not extend to collective price setting for American Express card services. From the perspective of American Express' role as an integrated issuer and acquirer, the arrangements with distributors are only marketing tools that share with distributors some of the benefits of access to their members and customers.

The American Express arrangements with independent issuers and distributors are necessarily on competitive and commercial terms by virtue of the voluntary nature of the agreement and the competing interests of the parties to the agreement. In the case of the issuer agreement with AMP (and any other institution with which American Express might negotiate an agreement) there would almost certainly be pressure to renegotiate those terms if regulatory or competitive pressures lowered interchange and other fees under other card schemes. American Express would need to provide comparably beneficial terms to its issuer(s) in the new circumstances.

As concluded by the RBA/ACCC joint study (Executive Summary, para 15), competition in the four-party credit card schemes in Australia (particularly on the acquirer side) has been limited by restricting membership of credit card schemes to deposit-taking institutions (the eligibility criterion). Given the scale and network economies available to the major card schemes, this has made it very difficult for alternative schemes, three- or four-party, open or closed, to compete sufficiently strongly to allow them to lower their charges to levels that would force the dominant schemes to lower their fees.

While some of the commercial arrangements entered into by closed card schemes give them attributes of four-party schemes, the principle difference from a regulatory perspective is the collective price setting in the dominant four-party schemes. If a three-party card scheme was dominant it might then be appropriate to examine its internal fee setting processes and profitability. It is not the four-party nature of the closed schemes *per se* that attracts regulatory concern in Australia. Rather, it is the combination of the dominant position of the four-party associations, the potential for association rules to restrict entry and competition and their collective price setting.

The fact that American Express negotiates terms that allow other organisations to issue or participate in distributing its Blue Card does not materially effect the case for containing regulation to the closed four-party schemes. It is still the dominance of and collective price setting by those schemes which are the principle reasons for concern, and these factors do not apply to American Express or its arrangements with fourth-party institutions.

2.3.2. Efficient pricing of credit card services

Optimal "Ramsey" pricing[7] in multiproduct firms implies fees and charges will depend on both cost and demand factors, and will not be directly related to marginal or attributable costs alone. Moreover, given the complex interaction between the returns to issuing and acquiring activities and the complementarities with other banking or financial services, it is likely that members of credit card associations would have strong incentives to price cardholding and acquiring services other than at the marginal costs of supply, and at margins that could not easily be related back to the identifiable costs of credit card activities alone.

For instance, as mentioned in Footnote 6, the EFTPOS network is used to complete both credit card and debit card transactions. Its costs are substantially fixed, and the marginal cost of individual transactions is close to zero. Although the marginal costs of credit and debit card transactions might differ slightly (to allow for the subtle differences in the information transmitted), efficient pricing principles would allow for more substantial differences based on the own-price elasticities of demand and substitutability and complementarity between these services and the prices of other financial services (such as account keeping fees).

Two points follow from this:

- It will be extremely difficult, if not impossible, to determine when one service (credit card payments) is being priced excessively based only on direct cost and revenue data for that service in isolation from the other activities of the multiproduct firm.

[7] Ramsey pricing is the term given to prices that follow a set of rules for allocating joint (usually fixed) costs across a number of (possibly interrelated) markets in a manner that minimises the social costs of ensuring those costs are recovered and the supplier breaks even. The rule apply generally to all profit maximising firms, but generally only allow for margins above marginal costs when the firm has some form of scale economies and supplies imperfectly competitive markets (so that a margin above marginal cost can be sustained).

- Regardless of whether prices are excessive, Ramsey pricing rules mean the differential between the efficient prices of two services[8] is unlikely ever to be directly related to the differences in their direct costs of provision.

The first of these points has implications for the methodology that regulators might use to assess the extent to which market power is being exercised in a market, since it suggests activities in that market cannot be examined in isolation from the rest of the activities of the firm(s) suspected of exercising power.

The second point says that, if regulators wanted to force firms to set distinct prices for two services, the efficient difference between those prices could not be predicted based solely on the direct costs of provision. That is, the influence of demand factors means that if merchants are allowed to set distinct cash and credit/charge card prices, the efficient difference between those prices (ignoring the costs involved in setting multiple prices) will almost certainly not be directly related to the merchant services charges for the cards.

2.4. Interchange fees and transparency

2.4.1. Transparency

The lack of transparency in interchange fees is not necessarily a problem. The key issue is whether the market in which such fees are set is competitive and contestable, and in the context of a payments network system with network and scale economies, this issue becomes absolutely critical.

Many costs of supply are hidden from consumers, and there are many reasons why firms would want to set uniform prices and not to charge explicitly for these costs.

For instance, it can be argued that retail competition ensures that the internal costs of retail outlets, warehouses and distribution networks are minimised (and there is strong evidence that the high level of retail concentration in Australia is attributable to the economies of scale and cost savings available to large retail organisations – which feeds through to customers). As long as this is the case the composition of costs need not be revealed to consumers other than through (uniform) final prices. Where there are distinct additional cost of supply (such as delivery charges for whitegoods) these are still conventionally charged separately.

The fact that consumers do not see interchange fees is not the problem *per se*, the problem is the potential for cooperative processes or agreements to prevent competitive forces from minimising the cost of credit card settlements charged to merchants.

2.4.2. RBA/ACCC assessment of level of interchange fees

The RBA/ACCC joint study concludes that interchange fees are too high based on its examination of highly aggregated data on the revenues and identifiable costs of operating the schemes. There are many reasons why the conclusions of this *empirical* examination should be treated cautiously (see Section 3 below). That said, we can be more confident that *structural* features of the four-party credit card associations – notably effective barriers to access and the nature of the issuer/acquirer relationship *within* such associations – are such as to give rise to concern that fee levels *might* be too high.

What is the appropriate structure of interchange fees? The RBA/ACCC joint study talks about the problems with setting *ad valorem* charges, but there is some case for an *ad valorem*

[8] Including the efficient prices consistent with any level of supernormal profit.

component in fees when the credit providers need to carry a cost of risk and credit which will be directly proportional to the size of the transaction. Picking an appropriate balance between the fixed and variable costs associated with each transaction would be difficult, and comparison of interchange fees would be made much harder if issuers adopted more flexible interchange fee structures.

Note too that, despite the RBA/ACCC conclusion that interchange fees and the cost of credit cards has biased consumer preferences away from apparently more efficient means of payment and settlement such as direct debit, there are signs that various forms of electronic bill payment are gaining popularity[9]. Consumers in the market for means of payment are clearly able to respond to changes in cost structures and will adopt cheaper and more efficient settlement processes, albeit with some delay. Even if the credit card market is "mature", it is still open to challenge from other payments mechanisms.

