



RESERVE
BANK
of
AUSTRALIA

PAYMENTS SYSTEM BOARD

ANNUAL REPORT 2006

Reserve Bank

Payments System Board

It is the duty of the Payments System Board to ensure, within the limits of its powers, that:

- the Bank's payments system policy is directed to the greatest advantage of the people of Australia;
- the powers of the Bank which deal with the payments system, set out in the *Payment Systems (Regulation) Act 1998* and the *Payment Systems and Netting Act 1998*, are exercised in a way that, in the Board's opinion, will best contribute to controlling risk in the financial system; promoting the efficiency of the payments system; and promoting competition in the market for payment services, consistent with the overall stability of the financial system; and
- the powers of the Bank which deal with clearing and settlement facilities, set out in Part 7.3 of the *Corporations Act 2001*, are exercised in a way that, in the Board's opinion, will best contribute to the overall stability of the financial system.

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ISSN 1442-939X (PRINT)

ISSN 1448-523X (ONLINE)

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Reserve Bank

Foreword

The past year has been an eventful one for the Board. Its processes and policies have been under close scrutiny from a number of quarters and it also finalised reforms to Australia's debit card systems.

As noted in last year's Report, in November 2004 a group of retailers challenged the Bank's decision to designate the EFTPOS system under the *Payment Systems (Regulation) Act 1998*. This was the second major legal challenge to the Bank's exercise of its powers in two years. The retailers argued that the Bank had erred in more than 70 different ways in designating the EFTPOS payment system in September 2004. The judgement in the case, which was handed down in November 2005, found in the Bank's favour on all counts and costs were awarded to the Bank.

When the Government established the Taskforce on Reducing Regulatory Burdens on Business in late 2005, a number of organisations made submissions dealing with the Bank's powers under the *Payment Systems (Regulation) Act*. One argument was that the legislation should be changed to constrain the Bank's powers, while another was that the Bank's responsibilities for competition and efficiency should be transferred to another authority. It was also argued that the Bank's decisions should be subject to merits review, as well as the current judicial, or procedural, review.

In its response to the report of the Taskforce in August 2006, the Government confirmed that while administrative decisions should be subject to merits review, decisions of the Bank with respect to the payments system are policy decisions and therefore should not be subject to such review. The Government has not proposed any changes to the legislation governing the operation of the Board.

The Bank's payments system reforms have also come under close scrutiny from the House of Representatives Standing Committee on Economics, Finance and Public Administration. In May 2006, the Committee held a special two-day hearing on payments system reforms, taking evidence from the Bank, industry associations, financial institutions, card schemes, consumers, consultants and academics.

The Committee was particularly interested in the reasoning behind the Bank's reforms to the credit card schemes and how the reforms have played out since their introduction in 2003. The Committee recognised that there are a wide range of views about the reforms, but concluded that 'the benefits of the reform, at this point, outweigh any alleged disadvantages'. The Committee also noted that the Bank planned to conduct a comprehensive review of its reforms beginning in 2007, five years after they were announced. Commenting on a number of suggestions that another body should conduct this review, the Committee concluded that 'it is appropriate for the RBA to conduct a review of its own reforms. The RBA is well placed to conduct a review given the expertise it has built up throughout the reform process. The Committee does not believe, at this stage, there is a need for an independent review.'

The Committee also noted that there was a consensus that in some areas, technology in the Australian payments system is falling behind that in a number of other countries. The Bank shares the Committee's concerns and is pleased that the industry is exploring ways to ensure that technology and payments services in Australia keep pace with developments abroad.

On the policy front, the Bank finalised reforms to the EFTPOS system and the debit card systems operated by the international card schemes. These reforms complement the earlier reforms to the credit card system. They will see interchange fees fall in both the EFTPOS and scheme debit systems, provide more choice to merchants, and improve access arrangements.

Finally, I would like to thank the members of the Payments System Board for their excellent contributions during my time as Chairman. The Board has played an active role in developing the Bank's policy and has brought both insight and practical experience to the Bank's deliberations. My thanks too to the staff who have worked tirelessly and effectively to deliver a more efficient and stable payments system for all Australians.

A handwritten signature in black ink, appearing to read 'I Macfarlane', written in a cursive style.

IJ Macfarlane

Chairman, Payments System Board
12 September 2006

Trends in the Australian Payments System

The Board continues to pay close attention to the changing structure of the Australian payments system. One of the most notable trends over the past decade has been the continuing movement to electronic payments; over this period, the number of such payments has increased by around 230 per cent and their value by around 390 per cent. A second significant structural change has been the tendency for the unbundling of payment services, with a number of non-financial institutions competing to supply services in various parts of the payments process. This change has been associated with the entry of a number of new, non-financial firms into the payments business.

The discussion below provides some perspective on these two important trends as well as an overview of the current structure of the Australian payments system.

The Australian Payments System

On average, there are at least 13 million non-cash payments made in Australia each day. The overwhelming majority of these payments are made electronically (Table 1). There are no statistics on the number of cash payments made each day.

Card-based payments currently account for just over half the non-cash payments made in Australia, with an almost identical number of debit and credit card transactions. The direct credit system accounts for a further quarter of non-cash payments, with the number of direct credits around two and a half times the number of direct debits.

In terms of values, the most significant payment system is the real-time gross settlement (RTGS) system operated by the Reserve Bank. Amongst other things, this system processes interbank payments

associated with purchases of securities and foreign exchange transactions. It accounts for around three quarters of the total value of non-cash payments in Australia, but over 90 per cent of the value of all payments exchanged between banks. On an average day, the system processes around 25 000 payments with a total value of around \$145 billion, the equivalent to Australian GDP for two months. Of the other payment systems, the largest values are carried by the direct entry system, which accounts for some 80 per cent of the value of non-cash retail payments.

	Number	Value
Cheques	10.6	16.2
Direct debits	10.7	34.2
Direct credits	26.4	47.4
Debit cards	26.3	0.7
Credit cards	26.1	1.5
Total	100.0	100.0
Memo item: RTGS payments (per cent of all non-cash payments)	0.1	76.6
Source: RBA		

Table 2: Non-cash Payments

Number per head

	1995	2005	Average annual growth, per cent
Cheques	56	27	-7
Direct debits	6	22	15
Direct credits	27	45	5
Debit cards*	15	59	13
Credit cards*	12	58	17

* There is a break in the data series in 2001. The average annual growth rates adjust for this break.

Sources: APCA; RBA

The structure of the Australian payments system today is quite different from that a decade ago (Table 2). Since 1995, the average number of cheques written per person each year has more than halved to 27. In contrast, the average number of credit card transactions per person has increased around five fold to 58 per year. There has also been very strong growth in the use of debit cards and direct debits.

Use of credit cards in Australia is now broadly on par with that in North America, although much higher than that in Europe. In contrast, debit card usage in Australia is lower than that in both North America and Europe. Use of the direct entry system is also lower than in many European countries (Table 3).

Table 3: Non-cash Retail Payments in Selected Countries

Number per head, 2004

	Cheques	Direct debits	Direct credits	Debit cards	Credit cards	Total
United States	119	20	17	67	65	288
Canada	43	18	25	88	55	229
Netherlands	0	64	78	77	3	222
France	66	41	42	70 *	na	219
United Kingdom	35	43	43	62	29	212
Australia	27	19	40	53	56	195
Germany	1	75	76	23	7 *	181
Sweden	na	16	51	86	3	157
Switzerland	0	7	78	35	14	134
Singapore	21	11	5	29	na	66

* 2003

Sources: ABS; APCA; BIS; RBA

Card payments

While the use of both credit and debit cards has increased substantially over the past decade, the timing of growth has differed. Credit card use grew particularly rapidly in the second half of the 1990s as many cardholders responded to the widespread introduction of reward programs. Growth subsequently slowed in the early part of this decade as credit card use became more widespread; over the past couple of years the number of credit card transactions has increased at an annual rate of around 8 per cent. In part, growth has been influenced by the Bank's reforms which have led to cutbacks in reward schemes and the introduction of surcharges on some credit card transactions.

The pattern of growth in debit card transactions has been more even. Recently, growth in the number of debit card transactions has exceeded that in credit card transactions by a considerable margin, reflecting not only developments in the pricing of credit cards, but also moves by many financial institutions to provide deposit accounts that provide unlimited electronic transactions, including debit card transactions, for a fixed monthly fee. The chapter on *Reform of Card Payment Systems* provides a more detailed discussion of these trends.

The vast majority of Australians have at least one debit card; in consumer surveys, around 91 per cent of adults report that they have such a card (Table 4). In contrast, surveys suggest that credit cards are not as widely held, with 55 per cent of adults reporting that they have either a credit or charge card. Data collected by the Bank show that there are currently 30 million debit cards on issue in Australia, and nearly 18 million credit and charge cards.

Of the adults who hold a credit or charge card, most hold cards issued under the schemes operated by MasterCard, Visa and, until recently, Bankcard. Only around 9 per cent of the adult population holds a card issued under schemes operated by American Express or Diners Club; three quarters of these cardholders also hold a credit or charge card issued under the Bankcard, MasterCard or Visa brands.

Table 4: Transaction Products Held by Australian Adults*

Average for year to March 2006

Per cent of adult population that have a:

Deposit account	97
Debit card	91
Credit or charge card	55
Bankcard, MasterCard or Visa card	52
American Express or Diners Club card	9

*Aged 18 years or older

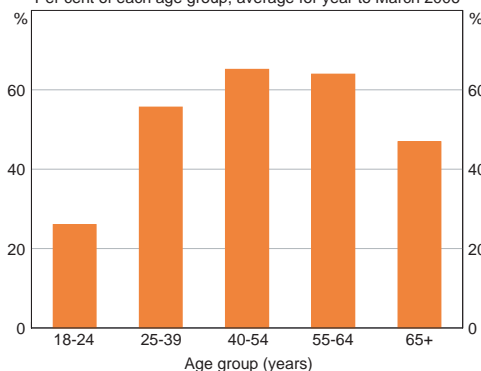
Source: Roy Morgan Research

The survey evidence also provides some perspective on the demographic characteristics of those that hold a credit card. It shows that credit card holding increases significantly with both income and age. Only 26 per cent of 18 to 24 year olds hold a credit or charge card, compared with 65 per cent of 40 to 54 year olds. Similarly, while only 35 per cent of individuals with household income under \$30 000 have a credit or charge card, 81 per cent of those with household incomes over \$130 000 do so (Graphs 1 and 2).