There is no information in the RBA/ACCC joint study, or any of the public versions of the reports presented by the ABA that review and criticise that study, about the *actual* processes and methodology used to set the level of interchange fees in Australia. This has led to suspicion that the interchange fee is somehow set to exploit users (both consumers and merchants) of the dominant four-party credit card schemes, but leaves only conjecture about how this is achieved. There may be smoke, but there is no smoking gun (let alone sign of the gunman) in the evidence presented to date.

This is not surprising given the currently-limited information about the processes involved in setting interchange fees provided to the RBA and ACCC, and the complicated interactions between credit card service prices and fees and charges for other settlement services and for other banking services. The RBA/ACCC joint study was a necessary first step towards clearing the air.

2.4.3. Interchange fee neutrality

Many of the supporting reports point to the "neutrality" of the interchange fee in credit card associations[10]. Changes in the interchange fee, so the reasoning goes, cannot affect the net cost of using credit cards borne by merchants and purchasers (collectively or individually) because competition in either or both the issuing and acquiring markets effectively reverses the impact of the fee through changes in credit cardholder fees and merchant services charges. This result hinges on different assumptions in the various models, and is ascribed various levels of generality.

Gans and King (2001b) identify two sufficient conditions for interchange fee neutrality in a general, although still stylised, model:

- the absence of "price coherence" (that is, differential pricing based on means of payment); or

[9] See "1 billion bill payments to outstrip credit cards", *Australian Financial Review*, 5 June 2001, page 48. Although these bill payment mechanisms represent alternatives to existing settlement services, some also make it easier to transfer the debt to a credit card, and will also add to the demand for credit card transactions.

[10] There are a number of seminal analytical studies which derive the conditions for the neutrality of credit card interchange fees in payments systems. The implications of the jointness property of credit card settlement are explored in Baxter (1983) The recent studies examining the role of interchange fees and the conditions that would allow exploitation of market power are summarised in Rochet and Tirole (1999), and in the papers by Gans and King (2000, 2001a, 2001b) which build on their framework.

- perfectly competitive retail markets (so that "cash only" suppliers are always able to enter if the interchange fee excessively raises the margins set by card-accepting merchants)

While the former condition reflects the importance of a binding and symmetrical "no surcharge" rule in other analytical work, the latter condition is derived from Gans and King's own model.

If either of these conditions exists in the Gans and King model, attempts by credit card associations with market power to exploit interchange fees would be unsuccessful. This implies that if, in practice, we observe imperfect price coherence (some diversity of pricing according to means of payment) *and* a tendency for retail pricing to absorb differences in the costs of alternative means of settlement (even in competitive markets), then a credit card association with market power *could* use the interchange fee to exercise that power.

2.4.4. Weaknesses of neutrality models

Our reading of the papers outlining the interchange fee neutrality results leaves some doubt about their relevance to the concern about the cost of credit card services in Australia. The papers do highlight the importance of some features of the schemes (such as the "no surcharge" rule and cooperative setting of the interchange fee) in simple and highly stylised settings, but they do not incorporate some relevant dimensions of the market for means of settlement. In particular, they do not directly address:

- the nature of competition between alternative credit card schemes and between credit card schemes and other network-based settlement mechanisms, such as debit and charge cards;
- the advantages to dominant schemes from economies of scale (both in terms of their lower average costs per transaction and, more perhaps importantly, the imperative that their success creates for merchants and purchasers to join these schemes); and
- the dynamics of competition within individual schemes as changes in interchange fees change incentives to change the balance of, or concentrate on, issuing or acquiring activities.

On this last point, note particularly that the analytical papers model agents (purchasers, merchants, issuers and acquirers) as having *fixed* benefits and costs of credit card transactions relative to cash. We strongly suspect that if this assumption was relaxed, for example so that individual issuers and acquirers had higher or lower average costs and varying marginal costs as the quantity of transactions handled changed, the nature of competition between them would also change and variations in a centrally determined interchange fee would no longer clearly be neutral *even under the simplifying assumptions specified in these models*.

Although Gans and King (2001b) set their analysis in a model with very general cost functions, they do not explore the impact of heterogeneous costs on the likelihood that issuer and acquirer markets will be sufficiently competitive for their neutrality results to hold. That is, they recognise that association members can exercise market power if interchange neutrality does not hold[11], but concentrate their analysis on the circumstances in which it does hold without considering the extent to which their necessary conditions for neutrality might apply in practice.

[11] Gans and King (2001b), page 5.

By ignoring imperfectly competitive behaviour by the credit card association in order to concentrate on other ways in which the interchange might be neutral, they then make the mistake of pointing to imperfections in these other conditions as reasons for concern about the interchange fee, instead of exploring the consequences of anti-competitive behaviour elsewhere.

2.4.5. Lower bound on cardholder fees

There are also practical limits to the extent that competition in the issuer market can reverse increases in the interchange fee. If (in the notation of Gans and King (2001b)) cardholders pay fees, f, equal to issuer costs, c_I, less interchange fees, a, the neutrality result essentially states that, in appropriate circumstances, the increase in a is exactly offset by the decrease in f. Competition ensures that issuer revenue, $(f + a)$, always equals costs[12]. This would no longer be possible if f had a lower bound and a exceeded c_I by more than this amount. Consider first if f was constrained to be positive. Then an interchange fee that exceeded issuer costs could not be passed on in lower cardholder fees, and issuer revenues would be greater than costs. An interchange fee externally set sufficiently high would "force" profits onto issuers. Normal competitive pressures to eliminate this profit (entry and discounting by incumbent firms) would be ineffective. The volume (and value) of transactions would be driven by consumer purchasing decisions, and the profit could not be competed away by other association members while the lower limit on cardholder fees applied.

The lower limit on cardholder fees need not be positive. It is possible that loyalty programs could reduce the net cost of cardholding below zero, but there will be limits to how far these could be funded without merchant opposition. More importantly, there would be perverse incentive effects if card use led to subsidies to consumption. That is, credit card issuers could not go as far as to offer substantial discounts on the value of transactions, since this would effectively force merchants to cut their margins transparently to cover the cost of issuer subsidies. As long as there was some (possibly negative) lower limit on cardholder fees increases in interchange fees would eventually to affect the total cost of transactions.

2.4.6. Heterogeneous issuer/acquirer costs allow positive industry profits

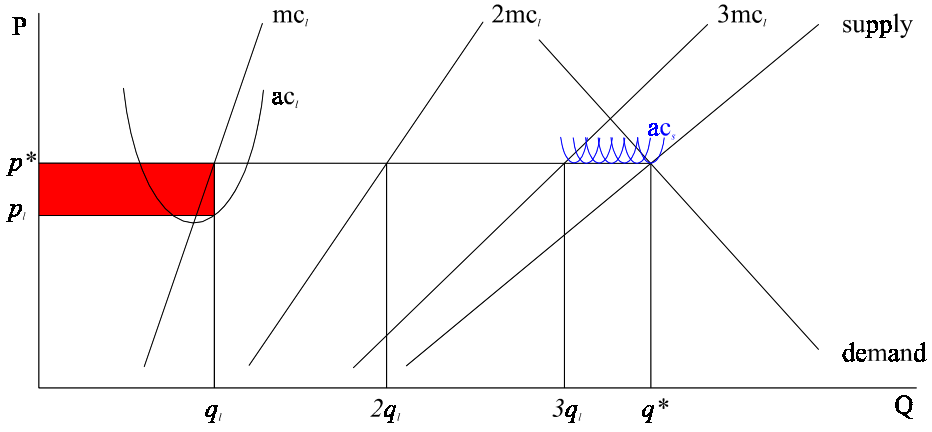
Differences in issuer and acquirer cost structures could lead to the perception of excess profits as a consequence of the commonly applied interchange fee. In competitive markets where marginal entrants have progressively higher costs of supply, a uniform market price allows the inframarginal suppliers to earn rents on their lower costs of production or supply. The market solution is efficient and competition ensures that the marginal firms make only normal returns. Nevertheless, if a large proportion of supply is provided by a few large firms with substantial (although, by definition, exhausted) scale economies that make their average costs lower than the marginal firms supplying the balance of the market, an examination of aggregate costs and revenues will suggest supernormal returns. A similar effect could emerge in the market for credit card services if marginal entrants have significantly higher costs of operation. The competition, together with the interchange fee, would ensure only normal returns to marginal issuers or acquirers, but the industry as a whole could appear to have supernormal returns on average.

[12] Note that the simplifying assumptions of these models do not allow them to distinguish between *aggregate* zero profit conditions like this one, and the standard *marginal* zero profit condition that emerges from perfect competition assumptions.

This possibility is illustrated in Figure 2-3 for a simple market in which there are two alternative scales of production, large and small, that generate two alternative average cost curves, ac_l and ac_s. The equilibrium quantity, q^*, is efficiently supplied by three large scale suppliers (each producing q_l, marginally greater than their cost minimising level of production) and a number of smaller suppliers that equally share the balance of the market ($q^* - 3q_l$). "Supply" in this example is the horizontal sum of the marginal cost curves of the three large firms and of the equilibrium number of smaller firms[13].

The market is not large enough to warrant entry by a fourth large scale producer, even though the incumbent large scale operators each earn supernormal profits (efficiency rents in this case) of $[q_l(p^* - p_l)]$ (the red shaded area). The minimum average cost of the small firms drives the market price, and each of these marginal firms earns zero profit. Nevertheless, the industry as a whole earns total revenues in excess of total costs, and makes "excess" profits on average.

Figure 2-3: Producer surplus for operators with scale advantages



2.4.7. Barriers to closed scheme membership

Although the four-party card associations have some power to inappropriately limit membership (for instance, by using the eligibility criterion to prevent entry by institutions with substantial asset backing), there are no explicit controls over the pricing by issuers and acquirers. Members of the four-party schemes are encouraged to engage in both issuing and acquiring activities (although there appear to be financial penalties for net acquirers in the form of a requirement to fund centralised association costs in addition to paying interchange fees – see ACG (2000, p. 13)). The commonly applied interchange fee is the only apparent avenue by which an increase in the total cost of credit card use might be affected.

Despite the case made to the contrary in the ACG report, the rules governing membership and participation in the dominant schemes appear to reinforce the dominance of the financial

[13] This supply function applies in the short-run for the given number and composition of firms. The long-run supply function would be more complicated as it would need to show the marginal resource cost of additional industry output derived from mixing combinations of large and small firms, and allowing for the facts that small firms will not enter until price rises to p^* and that price will fall once another large scale supplier enters.

institutions which hold full membership (as opposed to affiliated issuers) and, within those, of institutions undertaking the largest share of the value of transactions.

Without detailed information about the manner in which the interchange fee is set for Australia's dominant credit card schemes it is impossible to say with certainty, but it is reasonable to presume that the interchange fee is set (or changed only) at the behest of the largest banks. This would be the case if power in the credit card associations is related to shares of transactions, and if these are closely related to the banks' shares of cards on issue, deposits and other indicators of market share.

As discussed in the ACG report supporting the ABA position (ACG, 2001, Chapter 4), despite the various natural barriers to entry, it should not be impossible to establish a new credit card network in Australia or to introduce a local franchise of an internationally accepted card. Similarly, charge and credit card schemes do exist in competition with the dominant four-party schemes and have well-established market niches. Nevertheless, the dominant four-party credit card schemes still have market power by virtue of their ubiquity and international affiliations.

2.4.8. Exercise of market power by a dominant network

Australian retailers have a choice not to accept Bankcard, MasterCard or Visa, but would substantially limit their customer base as a consequence. Offering to accept American Express or Diners, so as to provide some means of charge or credit card payment would mitigate the problem, but could never compensate entirely.

Similarly, consumers could choose only to hold a three-party charge or credit card instead of one of the dominant four-party cards, but would consequently limit their consumption opportunities. Given the same cost of card holding and (generally zero, or possibly negative if valuable loyalty scheme points are earned) transactions costs, consumers will naturally tend to choose card schemes that have greater coverage.

As in telecommunications, it is not controlling the *lowest cost* credit card network that necessarily ensures market dominance, but controlling the *most widely used* network, even if it operates at relatively high cost. Entrants may be able to establish a lower cost network, but need either to interconnect with the dominant network to complete transactions or to acquire a significant number (if not all) of the customers of the incumbent to become competitive.

A monopolist controlling a dominant network extract rents from users as long as it does not (and possibly even if it does marginally) exceed the point where they have an incentive to join another network (transitional costs may keep users tied to the monopolist even though in the long run they would be better off shifting). The relevant question in the case of dominant credit card associations is whether they can be run like a monopolist, or whether there are factors that ensure that the prices of the association's services are kept to competitive levels despite its (collective) market power.

Monopoly rents might be extracted from merchants and consumers in a number of ways, but these reduce to two principal avenues: excessive issuer charges and excessive merchant service charges. The RBA/ACCC joint study concludes that issuer charges in Australia are too low and that merchant charges and the combined cost of credit cards is too high. As the discussion of credit card network pricing in Section 2.3.2 above makes clear, there are no clear rules of thumb that would allow assessment of the "excessive" nature of these charges independently of each other in practice as there are too many unobservable factors that determine the links between these charges in an efficient solution.

Nevertheless, it is useful to consider the circumstances in which merchant charges might be kept too high and thus able to support low issuer charges (through the level of the interchange fee) and generate rents for a dominant credit card association.