Graph 1

Credit and Charge Cardholders

Per cent of each age group, average for year to March 2006

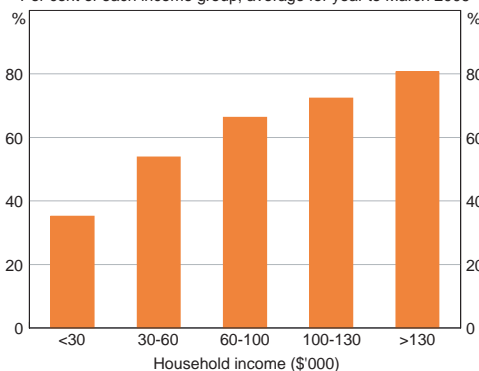


Source: Roy Morgan Research

Graph 2

Credit and Charge Cardholders*

Per cent of each income group, average for year to March 2006



* Cardholders aged 18 years or older

Source: Roy Morgan Research

For most face-to-face transactions, debit and credit cards are close substitutes for one another. In many situations, a credit card is viewed simply as a payment card, rather than as an ongoing source of credit. Around two thirds of credit cardholders surveyed in the year to March 2006 said that they usually pay off all credit cards each month.¹

One area where the two types of cards are not good substitutes is for payments over the telephone and internet. While the debit cards issued under the international schemes can be used in this way, the larger domestic PIN-based EFTPOS system can only be used in situations in which a PIN can be entered into a merchant's terminal. In 2005/06, around 18 per cent of credit and charge card transactions were undertaken in circumstances where the cardholder and the merchant were not face to face, a figure that has increased strongly over recent years.

The average value of a credit and charge card transaction is currently around \$135, more than twice the average value of a debit card transaction. In part, this difference is explained by the higher average incomes of those with credit cards, as well as differences in the patterns of credit and debit card spending.

Direct entry payments

The direct credit system has been used by businesses and governments for many years for salary, dividend and social security payments. To initiate a payment, the payer provides details of the payment and the beneficiary's bank account to his or her own bank. Direct debits on the other hand involve a payer providing an ongoing authorisation to another party to request a debit to his or her account. Direct debits are often used for recurring payments such as bill payments.

Direct credits were already heavily utilised by business and government by the mid 1990s but, unlike in many European countries, the system was not traditionally used to make person-to-person payments or pay bills. This has changed with the advent of internet banking in which the direct credit system is used to make 'pay anyone' payments from desktop banking packages. Provided the payer knows the bank account details of the intended recipient, direct credits can be used to make payments to anyone with a bank account. The number of direct credits has risen on average by around 6 per cent per annum and their value by around 20 per cent per annum over the past decade. In 2005, there were nearly as many direct credit payments as there were credit card transactions.

The number of direct debit transactions has grown more strongly than the number of direct credits, although from a lower base. In the 1990s, Australians appeared reluctant to authorise direct debits to their transaction accounts, but since the mid 1990s there has been a four-fold increase in the number of such payments and there are now as many direct debit transactions every year as there are cheque transactions. Price has been important in influencing take up of direct debits, with some billers offering discounts when bills are paid this way.

Bill payments

A more recent addition to the range of electronic payments is BPAY which was developed by a consortium of banks specifically to handle electronic bill payments. Payers contact their financial institution, either by telephone or internet, and instruct it to send a payment to the

¹ *Roy Morgan Research*

recipient using BPAY; around three quarters of BPAY transactions are initiated over the internet. The payment usually comes from a deposit account but can come from a credit card account if the biller permits this. Around 14 million bills worth \$9 billion are paid each month using BPAY, more than the total value of EFTPOS transactions. There are a number of other providers of electronic bill payment services, but to date they remain relatively small.

Despite the growth in electronic bill payments, payments over the counter and cheques through the mail remain important to many businesses.

Cheque payments

Cheques have traditionally been used for payments by mail, either in a business-to-business context or for bill payments. Because they can be made out in favour of a specific party, cheques provide a relatively safe way of making payments through the mail system.

Around two thirds of the cheques written in Australia in 2005/06 were commercial cheques – business-to-business payments with an average value of \$3 610 (Table 5). Most of the remainder were personal cheques, with an average value of around \$1 400, suggesting that there are some very large personal cheques

still being written. While there are relatively few cheques written by financial institutions, those that are written tend to be for large values; in total cheques written by financial institutions account for around a quarter of the total value of all cheques written.

Cash payments

Cash, comprised of currency notes issued by the Reserve Bank of Australia and coins issued by the Commonwealth Treasury, is the traditional payment instrument used for transactions where the payer and the receiver are face to face. Cash provides the recipient with immediate value which can then be used to make further payments; cash payments do not involve a third party, such as a financial institution.

While data are not available on cash withdrawals over the counter, data are collected on withdrawals from ATMs, cash outs at merchants and cash advances on credit cards. These data show that around 85 per cent of the value of cash withdrawn through these channels is through ATMs. The average withdrawal through an ATM is \$170, considerably larger than the average value of a cash-out transaction through the EFTPOS system, but smaller than the average value of a cash advance on a credit card (Table 6).

Many cardholders now pay a fixed monthly account keeping fee and are not charged each time they withdraw cash from their own institution's ATMs. However, around half of withdrawals from ATMs are from 'foreign' ATMs and most institutions charge a 'foreign ATM' fee when

Table 5: Cheques

2005/06

	Share by number	Share by value	Average value
	Per cent	Per cent	\$
Personal*	32	12	1 380
Commercial	65	65	3 610
Financial institution	3	24	28 206

* Includes agency cheques issued through credit unions and building societies.

Source: RBA

Table 6: Cash Withdrawals

2005/06

	Value \$ billion	Per cent of total	Average value \$
ATMs			
Own institution	79	49.8	194
'Foreign'	58	36.3	145
EFTPOS			
Cash-out only	1	0.6	79
Cash-out with purchase	9	5.6	54
Credit and charge card cash advances	12	7.6	319

Source: RBA

customers use another institution's ATM. The most common fee is \$1.50, though two large retail banks have raised their fee to \$2 in the past year. Withdrawals over the counter at a branch typically also incur a fee and some merchants charge for cash out through the EFTPOS system.

The move to electronic payments

There are a variety of interrelated factors that help explain the strong growth in electronic payments over

the past decade. These include: advances in technology; the lower costs of electronic payments compared to traditional alternatives; and the increasing recognition by consumers of the convenience of making payments electronically.

Advances in technology have both allowed the development of new means of payment and created a demand for these means of payment. Improvements in banks' internal systems and the growth of the internet have created new opportunities for electronic payments and the increasing importance of electronic commerce has resulted in a complementary demand for electronic payment methods that can be used in situations where the payer and payee are not in direct physical contact. Indeed, payments for many of the newer electronic services that Australians are now buying – mobile phones, access to the internet, information and entertainment downloads – can only be made electronically. Advances in technology have also recently made mobile electronic payments possible, with some tradespeople now carrying mobile terminals, preferring card payments to cheques and cash.

A second factor is the lower cost and convenience of electronic payments. Higher bank charges for writing cheques, lower per transaction charges for EFTPOS and the incentives to use credit cards have encouraged consumers to use electronic payments. The lower cost to merchants of a number of these payment methods has also seen some merchants encourage customers to pay electronically. Lower costs have also allowed firms to offer customers the option of making more frequent payments which can be automatically scheduled, with quarterly replacing annual payments, and monthly replacing quarterly. These more frequent payments can provide firms with more consistent cash flow and reduce credit losses, and are welcomed by many consumers.

A third factor encouraging electronic payments is growing awareness and acceptance by customers of the benefits of making payments electronically. Many younger bank customers do not have a cheque account and bank customers of all ages have become increasingly comfortable using on-line banking systems and the telephone to pay bills and make purchases. Consumers have also become more comfortable with using direct debits to bank accounts for recurring payments.

The trend towards electronic payments will no doubt continue for sometime yet, with there being a number of areas where there is scope for further changes in payment patterns. One is the development of electronic payment methods that are widely accepted for micro payments, which to date have been made largely with cash. Another is a greater use of electronic means of payment by businesses, which often still rely heavily on cheques. A third is the development of a secure on-line payment method, which could further boost on-line commerce.

Whether new forms of electronic payment succeed depends not just on whether technology solutions can be found, but also whether these means of payment can be priced attractively to both merchants and consumers. A recent report by the Department of Communications, Information Technology and the Arts concluded that the economic benefits of increasing the proportion of payments made electronically are substantial.² It identified roles for government and the industry in promoting such a move. The Bank's work on improving price transparency and increasing competition in the payments system will assist in this process, as will industry initiatives currently underway. Developments in some of these areas are discussed in the following chapters.

The Unbundling of Payment Services

Traditionally, participants in the various payment systems in Australia have been financial institutions. The role of these institutions has stemmed from the fact that they hold the deposit accounts from which consumers make many payments. Recently, however, there have been a number of changes, both market-based and regulatory, that have allowed non-financial institutions to participate more fully in payment systems.

On the market side, there has been a trend towards unbundling of the payment process which has allowed non-financial institutions to participate in particular parts of the transaction process. Whereas in the past, financial institutions controlled most of the payment process from end to end, these days there is increasing outsourcing of functions. Some financial institutions have outsourced their payment switching and processing to third parties. Specialist switches have emerged and there are signs that there are others looking to compete in this market as well. Non-financial institutions are also increasingly participating directly in transaction acquiring. In the EFTPOS system, one large merchant has established itself as an acquirer of transactions and has joined the clearing system for EFTPOS transactions as a self-acquirer. A non-financial institution has also joined the clearing system solely as an acquirer of EFTPOS and ATM transactions. A number of non-financial institutions are looking to acquire EFTPOS transactions in their own right rather than through an established player. In the ATM system, there have been a number of new entrants deploying ATMs and around 45 per cent of Australia's ATMs are now owned by independent deployers.

Competition among acquirers has resulted in an unbundling of acquiring services from general banking services, with some merchants choosing to separate the two. The most recent results of East and Partners' review of Australia's merchant acquiring markets indicated that 24 per cent of surveyed merchants were either certain or likely to change acquirers in the next

² *Department of Communications, Information Technology and the Arts, Exploration of Future Electronic Payments Markets, 2006.*

six months.³ Around 28 per cent of merchants would consider changing acquirers without necessarily reassessing their transactional banking arrangements.

On the regulatory side, two changes have allowed non-financial institutions to participate more fully in payment systems. The first was the establishment of an Access Regime for the Bankcard, MasterCard and Visa credit card schemes in 2003. The creation of a new class of authorised deposit-taking institution, known as Specialist Credit Card Institutions (SCCIs), has provided an avenue for firms that are not traditional deposit takers to enter the credit card system as either an issuer or an acquirer or both.

The second major change has been the implementation in 2006 of an Access Regime for the EFTPOS system in conjunction with an Access Code adopted by the current participants (see the chapter on *Reform of Card Payment Systems*). By making the connection process more transparent, the Regime and the Code have together facilitated participation in the EFTPOS system.