2.5. Interchange fees: What is the regulatory problem?

What is the regulatory problem? Regulators of credit card schemes need to address a series of questions:

- In what circumstances might credit card associations be able to (a) possess and (b) exploit market power?
- Is there evidence that (a) these circumstances exist and (b) they have been exploited?
- If exploitation has occurred, to what extent has this damaged economic efficiency?
- If significant damage has occurred, what regulatory remedies exist to address the source of the problem?
- Is the application of these remedies likely to generate net benefits, or do the risks of regulatory failure outweigh any potential efficiency gains?

The key point is the nature of four-party networks: to internalise network "externalities" and thereby grow to capture network effects, four-party card systems must cooperate, via card associations, to ensure appropriate pricing of network benefits/costs:

- This need for cooperation (between card issuers and acquirers) distinguishes four-party systems from three-party systems, where issuers and acquirers are the same entity.
- In other markets, such cooperation on pricing matters would typically be regarded as being in breach of the *Trade Practices Act* (TPA) and be prohibited. Indeed, in the case of four-party card systems, when this area was under the responsibilities of the ACCC, authorisation under the TPA was required to allow such cooperation to proceed.

Could this cooperation within card associations produce inefficient – distorting – outcomes? That depends:

- Members must cooperate on pricing, and the interchange fee is the relevant price.
- Precisely how that fee is set is not clear.
- It is *possible* that it could be set inappropriately.
- Whether an inappropriate interchange fee would affect *total* card transaction costs depends on the extent of competition within the card network: if competition is strong, one would expect any excessive level of interchange fees (ie, levels above true resource costs) would be offset by competitive effects on other components of transactions costs, which affect merchant fees and card membership costs.

At this stage, the strongest case for regulatory oversight appears to be *perceptions* rather than absolutely hard evidence. If parties are cooperating (colluding) to set a particular price that will be passed on to consumers/merchants, there is a good chance they will seek to extract rents in the process.

But *can* members of a four-party card association *in fact* extract rents? To do so, they must possess, and exploit, market power. Is there any *technical* reason why one might expect market power in four-party systems to be a problem?

The answers are:

- There is *imperfect*, but non-zero, price coherence
- There is the possibility that major banks have *some* market power
- They can use that power to influence interchange fees
- The interchange fee is *the* mechanism through which card association members can exploit any degree of price coherence to raise their profits and distort customer choice.

Where does this suggest regulatory intervention should be focussed? The first requirement is to get better information through monitoring about the levels of interchange fees, how they are set and their disaggregated impact on individual credit card association members. Secondly, starting from first principles, there is a need to derive and estimate measures of substitution between payment mechanisms, including measures of the non-payment services with each (the value of access to revolving lines of credit, for example), then make a comparison of charges. Thirdly, because it may still not be possible to test if interchange fees are too high, an attempt should be made to identify areas of apparently anomalous behaviour or pricing (e.g. comparison with fees for similar services overseas and for other payments mechanisms).

2.6. Framing and the "no surcharge" rule

2.6.1. Framing

Most economic theory is predicated on the assumption of consumer sovereignty – in particular, that consumers know best what is good for them and will, at least on average, make choices in everyday circumstances that yield them the greatest individual satisfaction overtime given their means and the information available to them. When first hearing this fundamental proposition of economics, psychologists usually respond with derision and laughter.

Amongst other things, psychologists investigate patterns of human behaviour in diverse circumstances, including markets, and identify instances of consistent, although not necessarily rational or self-interested, reactions. The literature on "framing" of economic decisions is more in the vein of applied psychology, in that it explores how consumers may make inconsistent choices in what appear to be identical circumstances from an economist's perspective.

The RBA/ACCC study notes the Kitch (1990) paper on framing and the no surcharge rule. It discusses the debate over no surcharge provisions in the United States in the early 1980s, in which the position of the charge card companies was held to be an example of the importance of framing in consumer purchasing decisions. It is clear from this paper that there was no theoretical, practical or experimental evidence available at the time to demonstrate that consumers are necessarily more inclined to use credit cards when no surcharge or no cash discount rules apply.

2.6.2. The "no surcharge" rule

The limited economic analysis of credit card schemes treats the no surcharge rule as a barrier to differentiated pricing of transactions settled by credit card and other means. Although they are strictly concerned with a "no discrimination rule" that prevents offering discounts for cash settlement, Rochet and Tirole (1999) model the lifting of the no surcharge rule as allowing merchants to set two prices (cash and credit) which then imposes an additional direct cost on credit card users.

In practice, experience suggests the application of no surcharge rules does not appear to have prohibited merchants offering or accepting discounted cash settlement. That is, there are

alternative prices available for different settlement terms. At worst, the role of the no surcharge rule may therefore be to limit the extent of this differential pricing. Potentially it only serves to prevent discrimination between different types of credit card, or to focus merchants' advertised "unconditional" prices at a level that already incorporates the average cost of credit card payment.

As has been noted previously, anecdotal evidence and experience suggest discounts on ticketed prices are widely available for cash payment for many types of goods and services. The present inclusion of "no surcharge" rules in merchants' card agreements therefore appears not to have completely constrained retailers' and merchants' abilities to adjust customer prices to the form of payment.

2.7. "Unconditional" ticketed prices

The negotiation and other costs of setting a number of prices means merchants will prefer to set a single price, regardless of the form or net cost of the means of payment chosen by their customers.

A similar result applies in general pricing theory. In principle, firms selling many goods and services will price each based on the costs of supply to each separately identifiable market, the nature of demand in those markets (including interaction with other markets) and the need to contribute to any "joint" costs of production. On this basis, supermarket chains would price every item in every store differently, and would vary prices daily according to changes in local demand conditions. In practice, the administration and management costs of setting and overseeing prices in this manner mean that much simpler rules of thumb are applied (broad markups on wholesale costs, for instance) and prices are relatively uniform across stores in large regions.

Similar factors militate against setting a different interchange fee for every transaction or even setting different interchange fees in bilateral agreements between all issuer and acquirer pairs. Although theory suggests this is what is needed to guarantee efficient outcomes, independently of the transaction costs of setting or negotiating the fee, we do not observe multiple prices in practice.

The problem this creates for policy makers is that the relative efficiency of particular market outcomes is clouded by these important, but largely unmeasurable, transaction costs. The prevalence and market success of uniform and stable prices suggests that this strategy is "efficient", but it provides no theoretical benchmark for testing alternative regulatory policies. We know these costs are important but, because we do not know enough about how they change in response to alternative policies, it is not possible to rank the efficiency consequences of those policies.

Regulators cannot therefore presume to know what margins, if any, merchants should be setting in the absence of external agreements to post unconditional prices. If "no surcharge" provisions were prohibited, so merchants were free to set multiple prices based on means of payment, it would be inappropriate *also* to prescribe allowed margins or to prevent credit card associations from "internalising" some of the benefits of having merchants continue to post unconditional prices by offering preferential merchant services charges to those who agreed to abide by "no surcharge" rule.

In the last case card schemes could then only include "no surcharge" provisions where merchants received appropriate compensation for the impact of either the lost opportunity to price discriminate according to form of payment or the sales impact of the alienation of cash

customers. Past (and, as discussed in Section 2.9 below, overseas) experience would suggest that no premium would actually be necessary.

2.8. Appropriate forms of regulation

Although the exercise of market power is a *prima facie* justification for regulatory intervention in markets, it should not be presumed that regulators can achieve more efficient outcomes in practice. Regulation may also fail, *inter alia*, because of:

- the absence of key information;
- problems with enforcement; and
- regulatory slippage – the difficulty of controlling a subset or single dimension of multi-dimensional prices and services.

In the case of credit card schemes there are information problems, such as data on the current extent of cash discounting, for instance. Without this the RBA is not in a strong position to judge the potential effects of present "no surcharge" provisions, and the extent to which changes in interchange fees might then be passed on in higher costs of credit card use.

The potential for regulatory failure should always be factored into decisions to regulate or to adopt particular forms of regulation. Just because an efficiency cost has been identified does not mean that regulation will automatically produce a better resource allocation outcome. Similarly, despite the public imperative to "do something", regulation should target causes not symptoms. Some caution needs to be exercised in assessing exactly where the source of perceived market failures lie before intervening in a market.

There is a strong case for targeted designation of schemes and regulation that deals only with dominant firms, rather than blanket designation. It has been widely accepted in regulatory practice that price control or other direct intervention should generally apply only to the dominant firm(s) in an industry, allowing competitive pressures to then force the effects to flow on to other, smaller players. This minimises the costs of administering the regulation of the smaller players and allows market forces to determine the appropriate adjustment to any regulated price for these suppliers rather than requiring the regulator to set or oversee all suppliers' prices. This was the approach followed in Australia by the then Prices Surveillance Authority, for example.

2.9. International credit card scheme oversight

The European Commission (EC) is currently reviewing the operation of international credit card schemes. As part of that review it commissioned two studies of the impact of the recent withdrawal of "no surcharge" rules ("non-discrimination" rules (NDR) in their terminology) in The Netherlands (ITM Research, 2000) and Sweden (IMA Market Development AB, 2000). Both of these studies surveyed merchant and consumer reactions to the removal of the NDR and found that removing the prohibition had little practical effect on their behaviour. There were some instances of merchants choosing to levy surcharges, but most preferred not to, in part because of the negative sentiment it generated with customers.

As noted by the EC in its overview of the empirical studies[14]:

[14] http://europa.eu.int/comm/competition/antitrust/cases/29373/studies/index.html

> *The main conclusions of the market studies are that most merchants do not use their right to surcharge cardholders for the use of the card. It is not established that the abolition of the NDR substantially improved the negotiating position of merchants, in particular not that it lead* (sic) *to decreased merchant fees. Cardholder's reaction to surcharging is in general negative.*

Based on these studies, the EC has made a preliminary assessment that NDR are not anti-competitive, reversing the Commission's initial stance.

3. The RBA/ACCC joint study

The Payments System Board of the RBA and the ACCC undertook a joint study into the networks for automated teller machines (ATMs), credit cards and debit cards (RBA/ACCC, 2000). Their particular focus was on:

- interchange fees; and
- conditions of entry into the industry.

The RBA/ACCC joint study was concerned with *economic efficiency* of these networks: that is, whether or not the services they provide is supplied at lowest resource cost to Australia. In this context, their particular concern was whether or not pricing signals encouraged customers to use the most efficient payments mechanisms.

The RBA/ACCC expressed particular concern about interchange fees because:

- These are "wholesale" fees – unique to card networks – that are not transparent to those customers that ultimately have to pay them, and therefore these fees cannot be "seen", cannot be *directly* influenced by card users, and thereby affect incentives to use different payments mechanisms
- The existence of "no surcharge" rules in respect of card use is believed to entail cross-subsidisation of card users by users of other payments mechanisms, such as cash, and prevent merchants from passing on the cost of accepting card payments to the card user.
- On the basis of data obtained by the RBA/ACCC from a small group of financial institutions, including the four major banks, the study concluded that average interchange fees were well above average direct costs of providing the relevant service. The study concluded from these data that there is evidence that interchange fees are too high, and the relativities between different interchange fees are difficult to understand/justify.

The RBA/ACCC joint study concludes that interchange fees are too high based on its examination of highly aggregated data on the revenues and identifiable costs of operating the schemes (see Section 3 below). There are several reasons to be cautious when drawing conclusions about the efficiency of interchange fees based on these data:

- the aggregate nature of the data;
- the focus on identifiable, directly attributed costs and the absence of capital costs and contributions to bank fixed costs;
- the partial approach that ignores the strong cost and demand complementarities between credit card, debit card and EFTPOS services and other banking and financial services; and
- the absence of a formal analytical framework in which to assess the efficient level of interchange fees or attributable costs.

The RBA/ACCC joint study concluded (Executive Summary, paras. 14 and 20) that:

> *"… 'no surcharge' rules suppress important signals to end-users about the costs of the credit card network, and that such rules are not desirable."*

"… the interests of end-users of card payment services need to be more directly engaged in the pricing process and conditions of entry to card payment networks need to be more open than at present."

Access Economics considers that the RBA/ACCC analysis – as far as it went – was a necessary first step towards understanding the operation of credit card schemes and the role of interchange fees in Australia. Nevertheless, it provided insufficient support for many of its conclusions:

- "no surcharge" rules for four-party card systems must be *effective* to allow economic distortions to occur: There was no evidence presented as to how effective "no surcharge" rules are in practice (eg, including the prevalence or otherwise of discounts for cash payments).
- distortions also require both the availability and use of a mechanism: in this case the mechanism is the interchange fee, but this must be exploited by banks possessing the market power to manipulate such fees. At most, the RBA/ACCC study concludes that the processes followed by the credit card associations to set such fees are not clear.
- excessive pricing for card network services is claimed to exist because of the estimated margin of average interchange fees over estimated average costs. This does not necessarily reflect the heterogeneity amongst card network participants, and the possibility that the larger, lower-cost, intra-marginal participants, can make higher margins on prices for a common services than the marginal supplier consistent with competitive market equilibrium (see Figure 2-3 above).

Access Economics is not suggesting that the RBA/ACCC conclusions have no basis in fact. However, it is suggesting that their conclusions are not proven beyond doubt by the evidence they present. Other conclusions may well be consistent with the facts presented.