³ *East and Partners Pty Ltd report to the Reserve Bank of Australia, 'Australian Merchant Acquiring and Cards Markets', August 2006.*

Reform of Card Payment Systems

Over recent years, the Reserve Bank has implemented a number of major reforms to Australia's credit and debit card systems designed to improve efficiency and competition in the Australian payments system. These reforms have promoted more appropriate price signals to cardholders and merchants, improved access arrangements, removed restrictions on merchants, and increased the range of information available to users of the payments system. The rationale for these reforms has been extensively set out by the Bank in previous Annual Reports and in various consultation and other documents.⁴

While the reforms to the credit and debit card systems have been part of a package, they occurred at different times. The credit card system reforms were implemented in 2003 and 2004, and included: a lowering of interchange fees in the Bankcard, MasterCard and Visa credit card systems; measures to liberalise access; and requiring the removal of restrictions on merchants imposed by the credit and charge card schemes. In contrast, the reforms to Australia's debit card systems were not finalised until the first half of 2006. When implemented, the reforms to the debit card systems will see a lowering of interchange fees in both the EFTPOS and scheme debit systems, improvements in access arrangements for the EFTPOS system, and the removal of the rule that required a merchant to accept a scheme's debit cards if it accepted the scheme's credit cards.

Reform of the Credit Card System

The reforms to the credit card system reduced average interchange fees in the Bankcard, MasterCard and Visa credit card schemes from around 0.95 to around 0.55 per cent of the transaction value. They also required all credit and charge card schemes to remove their rules preventing merchants from charging customers a fee for paying by credit card (the no-surcharge rule). The reforms also improved access by allowing participation by a new class of institution, known as a Specialist Credit Card Institution (SCCI), and promoted greater availability of information regarding interchange fees, average scheme merchant service fees and market shares.

Merchants' costs and prices

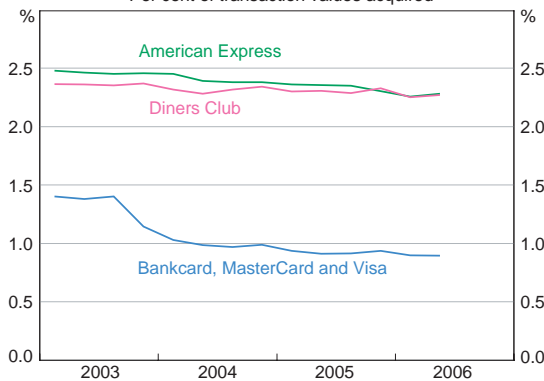
As a result of the reforms, merchant service fees for credit and charge cards have fallen substantially. The weighted-average merchant service fee for Bankcard, MasterCard and Visa credit cards in the June quarter 2006 was 0.89 per cent, well down from the 1.40 per cent immediately prior to the Bank's reforms coming into effect in November 2003 (Graph 3). This fall of around 50 basis points in the average merchant service fee is larger than the decline in interchange fees of 40 basis

⁴ See, for example: Debit and Credit Card Schemes in Australia: A Study of Interchange Fees and Access, *Reserve Bank of Australia and Australian Competition and Consumer Commission (ACCC), October 2000*; Reform of Credit Card Schemes in Australia: IV Final Reforms and Regulation Impact Statement, *Reserve Bank of Australia, August 2002*; and Reform of the EFTPOS and Visa Debit Systems in Australia: Final Reforms and Regulation Impact Statement, *Reserve Bank of Australia, April 2006*.

Graph 3

Merchant Service Fees

Per cent of transaction values acquired



Source: RBA

from around 2.46 per cent to 2.28 per cent. The average merchant service fee for Diners Club has fallen from around 2.37 per cent to 2.27 per cent over the same period.

These declines in merchant service fees represent substantial savings to merchants. After taking account of changes in market shares, in the 12 months to June 2006, merchants' costs of accepting credit and charge cards were around \$730 million lower than they would otherwise have been. These cost savings are flowing into lower prices for goods and services, although the flow-through is difficult to measure given the much larger changes in other costs that are occurring on an ongoing basis.

Prices to cardholders and competition

As expected the reforms have changed the effective prices facing users of credit cards. This has occurred in three ways: a reduction in the value of rewards programs; higher annual and other fees; and the introduction of surcharging by some merchants.

Since the reforms were implemented, the value of rewards points has been reduced. One measure of the value of these points is the amount that must be spent to receive a \$100 shopping

voucher. In 2003, this amount was, on average, around \$12 400; today it is around \$16 000 (Table 7). This change represents a reduction in the value of reward points of around 0.18 percentage points of the amount spent.

Table 7: Credit Card Rewards Programs

Four major banks

	Average spending required for \$100 voucher	Cardholder benefit as a proportion of spending (basis points)
2003	12 400	81
2004	14 400	69
2005	15 100	66
2006	16 000	63

Sources: Banks' websites, ANZ Telstra Rewards Visa card, Commonwealth Bank MasterCard Awards card, National Australia Bank Visa Gold card, Westpac Altitude MasterCard

At the same time that the value of rewards points has been reduced, annual and other fees on credit cards – including those associated with rewards programs – have been increased. According to data

collected by the Reserve Bank, average fee revenue per credit card account has increased from around \$40 in 2002 to \$70 in 2005.

Surcharging for credit card use has also increased over the past couple of years; recent surveys indicate that around 12 per cent of very large companies surcharge while around 2 per cent of small companies do so.⁵ These surveys also suggest that many merchants are considering imposing a charge. Further, some merchants charge more for the more expensive American Express and Diners Club cards.

In addition to their effect on price signals to cardholders, the reforms have also had an impact on the type of credit card products offered in the market place. Prior to the reforms, competition amongst issuers largely focused on rewards programs, with issuers using these programs to attract spending on their cards. Now that issuers are receiving lower interchange revenue, cardholders who do not pay interest, but redeem rewards points, have become less profitable, notwithstanding the changes to the reward programs. This has encouraged some card issuers to focus more on attracting customers who use their credit cards to borrow, by offering them lower interest rates. While the development of the ‘low-rate’ market would have occurred in the absence of the reforms, the lower interchange revenue prompted issuers to reassess their product offerings.

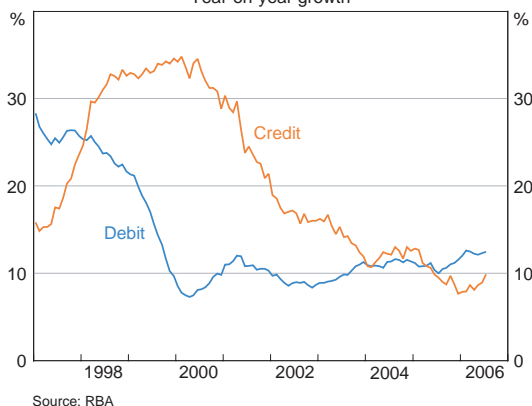
Competition on interest rates has led both to a proliferation in the number of low-rate cards available and sharp reductions in the interest rates on those cards, relative to the rates previously available. Credit cards are now available with on-going interest rates as low as 8.99 per cent, compared with an average of between 16 and 18 per cent prior to the reforms. Low-rate cards are now issued by all of the major banks, as well as several other existing participants and new entrants. These cards generally do not offer reward points but have both an interest-free period and lower annual fees than do the higher interest rate cards.

Growth of credit card use

Partly reflecting the changed price signals described above, growth in credit card spending has slowed over recent years (Graph 4).

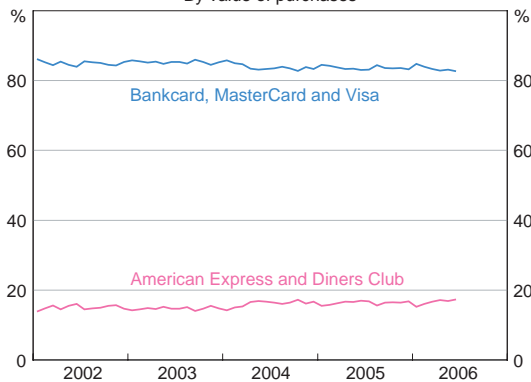
While some slowing was inevitable from the rapid pace of growth experienced over the late 1990s, the decline in the generosity of rewards programs, increases in fees, and the introduction of surcharging by merchants have also played a role. Over 2005/06, the number of credit card transactions increased by around 7 per cent, while the value

Graph 4
Value of Card Payments
Year-on-year growth



⁵ East and Partners Pty Ltd report to the Reserve Bank of Australia, ‘Australian Merchant Acquiring and Cards Markets’, August 2006.

Graph 5
Market Shares of Card Schemes
 By value of purchases



Source: RBA

of transactions increased by around 9 per cent. Both these growth rates are substantially below the equivalent figures for debit cards, the first time this has been the case since 1997.

By value, the combined market share of American Express and Diners Club has increased from an average of 14.9 per cent in 2002/03 (prior to the reforms) to 16.5 per cent over the past financial year (Graph 5). The bulk of this increase occurred in the second quarter of 2004, when two of the major Australian banks commenced

issuing American Express credit cards. By number of transactions, the combined market share of American Express and Diners Club was 12.4 per cent in 2005/06, lower than their share of the value of transactions. This reflects the higher average transaction value in these schemes compared to the Bankcard, MasterCard and Visa schemes.

The Bank continues to monitor carefully the market shares and average merchant service fees of American Express and Diners Club.

Regulatory developments during 2005/06

During the past year the Board made two changes to regulations affecting the credit card system. The first was an amendment to the interchange Standard so that a common interchange benchmark will apply to the MasterCard and Visa systems from 1 November 2006. The second was to exempt Bankcard from regulation, given its decision to close operations.

Prior to the move to a common interchange Standard, each scheme had a separate benchmark based on the costs of issuers in that scheme. The average interchange fee in each scheme was required to be no greater than the relevant benchmark. Under the amended Standard, a common benchmark will instead apply to each scheme.

This change was made in consultation with the industry. In February 2005, the Bank sought views from interested parties on the merits of a common benchmark across the Bankcard, MasterCard and Visa schemes. While views differed, a number of organisations noted that the scheme-specific benchmarks could give the scheme with the highest benchmark a competitive advantage in attracting issuers, because it could pay the highest interchange fees. This was particularly likely to be so if the higher benchmark reflected costs associated with particular characteristics of issuers' portfolios in the year in which the benchmark was determined, rather than intrinsically higher on-going costs peculiar to the scheme.

Following the initial round of consultation, in July 2005 the Bank released for comment a draft revised interchange Standard setting out a common benchmark. The Bank received

seven submissions on the draft Standard, and held discussions with most of those making submissions.

The revised Standard, with minor modifications, was then determined by the Board and gazetted in November 2005.

The Board also made the decision to exempt Bankcard from regulation, given its announcement that it is to close in early 2007. Accordingly, the Bank's designation of the Bankcard system was revoked on 27 April 2006, with references to Bankcard in the common interchange Standard removed at the same time. The Bank made clear, however, that it expects Bankcard's current interchange fees to be maintained until the scheme is closed.

Reform of the Debit Card Systems

During the past year, much of the Board's work was devoted to finalising a major package of reforms to Australia's debit card systems. This package, which was announced in April 2006, involved:

- (i) an Access Regime for the EFTPOS system, to complement the EFTPOS Access Code developed under the auspices of the Australian Payments Clearing Association (APCA);
- (ii) an interchange Standard for the EFTPOS system;
- (iii) an interchange Standard for the Visa Debit system; and
- (iv) a Standard requiring the removal of the 'honour all cards' and 'no surcharge' rules in the Visa Debit system.

MasterCard has provided an undertaking to the Bank to ensure outcomes in the MasterCard debit system equivalent to those required by the Standards applying to the Visa Debit system.

Australia's debit card systems

There are two types of debit card systems in Australia; the EFTPOS system operated by Australian financial institutions, and systems operating under the brands of MasterCard and Visa (the scheme debit systems). Both types of system allow cardholders to make payments to merchants from a deposit account held at an authorised deposit-taking institution, while the EFTPOS system can also be used at some merchants to withdraw cash.

The EFTPOS system currently accounts for around 85 per cent of debit card transactions in Australia. It is not able to be used, however, in situations in which a PIN cannot be entered into a secure PIN pad, such as over the internet or telephone. It is also a purely domestic system, so that the EFTPOS system cannot be used to make payments overseas. The system is built around a series of bilateral business contracts and technical links between issuers and acquirers. Interchange fees are paid by the issuer to the acquirer and are typically in the range of 18 to 25 cents per transaction.

In the scheme debit card systems, a cardholder authorises a transaction at a merchant by signature. Scheme debit cards use the processing infrastructure of the international card schemes, and can be used to undertake transactions over the internet and telephone (without a signature authorisation), as well as overseas. In contrast to the EFTPOS system, interchange fees are paid by the acquirer to the issuer and average around 0.55 per cent of the transaction value. The Visa

Debit system has been operating in Australia for many years, while the first MasterCard debit card in Australia was launched in late 2005.

Policy issues

The Bank's reforms have focused on three issues: interchange fees; access arrangements; and restrictions that prevented a merchant from choosing freely which payment methods to accept.

One consequence of the significantly different interchange fees in the EFTPOS and scheme debit systems is that issuers have priced scheme debit transactions to cardholders more attractively than they have priced EFTPOS transactions. This is despite the EFTPOS system having lower resource costs, reflecting lower fraud, shorter transaction times and lower costs of processing. The Bank has been concerned that the competitive position of the two types of debit cards was being heavily influenced, not by the relative merits of the two types of cards, but rather by interchange fees which themselves are not subject to the normal forces of competition. The Bank has had similar concerns about the competitive position of the EFTPOS system relative to the credit card system.

The issue of access to the EFTPOS system is long standing, and has been reviewed by the Bank and the Australian Competition and Consumer Commission (ACCC). Typically, in other countries, there is a single point of entry to a payment system for new participants. In contrast, given that the Australian EFTPOS system is based on bilateral interchange contracts and bilateral physical connections, entry can require negotiations with all existing participants, each of whom might have different technical and business requirements. Furthermore, the existing participants may have little incentive to facilitate the entry of a new participant, particularly if the entrant is likely to be a direct competitor in at least some business lines.

The third issue has been the restriction placed on merchants in deciding which payment methods to accept by the so-called honour all cards rules imposed by the MasterCard and Visa schemes. Under these rules, whenever a merchant agrees to accept credit cards issued under the MasterCard or Visa brands, it is required to accept the scheme's debit cards as well. This has meant that competitive forces could not bear directly upon the price, or acceptance by merchants of the scheme debit product.

Collectively, these arrangements distorted the relative competitive positions of the EFTPOS and scheme debit systems. For domestic point-of-sale transactions, which represent the largest segment of card-based transactions, the two types of debit systems are highly substitutable. Scheme debit, however, had a competitive advantage over EFTPOS because merchants were forced to accept the card when they made the decision to accept scheme credit cards, and the higher scheme debit interchange fees were encouraging issuers to issue and promote scheme debit in preference to EFTPOS. This raised the possibility that, over time, the scheme debit systems might displace the EFTPOS system, not because of differences in services to merchants and cardholders, but because of the combined effect of the schemes' honour all cards rules and differences in interchange fees.

The reform process

The Bank began examining interchange fees and access arrangements for Australia's debit card systems in its work with the ACCC in 1999. That work resulted in the publication by the Bank and the ACCC of *Debit and Credit Card Schemes in Australia: A Study of Interchange Fees and Access* (the Joint Study) in October 2000.

Following the release of the Joint Study, both the industry and the Reserve Bank began working to address issues concerning debit cards raised in the report. The Bank initially conducted discussions with Visa and issuers of Visa Debit cards with a view to agreeing voluntary changes to interchange fees. However, the Board decided in February 2004 to designate the Visa Debit system, to ensure a transparent process that would allow comment on proposals by all interested parties. The Bank did not, however, immediately proceed to propose a particular interchange Standard for Visa Debit, given that this issue needed to be considered together with proposals for changes to interchange fees in the EFTPOS system – and, at the time, there were signs that participants in that system were close to agreeing on reform of these fees.

Agreement was then reached by an industry group to set interchange fees in the EFTPOS system to zero. In February 2003, the group took this proposal to the ACCC which, after issuing a draft determination rejecting the application due to concerns about access, approved the proposal in December 2003. This was done in the expectation that the issue of access would be adequately addressed either by the industry or the Bank. A group of merchants then challenged the ACCC's decision in the Australian Competition Tribunal (ACT), with the ACT over-turning the ACCC's authorisation in May 2004.

After closely examining the ACT's ruling, the Bank remained of the view that a lowering of interchange fees in the EFTPOS system would be in the public interest. It therefore designated the EFTPOS system in September 2004, noting that there was little further prospect of industry reform of EFTPOS interchange fees. The designation was followed in October 2004 by a legal challenge in the Federal Court by a group of merchants to the validity of the designation. While this case was being decided the Bank released, in February 2005, draft Standards for interchange fees in both the EFTPOS and Visa Debit systems, and a Standard that would require the removal of the honour all cards rule in the Visa system. It noted, however, that final decisions would not be made until the legal challenge to designation of the EFTPOS system was decided.

At the same time, the industry (under the auspices of APCA) was developing an Access Code for the EFTPOS system. After two years, the industry indicated its agreement to a Code that was acceptable to the Bank. APCA, however, asked the Bank to consider giving regulatory certainty to the proposed cap on the price of establishing a new connection, contained in the Code, through an Access Regime under the *Payment Systems (Regulation) Act*.

After the case challenging designation of the EFTPOS system was decided in the Bank's favour in November 2005, the Bank issued a second consultation document in December 2005 setting out a draft Access Regime and making an amendment to the draft Standard on EFTPOS interchange fees. Following consultation on the new proposals as well as on the earlier components of the package, the Bank announced its final reform package on 27 April 2006. Throughout the process, 37 submissions were received on the Bank's proposals, and the Bank

met with 15 parties – in some cases more than once – who took the opportunity to discuss submissions with the Bank.

Interchange Standards for EFTPOS and Visa Debit

The Standards on interchange fees will narrow the difference in interchange fees between the EFTPOS and scheme debit systems, on an average transaction, from around 60 cents currently to around 20 cents. In the Bank's view, this will better promote competition between credit cards, scheme debit cards and EFTPOS based on the benefits that the various cards offer to cardholders and merchants, rather than on the basis of interchange fees that are not subject to normal competitive pressures.

The EFTPOS interchange Standard imposes a cap and floor on interchange fees in the EFTPOS system for all transactions not involving a cash-out component. The purpose of the floor is – in conjunction with non-discrimination provisions in the EFTPOS Access Regime discussed below – to limit the scope for negotiations over interchange fees to be used in a way that weakens competition in the system, including from new entrants. In particular, it removes the possibility that new entrants might be offered an interchange fee that significantly disadvantages them compared to existing participants, thereby making it difficult for them to compete.

Interchange fees for EFTPOS transactions with no cash-out component will fall to between 4 and 5 cents per transaction from 1 November 2006, from an average of around 20 cents currently. Interchange fees on EFTPOS transactions involving cash out are not subject to the Standard – the issue of whether there is a separate fee for cash-out transactions, and if so what this might be, remains a matter for negotiation between issuers and acquirers.

The Visa Debit interchange Standard imposes a cap on the weighted-average interchange fee in the Visa Debit system. The Board provided both MasterCard and Visa with the opportunity to agree voluntarily to set interchange fees for their debit cards in line with this Standard. In the event, MasterCard provided the Bank with an enforceable undertaking that will cap the weighted average of MasterCard debit interchange fees at the same level as for Visa. Visa did not provide the Bank with such an undertaking, and the Visa Debit interchange Standard was gazetted on 7 July 2006.

As a result of these reforms, interchange fees in the Visa and MasterCard debit systems, which are paid to financial institutions that issue the schemes' cards, will fall significantly from 1 November 2006. Based on currently available information, the weighted-average interchange fee in each scheme is expected to be no more than around 15 cents per transaction, down from around 40 cents currently.

Access Regime for EFTPOS

The Access Regime for the EFTPOS system is relatively limited in nature, and is designed to complement the EFTPOS Access Code developed by APCA. It sets a cap on the price that an existing participant can charge to establish a new connection, and sets out provisions designed to help ensure that negotiations over interchange fees cannot be used to frustrate entry. Other important aspects of entry are covered in APCA's Access Code. These include providing new and existing participants with the right to establish direct connections with participants in

the EFTPOS system, and setting a time frame for the establishment of connections and the completion of required testing.

The Access Regime was gazetted and came into force on 13 September 2006, following the formal adoption of APCA's Access Code by all existing direct connectors in the EFTPOS system on 8 September 2006.

Removing restrictions on merchants in the scheme debit systems

The 'honour all cards' Standard for the Visa Debit system requires that the tying of acceptance of Visa credit and debit cards be removed by Visa. It also requires that Visa Debit cards be identified both visually and electronically, to allow merchants to decline acceptance of either one if they so choose. Electronic identification must be possible from 1 January 2007, while visual identification must be possible for all new cards issued from this date onwards – with all Visa Debit cards on issue required to be visually identified by 31 December 2009. Both MasterCard and Visa were given the opportunity to agree voluntarily to these changes; only MasterCard opted to do so.

Automated Teller Machines

During 2005/06 the Bank continued to monitor work by participants in the ATM industry to address the issues of ATM pricing, and the arrangements under which potential participants gain access to the system.

The Australian ATM system is built around a series of bilateral interchange agreements and linkages. If a cardholder uses an ATM that does not belong to his or her financial institution, that institution pays the ATM owner a fee known as an interchange fee. This fee averages around \$1 per withdrawal. A small number of card issuers absorb this cost and do not explicitly pass it on to their customers. Most, however, charge a 'foreign fee', which is typically either \$1.50 or \$2 per transaction.