Perhaps the strongest conclusion from the RBA/ACCC study is that, in four-party networks, there is no transparency about how interchange fees are determined, and, in the absence of this, there is a suspicion that inefficient outcomes may occur.

That said, Access Economics considers that the onus is on the RBA:

- to demonstrate more conclusively that there *is* a problem before taking further regulatory action in relation to four-party systems (that is, to identify how the interchange fee is set, whether it is being used to exercise market power and whether broader access to credit card association membership could affect this); and
- to demonstrate that the efficiency benefits of any regulatory action then taken will outweigh the costs.

4. Critique of ABA cited studies

Following the designation of four-party credit card schemes by the RBA on 12 April 2001, the Australian Bankers' Association (ABA) issued a Media release on 11 May 2001 (ABA, 2001) outlining its preferred form for any regulation and citing three commissioned reports and one recent, and apparently independent, academic paper. These four studies addressed various aspects of the RBA/ACCC joint study and provide support for the ABA case against the arguments made by the RBA in its decision.

4.1. Network Economic Consulting Group (NECG)

Access Economics is in substantial agreement with most of this study, although we believe it fails to address the key issue driving the likely source of any excessive charges for credit card use. The possibility that a dominant network might possess market power, and the circumstances in which that power might be exercised, are not discussed.

Indeed, the section of the NECG report outlining efficient pricing principles appears to suggest[15] that industries exhibiting network economies can be competitive but, again, when this might occur is not explained. There is no assessment of whether a dominant credit card association could exploit market power, or of the particular characteristics of credit card associations that would counteract or mitigate the any such attempt.

Although the importance of interchange fees in facilitating the growth and continued viability of credit card networks is discussed in detail, the NECG study accepts the proposition presented in other studies that competition in issuing and acquiring activities effectively neutralises any shift in the interchange fee away from a social optimum.

The NECG study claims[16] that:

> *Any moves to regulate interchange for open card systems such as Visa would provide a significant competitive advantage for closed credit card networks such as American Express. Indeed, there is a strong argument that if the interchange fees set by the open systems are regulated, then there is a clear need for final price regulation of closed systems.*

Access Economics strongly disagrees with this claim. As discussed above in Section 2, the rationale for regulation hinges on the exploitation of market power possessed by the four-party schemes by virtue of their dominance and the associated network economies, and the role of the interchange fee in such networks. This rationale does not extend to non-dominant, closed three-party schemes.

The quote suggests NECG appears completely to have misunderstood or ignored the dominance and "closed" nature of the "open", four-party card schemes (and consequent concern about the role of interchange fees) as the primary rationales for the designation of credit card schemes. It argues a general theme that regulation should extend to include closed, three-party schemes because they represent competing substitute services for those provided by the four-party schemes.

[15] NECG (2001), page 5.

[16] NECG (2001), Executive Overview.

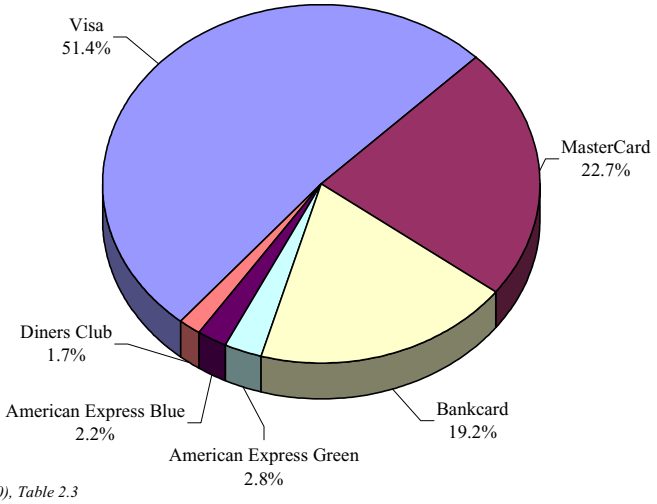
Although NECG appears to accept that charge cards are effective substitutes for four-party credit cards and that three-party cards therefore compete with credit card payment services, they appear unwilling to argue the converse case: that if regulation reduces the merchant services charges of four-party scheme acquirers, this will necessarily put competitive pressure on the three-party cards commensurately to reduce their merchant services charges.

NECG appears to be claiming that three-party card schemes are simultaneously competing close substitutes for their services *and* impervious to falling charges for four-party card services. Their argument appears to hinge on the three-party schemes being able to support higher merchant services charges through the higher levels of issuing and marketing activities that this funds.

Extending this logic, and regardless of any regulation of four-party merchant services charges, the three-party schemes should be able to sustain even higher merchant services charges simply by dedicating the additional revenue to offsetting promotional activities. This proposition is unsustainable and it should be clear that, to the extent that the three-party schemes are close substitutes for four-party cards, there will be flow-on of any reductions in merchant services charges from regulation. Three-party schemes are unlikely to be advantaged by regulation of the four-party schemes, except possibly to the extent that regulation imposes additional costs of compliance and regulatory risk on the four-party schemes.

As discussed in Section 2.8, there are good reasons for preferring targeted declaration and regulation that deals only with dominant firms over blanket declarations. The NECG paper does not present a credible case for broadening the 12 April 2001 designation of four-party credit card schemes. As the RBA/ACCC joint study makes clear, the dominant suppliers of credit and charge card services are the three major four-party card schemes (Visa, MasterCard and Bankcard). For instance, as illustrated in Figure 4-1, these schemes account for over 93% of credit and charge cards on issue in 1999-00.

Figure 4-1: Major credit and charge card brands, shares of cards on issue, 1999/2000



Source: RBA/ACCC (2000), Table 2.3

There must be a strong presumption that, even allowing for their imperfect substitutability, any regulation targeting the dominant four-party credit card schemes will have an impact on the balance of the credit and charge card market.

In any event, there will be a natural flow-through into the cardholder fees and merchant services charges of three-party schemes as a natural consequence of competition between all card schemes and the substitutability between the services they offer. If regulation did have the effect of lowering the cost of four-party credit card use, this would likely lower the demand for close substitutes such as three-party charge cards and other, less widely held or accepted three-party credit cards.

Just as it is difficult to predict what effect regulation of four-party credit card schemes might have on their merchant services charges and cardholder fees, so too it is unclear how three-party schemes would be affected. But, whatever the effect on four-party systems, it is at least clear that similar effects would flow through to payment substitutes. Despite the claims by NECG, it is unlikely that three-party schemes would be conferred with any sustained competitive advantage.

One possible exception to this conclusion, and one which does not appear to be directly outlined by NECG, is that three-party schemes would gain some relative advantage if regulation was poorly designed and implemented, so that it unnecessarily raised the costs of the four-party schemes or reduced their ability efficiently to exploit network or scale economies.