The Bank has previously noted two concerns with these arrangements. The first is that interchange fees, which underpin foreign fees, are not subject to the normal forces of competition and, in the past at least, have been well above the cost of providing the service. The second is that, as in the EFTPOS system, the bilateral architecture of the system complicates entry for parties wishing to participate directly, rather than through gateway arrangements.

For some time, participants in the ATM industry have been exploring options to address these concerns. However, obtaining the agreement of all parties to an alternative set of arrangements has been difficult. Initially, there was some support from banks to move to a system in which the ATM owner charged the customer directly, but support amongst the banks for this approach has waned through time. In contrast, non-financial-institution owners of ATMs typically continue to support the direct charging model. Reflecting the difficulty of developing an alternative model, the Australian Bankers' Association wrote to the Bank in 2005 asking for some guidance on possible ways forward.

The Bank subsequently met with participants in the ATM system and other interested parties to seek their views on both the need for reform and how any reforms might be pursued. Following this meeting, the Bank recommended that the industry focus on three issues.

The first is liberalising access arrangements in the ATM system just as access arrangements to the EFTPOS system have been liberalised. The second is to explore the possibility of moving to a common interchange arrangement among all participants. As in the EFTPOS system, negotiations over interchange fees can significantly complicate access and it is important that bilateral negotiations over interchange fees cannot be used in a way that adversely affects access or competition. The third is to ensure that there are no restrictions on the ability of ATM owners to levy a direct charge if they wish to do so.

The industry has been working on these issues over the course of 2006, with a view to clarifying access arrangements and identifying any impediments to direct charging. A steering group established by the industry to conduct this work recently provided the Bank with a preliminary report, and is continuing to examine these issues.

Purchased Payment Facilities

Under Part 4 of the *Payment Systems (Regulation) Act* the Board has regulatory responsibility for purchased payment facilities – other than those issued on a wide basis, with deposit-like characteristics, and for which any unused stored value is redeemable on demand in Australian currency. Responsibility for the latter was transferred to the Australian Prudential Regulation Authority (APRA) in 2000.

In 2005, the Board determined that an electronic gift card proposed by Westfield for use only in its shopping centres was not subject to the *Payment Systems (Regulation) Act* because of its limited nature and purpose. At that time the Bank indicated that – in conjunction with the Australian Securities and Investments Commission (ASIC), which has consumer protection responsibilities in this area – it was examining the possibility of widening its existing class exemptions, announced in 2004.

In November 2005, ASIC decided that gift cards, pre-paid mobile phone accounts, loyalty schemes and electronic road toll devices would not be subject to certain provisions of the *Corporations Act 2001*. Consistent with this, the Bank announced in April 2006 that the *Payment Systems (Regulation) Act* would also not apply to these facilities. The specific exemption granted to the Westfield gift card facility became redundant and was revoked.

The Board also broadened the range of other facilities to which the *Payment Systems (Regulation) Act* would not apply. These now include facilities where the total amount outstanding is less than \$10 million, up from \$1 million previously. This revised limit is consistent with the threshold set by ASIC in its definition of ‘low-value’ non-cash payment facilities, which were granted regulatory relief by ASIC in 2005.

Scrutiny of the Bank’s Procedures and Policies

Over the past year or so, the Board’s policies and the way in which the Bank carries out its payments system responsibilities have been subject to close scrutiny by various parties. The scrutiny has involved: a major legal case in the Federal Court; assessment of the case for merits review as well as judicial review of the Bank’s decisions; and a two-day special hearing on payments system reform by the House of Representatives Standing Committee on Economics, Finance and Public Administration.

In November 2004, a group of merchants sought a judicial review in the Federal Court of the Bank's decision to designate the EFTPOS system as a payment system. The merchants alleged that the Bank had: misinterpreted and acted outside its powers; not taken into account the correct matters in coming to its decision; and acted unreasonably in reaching the decision that it was in the public interest to designate the EFTPOS system. In all, it was claimed that the Bank made more than 70 separate errors in reaching its decision. Preparation of the defence consumed a large amount of the time of the Bank's senior staff over many months and involved the discovery and cataloguing of more than 10 000 separate documents, many of which contained information confidential to third parties.

The case was heard over four weeks in May and June 2005, and a decision in the Bank's favour on all claims was handed down in November 2005. Costs were awarded in the Bank's favour.

In addition to judicial review, a number of organisations have argued that the Bank's decisions under the *Payment Systems (Regulation) Act* should be subject to merits review. In submissions to the Taskforce on Reducing Regulatory Burdens on Business, it was argued that affected parties should be able to seek a review of the merits of the Bank's decisions by a body such as the Administrative Appeals Tribunal or the Australian Competition Tribunal. Some of the submissions also argued that the Bank's powers should be restricted.

In its report issued in April 2006, the Taskforce recommended that administrative decisions made by government bodies should be subject to merits review. In its response in August 2006, the Government accepted this recommendation, but indicated that decisions made by the Bank about the operation of the payments system were either policy or legislative in nature, and thus would not be subject to merits review.

The House of Representatives Standing Committee on Economics, Finance and Public Administration also devoted considerable time to the Bank's reforms of card payment systems over the past year, holding two days of public hearings in May 2006, with testimony from the Bank, card schemes, financial institutions, merchants, consumers, consultants and academics.

While the Committee recognised the wide range of views, it was broadly supportive of the Bank's reforms, judging that the benefits outweighed the alleged disadvantages. It accepted that interchange fees are not determined under competitive conditions and that it was logical that falls in merchant service fees resulting from lower interchange fees would flow into lower prices for consumers. It also supported abolition of 'no surcharge' restrictions. After hearing extensive evidence from all the interested parties, the Committee concluded that the reforms had not inappropriately advantaged American Express and Diners Club, arguing that it was important to recognise differences in the way the various schemes operate.

The Committee also considered submissions arguing that the reforms should be formally reviewed by a separate body, such as the Productivity Commission, rather than by the Bank, which plans a comprehensive review beginning in 2007, five years after the credit card reforms were announced. The Committee did not accept these arguments, concluding that the Bank should conduct the review of its reforms and that it is well qualified to do so.

Payment Systems Technology and Architecture

Over the past year, the Board has examined in some detail the architecture of the Australian payments system and the technology upon which it is based. The Board has focused on two related issues. The first is whether the development of payment products in Australia has been keeping pace with that abroad. The second is whether the bilateral arrangements on which a number of Australia's payment systems are based have implications for the pace of innovation in Australia.

The Board's interest in these areas reflects the important role that technology can play in the evolution of the payments system. The Board recognises that decisions about technology and product development are typically best made by industry; however, it is also of the view that there is a benefit to be gained from further public discussion and industry analysis of the way the payments system has developed, and how it might develop in the future.

Product Developments

Overall, Australia has a creditable record in terms of payment system innovation. It was one of the first countries to develop a national PIN-based EFTPOS system, it has a sophisticated electronic bill presentment and payment service, and Australian financial institutions offer extensive internet banking facilities to their customers. Australian consumers also have universal access to the ATM network, and financial institutions can provide cardholders with a single card that can be used for ATM, debit and credit transactions. By international standards, Australia has a relatively efficient payment system that meets the needs of most businesses and consumers reasonably well.

Notwithstanding this record, consumers and businesses in some other countries are now being offered a greater range of payment services, or more flexible services, than is generally available in Australia. Examples of these services include the ability to pay for goods on-line using a bank account in a secure environment; interfaces between payment and invoicing systems for businesses; and the application of chip technology to debit and credit cards.

'On-line debit'

In a number of economies, including Canada, Germany, Hong Kong, the Netherlands and Singapore, consumers shopping on-line can choose a payment option that automatically links details of the transaction – the price and merchant's account details – to their internet banking facility. This option (sometimes referred to as 'on-line EFTPOS', although no card is actually used) allows a real-time, authorised payment to be made to the merchant, without using a credit card or scheme debit card. The process is relatively simple. Customers selecting the on-line debit option at the merchant's website are switched to their bank's internet website. They log in, in

the usual way, and are automatically prompted to authorise the transaction. A message from the bank, confirming the successful transaction, is then relayed back to the merchant.

This form of payment offers benefits to customers and merchants. The customer is able to make payment from an account accessible by internet banking and does not have to provide account details to the merchant. The merchant is not exposed to the fraud risks associated with accepting credit cards on-line and generally pays lower merchant service fees on these transactions. On-line debit also allows the merchant to sell goods and services to those consumers who do not have a credit card. (While scheme debit cards also allow on-line purchases to be made from a deposit account, their use raises the same issues as for credit cards, namely: confidentiality; merchant service fees; and fraud.)

In Australia, there is no widely available 'on-line debit' facility. This was noted by the House of Representatives Standing Committee on Economics, Finance and Public Administration in its report on the Reserve Bank's Annual Reports for 2005. The Committee encouraged industry to address this issue.

Business products

There have been a number of developments overseas which have improved the efficiency of electronic payments for business customers. In some cases, these developments have provided products that improve the interface between payment systems and business accounting systems. As a result, they are facilitating better opportunities for straight-through processing for business-to-business payments, and thus increased use of electronic payments.

In a number of countries, electronic payment systems have been updated to allow businesses to include additional information with each payment message. In the United States, for example, the Electronic Payments Network recently introduced a new message format that allows users to fill in 10 separate fields with information relating to the transaction. Similarly, as part of its move towards the Single Euro Payments Area, the European Payments Council has developed a standard for credit transfer payments that provides more than 60 remittance data fields, as well as up to 140 characters of 'free text' to enable automatic reconciliation by the beneficiary. And in the Scandinavian countries, there has been a move towards a common standard for electronic invoicing of business-to-business transactions, allowing businesses to issue electronic invoices and payment to be made without re-keying invoice details.

In Australia, the format of messages in the electronic payment system used for many business-to-business payments – the direct entry system – has remained largely unchanged since the 1970s. It allows only 18 characters for users to add their own supplementary information after critical details, such as account numbers and the payment value, are included. This constraint on the amount of additional information is one factor that helps explain the continued reliance of Australian businesses on payments by cheque.

The limited flexibility of the direct entry system has been raised by a range of business organisations in discussions with the Bank, and was discussed in a recent report by the Department of Communications, Information Technology and the Arts on the future of electronic payments

markets in Australia.⁶ The majority of businesses surveyed for this report indicated that they wished to make and receive more electronic payments, rather than use cheques, which they recognised as more expensive. Businesses receiving payments reported that the most significant issue they faced was that there was not enough information in the direct entry payments to reconcile accounts.

There have been efforts to overcome some of the limitations of the current message formats. Financial institutions and other third-party providers offer services that ‘tag’ payments with an identifying code when it is passed into the direct entry system; this code is then used by the recipient to link the payment with related accounting information. However, there is no standardisation of this approach across the industry, and fully automated reconciliation processes are typically not possible.

The issue of upgrading the direct entry system to better serve business customers was considered by APCA in 2001. While it was agreed that enhancements to the message standard would represent an improvement to existing arrangements, most financial institutions concluded that there was an insufficient business case to justify upgrading the system at that time.