This would be an example of regulatory failure and, to the extent that it is possible, the risk of this needs to be balanced against the expected benefits of regulation. In this case three-party card schemes may gain a competitive advantage to the extent of the additional costs imposed on the four-party schemes. It would, however, be surprising if this advantage was sufficient to outweigh the likely cost advantage that the four-party schemes have over the three-party schemes by virtue of the greater scale of their operations.

4.2. Frontier Economics

The Frontier Economics (2001) report was commissioned by a group of Australian banks with a brief to devise a framework for assessment of alternative interchange fee arrangements. The publicly released version of the report does not appear to have met that objective. It contains a lengthy discussion of credit card schemes and their place in the payments system and of the role of interchange fees in facilitating four-party card schemes, but does not provide an analytical framework which allows assessment of current levels of interchange fees in the dominant Australian four-party credit card schemes.

The public version of the Frontier Economics report does not contain any substantial arguments relevant to the extent or direction of credit card scheme regulation that warrant discussion here.

4.3. Allen Consulting Group

The Allen Consulting Group report (ACG, 2001) focuses on the economic consequences of the membership rules for the "open", four-party credit card schemes and is an adjunct to the Frontier Economics report mentioned above. Despite the exclusions from the publicly released version, this Report provides useful background on the self-regulation and internal processes of the major credit card associations.

Aside from reinforcing a case for the eligibility for membership to be restricted to deposit-taking institutions, the ACG report makes it clear that the rules are designed to discourage net

acquisition, and force members to balance both issuing and acquiring activities. While there is some merit in the argument that this is in the interest of the schemes, it is not clear that it is always in the public interest, given the effects on potential competition between schemes and on the development of an effective countervailing power to address the potential for issuers to over-price their services.

In particular, it could be argued that restrictions forcing "balanced" issuing and acquisition would be unnecessary if interchange fees were properly set. There would be no danger to the viability of the issuers if these fees compensated issuers under any scheme for their costs, including mutually beneficial marketing and brand promotion. Moreover, it would ensure that the schemes were protected only by the "natural" barriers to entry (such as sunk costs and network and scale economies), and less likely to abuse their market power or to drive out more efficient entrants. ACG attempt to counter this by arguing that issuers incur sunk costs and generate externalities that are not easily recovered through interchange fees.

Similar arguments can be made against the eligibility criteria, although it is difficult to build a case against the ACG report as much of the relevant content is deleted from the publicly available version. The conclusions nevertheless beg several questions about the nature of the weaknesses of institutions with substantial asset bases but which do not accept deposits and are ineligible for membership of the dominant four-party credit card schemes.

It should also be noted that government prudential supervision is no guarantee against the failure of a deposit-taking institution, and it would be useful in future research to examine the frequency with which (domestically and internationally) credit card scheme members have had to make good the liabilities of a failed member.

Although the ACG report discusses in passing the importance of the four-party credit card association rules for their ability to compete with three-party schemes, it does not directly address the extent to which any future regulation might be applied to three-party card schemes.

4.4. Gans and King

The ABA included a recent journal article by Professors Joshua Gans and Stephen King of the University of Melbourne (Gans and King, 2001a) among those it cites in its Media Release response to the RBA/ACCC joint study[17]. An earlier and substantially identical version of this article was published as a Melbourne Business School Working Paper (No.16, December 2000) (Gans and King, 2000), and the arguments both versions contain rely heavily on the analysis of circumstances in which changes in credit card scheme interchange fees will be neutral in an unpublished working paper (Gans and King, 2001b). Parts of these analyses have already been discussed in Section 2.4 above.

The key to this paper is the claim that interchange fees are largely irrelevant to the efficiency of the credit card market, or of the payments system generally. Gans and King outline a theory of interchange fees and competition that suggests that, except in what they defined as limited circumstances, the level of interchange fees will be offset by adjustments in other fees and charges. Credit card issuers cannot therefore use the interchange fee to extract rents from

[17] Although this paper initially appears not to have been commissioned by the ABA or its members, the unpublished working paper on which it substantially relies (Gans and King, 2001b) acknowledges financial support from the National Australia Bank.

consumers and merchants or to set the relative price of credit cards to distort consumer choices away from other means of payment (particularly cash).

We have not reviewed the source papers of these results in detail, but find the conclusion highly counterintuitive. Gans and King label as "naïve" the claim that increases in interchange fees might raise the price of credit card transactions. Nevertheless, we are unconvinced that their model captures all of the effects of changes in interchange fees, particularly the consequences of circumstances that allow issuers collectively to set those fees and the effects of interchange fees on non-bank competitors who are not whole members of the relevant credit card schemes.

The Gans and King analysis appears to us to have two weaknesses that raise doubts about the generality of their conclusions. First, they have not modeled the network and scale economies available to credit card associations and their members, and therefore have no mechanism to incorporate the effects of diverse profit levels across association members as the interchange fee is varied.

Secondly, as explained in Section 2.4, they fail to consider the impact of practical limits on the lower levels of cardholder fees if interchange fees are raised. The consequence of this is that, beyond some limit, competition in the issuer market will not be able to neutralise the impact of interchange fees set higher than the costs of issuing. Higher interchange fees will then begin to translate into a higher aggregate price of credit card use and facilitate the extraction of rents from purchasers and merchants.

Despite these criticisms of their attempts to extend the analytical literature on the role of interchange fees, we nevertheless concur with Gans and King's assessment of the RBA/ACCC joint study.. The joint study examination of interchange fees is cursory and lacks a solid theoretical basis for its comparison of interchange fee revenues and identified costs.

5. Other matters

5.1. Loyalty programs

The RBA/ACCC Joint study notes that the impact of loyalty programs effectively reduces the cost of using credit cards and, for those who do not use the revolving line of credit, the impact is that customers are "paid to use the card". This strikes us as an excessively strong conclusion, given the balance of other costs and benefits that will influence the decision to use credit cards over other payment mechanisms. Provided the customer puts sufficient spending through their credit card account, loyalty programs can generate rewards worth up to around one per cent of their spending. While the potential to earn points towards loyalty rewards can offset some of the costs of using a credit card and may be influential in marginal cases, it is not clear that these programs obviously generate *net* benefit for credit card use or are pivotal to consumers' choice of settlement mechanism.

Frontier Economics (2001, page 53) argues that not allowing for the cost of loyalty programs in a regulated interchange fee would put four-party card schemes at competitive disadvantage compared with three-party schemes because the four-party schemes would not then be able to pass any of the cost of the programs on in their merchant services charges. The logic of this argument seems to dismiss the possibility of the neutrality of the interchange fee in four-party schemes. It also ignores competitive flow-on effects from four-party to three-party schemes.

5.2. POS access and pricing

As noted in Section 2.2, electronic transactions (of all types – credit, debit and charge card) are generally carried over the same EFTPOS network.