Chip and PIN developments

A third area where there has been significant change overseas is in the adoption of PIN and chip in card payment systems. PIN authorisation of transactions is used to lower fraud. Chip technology also reduces fraud, while providing a number of other benefits, such as the potential to consolidate payment and non-payment functions on the one card. Chip-based cards can also be adapted for contactless use, where information is accessed when the card is held close to the terminal, allowing faster transactions; contactless chip cards are, for example, already widely used in public transport systems. The use of chips also allows payment functions to be held on devices other than a card, including on mobile phones.

In Australia, credit card transactions are still authorised by signature, and most cards are issued with only a magnetic stripe.

Overseas, chip migration programs have been underway for some time, typically motivated by rising fraud costs. These programs have been promoted by the credit card schemes, which have developed a standard – referred to as the EMV (Europay, MasterCard and Visa) standard – for chip use in financial transactions. One of the means of promoting chip use has been the introduction of a liability shift, where an acquirer or issuer that has not implemented the EMV standard becomes liable for fraudulent transactions. For transactions between countries in the Asia-Pacific region, the liability shift became effective on 1 January 2006.

Amongst European countries, the United Kingdom is particularly advanced in migrating to chip technology which satisfies the EMV standard; all cards are chip-based and domestic point-of-sale transactions are PIN authorised. In part, this progress reflects the co-ordination role played by a high-level industry forum, made up of senior executives from industry bodies, financial institutions, retailers and consumer groups. The forum determined how and when the

⁶ Department of Communications, Information Technology and the Arts, *Exploration of Future Electronic Payments Markets*, 2006.

changeover would occur and was responsible for overseeing the project and educating both the industry and public.

In the Asian region, Japan, Malaysia and Taiwan have the most advanced chip migration programs. Migration is complete for credit card systems and in the pipeline for other point-of-sale card systems. A number of other economies – Hong Kong, India, Indonesia, Pakistan, the Philippines, Singapore and Thailand – are expected to have migrated their credit card systems by early 2007.

In North America, the Canadian EFTPOS/ATM system, Interac, is planning to be able to process chip transactions by the start of 2007. In contrast, there seems to be little impetus for chip migration on either credit or debit cards in the United States.

In Australia, PIN authorisation of credit card transactions was first considered by the industry in 2001, when APCA was asked by the banks to co-ordinate an industry-wide project. Given that Australia had a nation-wide system in which cardholders were used to authorising debit card transactions with a PIN, it was thought that PIN authorisation for credit card transactions was a natural next step. However, the industry group eventually decided that there was no business case for proceeding, given the low level of credit card fraud in Australia. Since then, banks have spent considerable resources investing in a range of other anti-fraud initiatives, designed to detect unusual activity on accounts. These have been largely successful, with fraud levels on credit cards falling further since 2001.

Recently, the industry has again been discussing the possibility of moving to PIN authorisation of credit card transactions and the use of chip. Costs of upgrading to PIN authorisation are now substantially lower than in 2001 as many terminals have been upgraded to allow remote installation of software, and the industry is now revisiting the issue of PIN authorised transactions on the magnetic stripe technology. By the end of 2008, it seems likely that cardholders will have the option of authorising credit card transactions at the point of sale with a PIN.

Progress towards chip migration has also taken place. The pace of change is being accelerated as banks react to the change in liability for fraud that came into effect in Australia at the beginning of 2006. Prior to this change, issuing banks bore the cost of most fraud in the credit card system. The new arrangements mean that if an issuer has converted its cards to chip, but the terminal where the card is used has not been converted, the liability for fraud lies with the merchant's acquirer. This is encouraging both issuers and acquirers to speed up conversion in order to avoid liability for fraud. However, while individual banks have their own conversion programs, at this point there is no timetable for industry-wide chip migration in Australia.

The House of Representatives Standing Committee on Economics, Finance and Public Administration has taken a close interest in the benefits of chip and PIN technology and has encouraged the industry to implement PIN authorisation of credit card payments and to consider the widespread adoption of chip technology.

Australia's Bilateral Systems

The second broad issue that the Board has focused on is the reliance of Australia's retail payment systems on bilateral linkages and business arrangements.

Traditionally, payment systems have been categorised as either bilateral or centralised. In a bilateral system, institutions can participate either directly or indirectly. Direct participants exchange payment messages directly with one another, with each participant having a separate physical link to every other direct participant. In some bilateral systems, negotiations are also required with each direct participant about both technical details relating to the actual physical connection and business arrangements such as interchange agreements. Participants who enter the system indirectly do so as a ‘customer’ of a direct participant, who then directs their messages to other direct participants.

In contrast, in centralised systems, participants pass payment messages to one another through a central entity, often referred to as a ‘switch’. These centralised networks are structured so that each participant only needs one physical connection into the system, and there are no bilateral contracts between the participants.

With greater use of internet technology, the traditional distinction between these two types of systems has become somewhat blurred. It is now possible to have a hybrid system in which participants pass messages bilaterally over a private network. This allows some of the benefits of centralisation – only one connection into the network is required – but still maintains the structure that messages are passed directly between individual participants. Some centralised systems have also adopted internet technology, but still route messages through a central entity which forms part of the payment network.

In Australia, the EFTPOS system, the direct credit and direct debit systems and the ATM system are all bilateral networks, operating through a series of bilateral links and contracts between direct participants. (The credit card systems and the BPAY network operate under the centralised model.) This heavy reliance on bilateral systems is unusual by international standards. In other countries where bilateral systems have existed, for example in Canada and Finland, there has been a tendency for them to move to a hybrid model with a single point of entry to the network. Centralised systems though are far more common; examples include: the direct entry system, Voca, in the United Kingdom; Interpay in the Netherlands; and the Electronic Payments Network in the United States.

The Board recognises that bilateral systems may provide both benefits and potential challenges.

In some situations, bilateral linkages may be the quickest, and perhaps the only feasible way, to establish a particular payment system. If, for instance, it is difficult to get multiple institutions to agree to establish a comprehensive system, an alternative is for two institutions to agree to exchange payments and provide services to customers that have accounts with either of them. If a third institution subsequently wishes to join, it can then establish a link to each of the first two institutions. This can be a practical way for a system to expand, allowing tailored technical connections for each pair of institutions. Both the ATM and EFTPOS systems in Australia essentially developed in this way.

Bilateral arrangements can, however, pose some challenges once the system matures. After a bilateral system reaches a certain size, obtaining access can become more difficult and expensive than obtaining access to a system with ‘single point of access’ – any new institution must reach an agreement to exchange payment data with each of the existing participants. In

Canada, concerns about access to the ATM/EFTPOS system, Interac, led to intervention by the competition authority. To satisfy the competition authority's requirements, Interac was upgraded to an internet-based network with access through a single standardised connection.

In addition to access, bilateral systems may be more difficult to renovate and update. Without an organisation focused on promoting and developing the network, it may be difficult for participants to agree on the technical details of any changes to the system as well as to commit resources to upgrade the system.

Internationally, some payment systems have addressed the challenge of fostering innovation by establishing two companies: a scheme, which agrees the operating rules for the system; and a for-profit organisation that physically operates the system. In the United Kingdom, this separation of roles was a key recommendation of the Cruickshank Report into competition in banking, and broadly similar changes have taken place in the ATM/EFTPOS networks in Canada and the Netherlands. In these countries, the 'for-profit' system operator has made changes to the infrastructure to promote the interests of the business; the result has been that each is now operating on a recently upgraded platform, which uses the internet to pass payment messages between participants (in the case of the bilateral business model in Canada) or from participants to the central switch or processor (in the case of Voca, the processor for BACS Limited in the United Kingdom, and Interpay in the Netherlands).

In Australia, upgrades to the ATM, EFTPOS and direct entry systems have been limited to individual efforts by participants. Some financial institutions have made bilateral agreements to move from the older style point-to-point connections to internet-based connections to exchange payment messages. Others, which offer services to indirect participants, have developed their own internet network for receiving messages. However, there is no industry-wide standard for the internet technology being applied.

As long as physical links between direct participants in the EFTPOS, ATM and direct entry systems remain bilateral, new entrants that wish to be direct participants in these systems must establish a number of connections before they can be fully operational. In the EFTPOS system, this process has recently been made more transparent and less complex by the combined effect of the Bank's EFTPOS Access Regime and APCA's EFTPOS Access Code. The Bank has encouraged industry to consider whether similar arrangements for the ATM network would be appropriate.

APCA and the Australian Bankers' Association are in the process of assessing the existing infrastructure and are considering whether current arrangements are able to deliver an internationally competitive payment service to Australian businesses and consumers. The Bank is looking forward to working co-operatively with the industry and participating in further discussions on these issues.

Safety and Stability

The Reserve Bank has a general responsibility for the safety and stability of the payments system and clearing and settlement facilities in Australia. The *Reserve Bank Act 1959* requires the Payments System Board to have regard to ‘risk in the financial system’ in the exercise of the Bank’s payments system powers and ‘stability of the financial system’ in its oversight of clearing and settlement facilities. The acts providing specific powers in these areas – the *Payment Systems (Regulation) Act 1998*, the *Payment Systems and Netting Act 1998* and the *Corporations Act 2001* – also emphasise these responsibilities.

Central to the oversight of payment systems from a stability perspective is the assessment of systemically important systems against recognised international standards. The Bank conducted such an assessment of Australia’s real-time gross settlement system – known as the Reserve Bank Information and Transfer System (RITS) – during 2004/05. This assessment has been followed up over the past year with an independent external assessment by the International Monetary Fund (IMF) as part of the Financial Sector Assessment Program (FSAP).

In the case of clearing and settlement facilities, licensees must comply with financial stability standards developed by the Bank. Each year, the Bank conducts a formal assessment of each licensee’s compliance with the relevant standard, with the assessment provided to the Minister with portfolio responsibility for the *Corporations Act*.

The RTGS System

On average, 25 000 transactions, with a value of around \$145 billion, are currently settled through Australia’s real-time gross settlement (RTGS) system each day. This compares with around 15 000 transactions, with a value of around \$100 billion, during 1998/99, the system’s first year of operation. The average transaction size is currently around \$5.8 million, down from around \$6.6 million in 1998/99.

Transactions processed through the RTGS system come from three main sources: the settlement of debt securities trades and other transactions from the Austraclear feeder system; interbank lending; and other interbank transactions, predominantly related to foreign exchange settlement and high-value corporate payments. In 2005/06, the value of transactions through the Austraclear feeder system averaged around \$38 billion per day, while interbank lending averaged \$19 billion, and other interbank transactions averaged around \$98 billion.

The Board’s 2000 Annual Report included an assessment of RITS against the then draft *Core Principles for Systemically Important Payment Systems* (published in final form by the Bank for International Settlements in 2001). In 2004/05 the Bank undertook a second, more detailed, self-assessment of RITS against the *Core Principles*. As mentioned in last year’s *Annual Report*, the Bank concluded that RITS complied with all of the *Core Principles* and that the Bank’s

oversight arrangements complied with the ‘Responsibilities of the Central Bank in Applying the Core Principles’.