Just as merchants generally prefer to deal with only one acquirer of credit card transactions, they have a strong aversion to having more than one terminal machine in their stores, or to having to integrate links to more than one financial institution into their terminal and stock-keeping systems. Nevertheless, this single link has to be compatible with all of the types of cards they wish to accept, and there is an overarching data transmission and switching network that has to be shared by all users and providers of electronic settlements.

The RBA/ACCC joint study examined most of the services supplied over the EFTPOS network, but did not consider their interaction or joint reliance on, and contributions to the costs of, that network.

The operation of the EFTPOS network has many of the same characteristics of four-party credit card schemes, particularly the dominance generated by the network effect and the necessary cooperation between otherwise competing firms regarding the management of the network and the development of standards and protocols. As in the four-party credit card schemes, there is also the potential for these cooperative processes to be manipulated to the advantage of network members generally or, more likely, of particular members.

Access Economics notes that this will be the subject of further consideration by the RBA in future, and would wish to develop its own analysis on this matter as an input into that work as a separate exercise from this Report.

6. Conclusions: Main findings and policy implications

6.1. Main findings

Access Economics reaches the following conclusions about

- Collective price setting.
- Conditions for access to payments systems.
- The "no surcharge" rule.

6.1.1. Collective price setting

Collective price setting is a feature unique to four-party credit card systems and involves the determination of the interchange fee. It give rise to concern – rightly or wrongly – because, while setting an interchange fee is necessary to make such networks effective, it is a practice that, in other markets, would be regarded as anti-competitive.

Establishing whether or not the interchange fee can be exploited by banks to increase their profits and distort choice towards excessive use of credit cards is not possible in any *ex ante* or *general principles* sense. Interchange fee neutrality can be established in the presence of extreme assumed conditions, but these generally do not apply, or do not apply fully, in practice, and, to the extent that they do not, interchange fee exploitation *may* generate distortions favouring excessive card use. At the end of the day, it is an empirical matter. Further research into the setting of the interchange fee and the pricing of credit card services is needed. The data used in the RBA/ACCC joint study needs to be added to and a more comprehensive analytical framework for interpreting that data needs to be developed.

That said:

- where banks possess some market power, and
- customers face imperfectly substitutable alternative payment options, and
- price coherence is at least a partial reality

there is at least the *possibility* that distortions encouraging over-use of four-party credit cards exist.

This is probably the firmest conclusion that can be reached given the present state of our knowledge.

If such distortions do exist, the mechanism driving them is the four-party card system interchange fee, and the processes through which that fee is determined. In that sense RBA designation of Bankcard, MasterCard and Visa on 12 April 2001 can be viewed as a precautionary response enabling greater scrutiny in this area.

There is nothing wrong with interchange fees *per se.* But because the interchange fee is the mechanism through which credit card distortions – if any – can be effected, the RBA decision not to designate three-party systems is sensible. If there is a problem distorting market choices, the effective policy response is to remove the problem, not seek to regulate all competitors whether or not they exhibit the problem.

6.1.2. Conditions for access to payments systems

Present conditions for access to four-party payment systems *may* be inappropriately restrictive:

- Maximising network effects – the efficiencies networks offer – may require fewer restrictions on membership
- But, whatever the membership of four-party card networks, an interchange fee will still be needed, and concerns about collective price-setting will remain.
- Indeed, the more dominant any four-party card network becomes, the more pervasive may such concerns become.

6.1.3. The "no surcharge" rule

It is possible to show, using simplified models, that, where a "no surcharge" rule is applied to merchants as a condition for accepting a credit card, *and that rule is effective, resulting in perfect price coherence*, then banks with market power can exploit that power via manipulation of the interchange fee, distorting customer choice towards excessive use of credit cards and raising bank profits.

In practice, however, "no surcharge" rules do not generate *perfect* price coherence:

- While formal surcharges for credit card use exist in Australia only in limited circumstances (taxis), their economic equivalent – discounts for cash – exist to varying degrees.
- No formal data are available about the extent to which such discounts exist, but anecdotal evidence and experience suggest that cash discounts are frequently offered and obtainable. To the extent that cash discounts can be had, the existence of cross-subsidisation effects and the probability of credit card use distortions is reduced.
- However, it is probable that *imperfect* price coherence exists, possibly driven in part by the costs of multiple pricing at the merchant level as much as by compliance with specific rules on card acceptance.

Consequently, the existence of "no surcharge" rules, at least in part, can contribute to credit card use distortions. But they can only do so by providing an incentive for card association members (banks with market power) with the means to do so (exploitation of interchange fees) to engage in distorting behaviour.

Again, this leads to the conclusion that, *if* there is a market distortion because "no surcharge" rules are at least partially effective, then addressing this problem may require prohibition of such rules *by the card associations whose members could benefit from the existence of such rules.* But this conclusion:

- Does *not* apply to three-party systems, because they do not have interchange fees
- Should *not* force merchants to display multiple prices for a product for each payment mechanism: that choice should be left to the merchants themselves.

6.2. Policy implications

Access Economics' findings suggest the following policy implications.

1. Designation of four-party card systems by the RBA may be justified as a precautionary initiative.
2. Further policy action in relation to designated card systems might sensibly concentrate on two areas:
   - how the interchange fee is set; and

- whether the "no surcharge" rule for four-party card membership should be proscribed.

3. As regards the interchange fee, policy might sensibly start with monitoring and information-gathering, with a view to improving knowledge of the bases on which the fee is set. Depending upon the findings of this process, consideration might be given to regulation of the level of such fees. However, Access Economics considers that any intervention in fee-setting is fraught with difficulties, and attempts to optimise the fee by bureaucratic fiat will almost certainly fail.

4. If intervention is thought necessary, careful consideration should be given to the likely costs and benefits of any proposed regulation. This would not simply count the costs of existing distortions as automatic benefits of intervention, but would balance factors such as the extent to which regulation could realistically correct existing failures and the potential for regulation to itself impose additional costs.

5. As regards the "no surcharge" rule for four-party card systems, an alternative or complementary policy approach by the Reserve Bank is simply to proscribe such a rule for the designated card systems. This is a relatively "clean" policy approach which then allows market forces greater room to operate, increasing chances of optimal outcomes.

6. The following measures are *not* indicated:

   - designation of three-party card systems: any cost/price effects flowing from 3. and 5. above will flow on to such systems, and other payment mechanisms, via competitive market forces and the close substitutability between card schemes;
   - prohibition of any "no surcharge" rules in three-party card systems; and
   - mandating multiple pricing for each product by merchants: multiple pricing should be at the discretion of merchants themselves.

Access Economics considers that these policy recommendations focus on the core elements of the market distortion problem and, when in place, allow greater scope for competitive market forces to generate efficient pricing outcomes.

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