During the past year, the Bank’s self-assessment provided input to an independent external assessment of RITS by the IMF as part of its FSAP. The preliminary conclusion of this external assessment – which took place over a two-week period in December 2005 – is that RITS complies with the *Core Principles*. According to the preliminary findings, RITS is a sound and efficient payment system, with a solid legal basis, well developed functionality, adequate risk management, and effective and transparent governance. As part of its findings, the IMF has also made a number of recommendations, which the Bank and the Payments System Board are currently considering. The results of the FSAP will be published later in 2006.

Clearing and Settlement Facilities

The *Corporations Act* requires that clearing and settlement facility licensees comply with financial stability standards determined by the Reserve Bank. The Bank has determined two such standards – the *Financial Stability Standard for Central Counterparties* and the *Financial Stability Standard for Securities Settlement Facilities*. These standards have been outlined in previous *Annual Reports*.

The standard applying to central counterparties applies to two facilities: the Australian Clearing House (ACH) and SFE Clearing Corporation (SFECC), the former of which is owned by the Australian Stock Exchange (ASX) and the latter by SFE Corporation. The standard relating to securities settlement facilities also applies to two facilities: ASX Settlement and Transfer Corporation (ASTC) and Austraclear. Since the merger of the ASX and the Sydney Futures Exchange (SFE) in July 2006, all these facilities are under common ownership although to date the securities settlement and central counterparty arrangements have remained unchanged. A fifth licensed facility operated by IMB Limited falls outside the application of the Financial Stability Standards as a result of its small size.

The ACH provides central counterparty services for a range of mainly equity related products – including physical equities, warrants and equity derivatives – traded on the ASX, while ASTC provides the corresponding settlement facility. SFECC provides central counterparty services for derivatives contracts traded on the SFE, but does not provide central counterparty services for debt securities. The Austraclear settlement system is first and foremost a system for settling over-the-counter debt securities trades, although settlement of obligations from derivatives contracts also occurs through the system.

As the central counterparty for the ASX, the ACH becomes the seller to every buyer and buyer to every seller (through the process of ‘novation’) for transactions on ASX markets. The value of physical equities and warrants traded on the ASX market and novated to the ACH averaged around \$4 billion per day in 2005/06, while the notional value of futures and options contracts novated averaged close to \$2 billion per day (Table 8). At the end of each day, the net amounts owed to the ACH by each participant as a result of trading in equities and warrants are calculated. The total owed to and by the ACH from each day’s trading averaged \$360 million in 2005/06, but because several days’ trading is awaiting settlement at any time, aggregate amounts owed to and by the ACH averaged \$735 million. There are no equivalent figures for derivatives,

Table 8: Turnover Processed by Clearing and Settlement Facilities

\$b per day, 2005/06

Novated to Central Counterparties			
ACH		SFECC	
Equities/ warrants	ASX derivatives (notional)	SFE derivatives (notional)	
3.9	1.9	111.0	
Settled by Settlement Systems			
ASTC		Austraclear	
Equities/warrants *		Debt securities	
3.9		26.0	

*Trades executed on the ASX market
Source: ASX

but the value of margins held by the ACH against its obligations averaged \$940 million in 2005/06.

The notional value of derivatives contracts traded on the SFE market and novated to SFECC is considerably higher than for the ACH, reflecting the higher level of turnover in debt futures markets than the equities market. During 2005/06, the value of margins held by SFECC against its obligations averaged \$1.7 billion.

In terms of value, the Austraclear system is the larger of the two securities settlement systems, handling debt securities settlements

of \$26 billion per day. Equities and warrants traded on the ASX market and settled by ASTC average around \$4 billion per day. In addition, 'off-market' settlements by ASTC, which predominantly result from securities lending, are estimated to amount to around \$1 billion per day.

Turnover in both securities and exchange traded derivatives increased significantly in 2005/06. In the equities and derivatives markets, the value of turnover was up by around 25 per cent from 2004/05, while the value of debt securities settled through Austraclear was up 13 per cent.

The Reserve Bank is required to assess how well each clearing and settlement facility licensee has met its obligation to comply with the Financial Stability Standards at least once a year. It is required to report the results to the responsible Minister.

In its most recent assessment the Bank determined that each of the licensees had satisfied its obligations with respect to the relevant standard. In reaching this conclusion, the Bank undertook an extensive information gathering exercise, as well as drawing upon information provided by licensees as part of their quarterly reporting obligations and regular face-to-face discussions between the Bank and key personnel of the licensees.

In its assessments, the Bank has focused particularly on the risk management practices of ACH and SFECC. As providers of central counterparty services, these facilities simplify counterparty risk management by replacing exposures to a variety of other participants with an exposure to a central counterparty. This arrangement also allows more robust risk controls to be placed on participants and provides additional scope for netting of obligations. Central counterparties, however, also result in a significant concentration of risk. This risk can crystallise if a participant defaults on its obligations to the central counterparty, which is required to meet all its obligations to other participants. This concentration of risk means that it is important that measures are in place to provide confidence that, in all but the most extreme circumstances,

a central counterparty can accommodate a default without threatening its solvency, or causing significant disruption to financial markets or the financial system more generally.

Clearing and settlement facilities are responsible for determining their own risk management arrangements, consistent with the Financial Stability Standards. These arrangements typically operate at a number of levels.

Firstly, criteria for participation in each system are used to ensure that only participants that will not adversely affect the safety and stability of the system are admitted. These criteria cover areas such as the financial strength and operational capacity of the participants.

Secondly, margining is used to limit risk to the central counterparty from a participant defaulting on its derivatives obligations. Participants must post cash or other collateral with the central counterparty when contracts are initiated and pay in additional funds if the market moves against them. SFECC can also impose 'additional initial margins' in response to a variety of triggers, including stress tests, and places position limits on participants, based on net tangible assets. There is no margining of physical equities by ACH, but unlike most futures and options, equities exposures are short-lived, usually three days.

Thirdly, the financial resources available to the central counterparty are an important protection to the system. These can be drawn on in the event that losses exceed margins and other assets of a defaulting participant held by the central counterparty. This situation could arise if a default by a participant coincided with a very large market movement.

In the case of the ACH, a minimum amount of \$110 million is set aside to meet the central counterparty's obligations in the event of a default. This amount includes capital and funds paid into a restricted reserve from the National Guarantee Fund in 2005. In addition, insurance of \$100 million was obtained in late 2005, which can be drawn upon if losses exceed \$110 million. The ACH also has the capacity to require non-defaulting participants to contribute up to a total amount of \$220 million to meet clearing losses not covered by those other resources, and has access to a line of credit that can be drawn down at short notice to facilitate settlement.

SFECC holds capital of \$30 million and participant contributions of \$60 million. It can call for additional participant contributions if required. Insurance of a further \$60 million to cover a range of risks, including default, is also in place.

Finally, central counterparties are expected to have systems that allow them to monitor the exposures of individual participants, the level of risk faced by the system as a whole, and the adequacy of financial resources and margins on an ongoing basis. Stress testing is central to these arrangements, enabling the central counterparty to evaluate potential losses under extreme but plausible circumstances. Stress tests provide a means of evaluating whether a particular combination of risk management arrangements and resources is adequate. Models for determining margins must also be adequate and their validity assessed on a regular basis.

The Bank emphasised in its assessments of central counterparties that, while the facilities are considered to have satisfied the Financial Stability Standards, work currently being undertaken to improve some elements of risk management should continue to be given a high priority. The

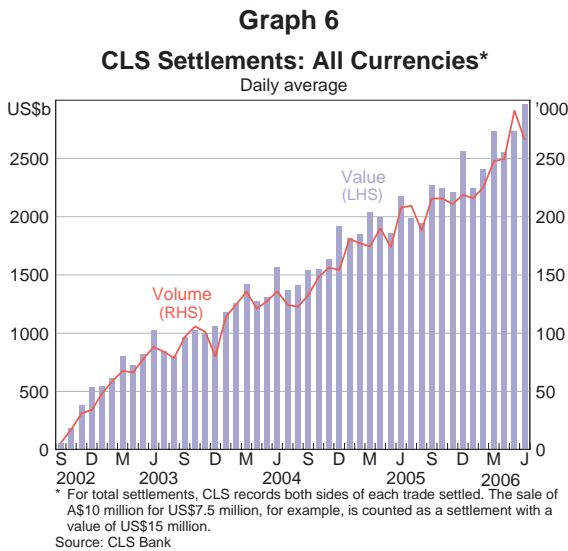
Bank also believes that, given the rapid increases in market activity over recent years, licensees should continue to monitor closely the adequacy of their financial resources to deal with a default.

At the time of last year's *Annual Report*, it was anticipated that Australia's main clearing and settlement facilities would be subject to informal (rather than full) assessments against international standards as part of the IMF FSAP. In the event, the Australian authorities and the IMF agreed that informal assessment of these systems would be of limited benefit. As a consequence, it was decided that they would not be assessed as part of the FSAP, but that a full assessment should be undertaken at a later stage. The timing is yet to be decided, and will in part depend on the effect the merger of the ASX and the SFE has on the operations of their clearing and settlement facilities.

Foreign Exchange Settlement Risk

Another focus of the Bank's work continues to be foreign exchange settlement risk; that is the risk that one party to a foreign exchange transaction will pay the currency it sold but not receive the currency it bought. Policymakers, both in Australia and internationally, have sought to ensure that this risk is understood and measured. The BIS Committee on Payment and Settlement Systems has established a Foreign Exchange Settlement Risk Sub-group to assess strategies for reducing the risks associated with the settlement of foreign exchange transactions. The Reserve Bank of Australia is a member of this group.

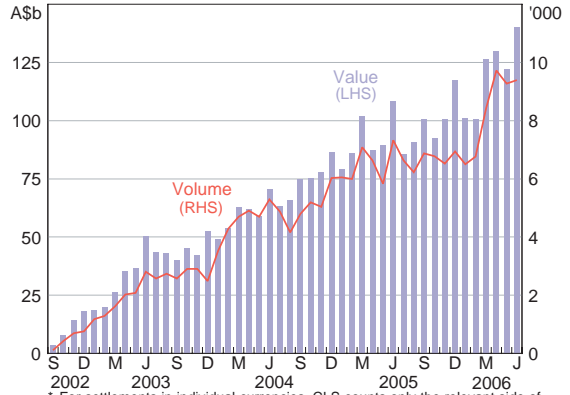
A major part of the Sub-group's work in the past year has been to conduct a survey of the way in which banks manage the settlement of their foreign exchange transactions. Most countries participating in this survey have conducted similar surveys previously, but there has



been significant change to settlement options in recent years, including the establishment of the CLS Bank (CLS), which began operation in 2002. Since CLS commenced operations, the number of transactions settled has grown strongly (Graph 6 and 7). In recent months, around 250 000 transactions in all eligible currencies have been settled each day, with an average daily value of over US\$2.5 trillion. Settlement of the Australian dollar leg of transactions accounts for around 3.5 per cent of all transactions settled in CLS, valued at around A\$130 billion.

The current survey of settlement practices is expected to give an indication of the extent to which the focus on foreign exchange settlement risk has been accompanied by a reduction in settlement risk. The participation of a number of Australian banks in the survey is being coordinated by the Bank. The results will be published in 2007.

Graph 7
CLS Settlements: Australian Dollars*
 Daily average



* For settlements in individual currencies, CLS counts only the relevant side of each trade settled. The sale of A\$10 million for US\$7.5 million, for example, would be measured as an A\$ settlement with a value of A\$10 million.
 Source: CLS Bank

The Board's Decisions and Reserve Bank Reports

1998

'Some Features of the Australian Payments System', Reserve Bank of Australia *Bulletin*, December 1998.

1999

Media Release 1999-02, 'Eligibility for Exchange Settlement Accounts' (Sets out the Reserve Bank's policy on eligibility for exchange settlement accounts), 1 March 1999.

'The Role of Exchange Settlement Accounts', Reserve Bank of Australia *Bulletin*, March 1999.

Joint RBA/ACCC Media Release, 'Study of Interchange Fees and Access in Debit and Credit Card Schemes' (Announcing the commencement of the study), 16 September 1999.

Reducing Foreign Exchange Settlement Risk in Australia: A Progress Report, Reserve Bank of Australia, Sydney, September 1999.

Media Release 1999-13, 'Payment Systems and Netting Act 1998: Approval of Multilateral Netting Arrangements' (Approval of the Austraclear System and the High Value Clearing System managed by the Australian Payments Clearing Association), 24 November 1999.

2000

The Future of Clearing and Settlement in Australia: A Discussion Paper, Reserve Bank of Australia, Sydney, March 2000.

Joint RBA/APRA Media Release, 'Regulation of Purchased Payment Facilities' (Announcing the enactment of a regulation under the *Banking Act 1959* bringing certain types of purchased payment facilities under APRA's supervision), 15 June 2000.

Joint RBA/ACCC Media Release, 'Debit and Credit Card Schemes in Australia: A Study of Interchange Fees and Access' (Announcing the release of the study), 10 October 2000.

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

2001

Media Release 2001-09, 'Designation of Credit Card Schemes in Australia' (Announcing designation of the Bankcard, MasterCard and Visa credit card schemes in Australia), 12 April 2001.

Media Release 2001-25, 'Reform of Credit Card Schemes in Australia' (Releasing a consultation document and draft standards for the Bankcard, MasterCard and Visa credit card schemes in Australia), 14 December 2001.

Reform of Credit Card Schemes in Australia: I A Consultation Document, Reserve Bank of Australia, Sydney, December 2001.

Reform of Credit Card Schemes in Australia: II Commissioned Report, Reserve Bank of Australia, Sydney, December 2001.

Reform of Credit Card Schemes in Australia: III Submissions Received, Volumes 1 and 2, Reserve Bank of Australia, Sydney, December 2001.

2002

Media Release 2002-15, 'Reform of Credit Card Schemes in Australia' (Releasing the final standards for the Bankcard, MasterCard and Visa credit card schemes in Australia and a Regulation Impact Statement), 27 August 2002.

Reform of Credit Card Schemes in Australia: IV Final Reforms and Regulation Impact Statement, Reserve Bank of Australia, Sydney, August 2002.

Media Release 2002-18, 'Reform of Credit Card Schemes in Australia' (Announcing the Bank would defend the challenge to the credit card reforms by Visa International), 19 September 2002.

2003

Joint RBA/APRA Media Release, 'Management of Exchange Settlement Accounts' (Announcing new provisions for agency arrangements in RTGS), 26 March 2003.

Media Release 2003-04, 'Financial Stability Standards' (Release of Financial Stability Standards for Securities Settlement Systems and Central Counterparties licensed under the *Corporations Act 2001*), 30 May 2003.

Media Release 2003-08, 'Reform of Credit Card Schemes in Australia' (Announcing a regulation to ensure that, in complying with the standards for credit card schemes, participants in credit card schemes are not at risk under the *Trade Practices Act 1979*), 1 July 2003.

Media Release 2003-09, 'Reform of Credit Card Schemes in Australia – Access Regime' (Announcing a draft access regime for the Bankcard, MasterCard and Visa credit card schemes in Australia), 24 July 2003.

'The Changing Australian Retail Payments Landscape', Reserve Bank of Australia *Bulletin*, July 2003.

Media Release 2003-12, 'Reform of Credit Card Schemes in Australia' (Reporting the Federal Court decision on the challenge to the Reserve Bank's credit card reforms), 19 September 2003.

Media Release 2003-14, 'Interchange Fees for the Bankcard, MasterCard and Visa Credit Card Schemes' (Reporting new interchange fees for the schemes in compliance with the Reserve Bank's standards on interchange fees), 31 October 2003.

2004

Media Release 2004-01, 'Designation of the Visa Debit Card Scheme in Australia', 23 February 2004.

Media Release 2004-02, 'Reform of Credit Card Schemes in Australia – Access Regime' (Announcing the finalisation of an access regime for the Bankcard, MasterCard and Visa credit card schemes in Australia), 23 February 2004.

Media Release 2004-04, 'Regulation of Purchased Payment Facilities under the *Payment Systems (Regulation) Act 1998*' (Announcing class exclusions from the operation of the *Act*), 10 March 2004.

'The Australian High-value Payments System', Reserve Bank of Australia *Financial Stability Review*, March 2004.

Submission by the Reserve Bank of Australia to the Australian Competition Tribunal, April 2004.

'How Australians Withdraw Cash', Reserve Bank of Australia *Bulletin*, July 2004.

'Merchant Service Fees for Credit Cards', Reserve Bank of Australia *Bulletin*, July 2004.

Media Release 2004-07, '*Payment Systems and Netting Act 1998*: Approval of Netting Arrangements, *Cheques Act 1986*: Recognition of Settlement System' (Announcing that four clearing streams managed by the Australian Payments Clearing Association (APCA) are approved multilateral netting arrangements and that APCA's Australian Paper Clearing System is a recognised settlement system under the *Cheques Act 1986*), 19 August 2004.

Media Release 2004-08, 'Reform of Card Payment Systems in Australia' (Announcing the designation of the EFTPOS system in Australia), 9 September 2004.

'Reasons for the Decision to Designate the EFTPOS Payment System', Reserve Bank of Australia, Sydney, 14 October 2004.

2005

Media Release 2005-02, 'Payments System Reform' (Announcing draft standards for the EFTPOS and Visa Debit systems, decisions on the regulation of American Express and Diners Club and calling for submissions on whether the Credit Card Interchange Standard should be amended), 24 February 2005.

Reform of the EFTPOS and Visa Debit Systems in Australia: A Consultation Document, Reserve Bank of Australia, Sydney, February 2005.

Media Release 2005-07, 'Payments System Reform' (Announcing outcomes from the Payments System Board meeting on regulation of BPAY, publication of credit and charge card market share data, EFTPOS access reform and a change to the Financial Stability Standard for Securities Settlement Facilities), 1 June 2005.

Media Release 2005-08, 'Payments System Reform' (Announcing the outcome of the Payments System Board meeting with respect to a revised draft standard for setting of credit card interchange fees, a draft access regime for Visa Debit, EFTPOS access reform, publication of BPAY interchange fees and market shares of credit and charge card schemes, and changes to American Express merchant agreements), 20 July 2005.

Proposed Changes to the Credit Card Interchange Standard: A Consultation Document, Reserve Bank of Australia, Sydney, July 2005.

An Access Regime for the Visa Debit System: A Consultation Document, Reserve Bank of Australia, Sydney, July 2005.

Media Release 2005-10, 'Payments System Board Decisions' (Announcing the imposition of an access regime on the Visa Debit system in Australia and the exclusion of the Westfield gift card from the provisions of the *Payment Systems (Regulation) Act 1998*), 22 August 2005.

'Merchant Service Fees and Market Shares for Credit and Charge Cards', Reserve Bank of Australia *Bulletin*, August 2005.

Media Release 2005-13, 'Payments System Board – November 2005' (Announcing a common benchmark for the setting of interchange fees in the Bankcard, MasterCard and Visa credit card schemes and aspects of ATM access arrangements that warrant attention), 25 November 2005.

Common Benchmark for the Setting of Credit Card Interchange Fees, Reserve Bank of Australia, Sydney, November 2005.

Media Release 2005-14, 'Reform of Debit Card Schemes in Australia' (Reporting the Federal Court decision on a challenge to the Reserve Bank's designation of the EFTPOS system), 28 November 2005.

Media Release 2005-16, 'Reform of Debit Card Systems in Australia' (Announcing the outcome of the release of a draft access regime for the EFTPOS system, a revised draft interchange standard for the EFTPOS system and MasterCard's intention to voluntarily apply to its new debit card product any standards imposed on the Visa Debit system), 20 December 2005.

Reform of Debit Card Systems in Australia: A Consultation Document, Reserve Bank of Australia, Sydney, December 2005.

2006

Media Release 2006-02, 'Payments System Reforms' (Announcing the decisions to determine an interchange standard for the EFTPOS system, revoke the designation of the Bankcard scheme and access regime imposed on it, and remove references to Bankcard from the Credit Card Interchange Standard, and the exclusion of a number of classes of purchased payment facilities from the provisions of the *Payment Systems (Regulation) Act 1998*), 27 April 2006.

Reform of the EFTPOS and Visa Debit Systems in Australia: Final Reforms and Regulation Impact Statement, Reserve Bank of Australia, Sydney, April 2006.

Media Release 2006-04, 'Reform of Debit Card Systems in Australia' (Announcing the imposition of an interchange fee Standard on the Visa Debit system, a Standard dealing with 'honour all cards' rules in the Visa Debit and Visa credit card systems and the 'no surcharge' rule in the Visa Debit system, and the receipt of an undertaking from MasterCard that it would voluntarily comply with the Standards imposed on the Visa Debit system), 7 July 2006.

The Payments System Board and Governance

Role and Composition of the Payments System Board

The Payments System Board was established in 1998 by amendment of the *Reserve Bank Act 1959*. It has responsibility for the Bank's payments system policy and is required to exercise this responsibility in a way that will best contribute to:

- controlling risk in the financial system;
- promoting the efficiency of the financial system; and
- promoting competition in the market for payment services, consistent with the overall stability of the financial system.

The Payments System Board comprises the Governor, who is Chairman, one representative of the Reserve Bank appointed by the Governor, one representative of the Australian Prudential Regulation Authority appointed by APRA and up to five other members appointed by the Treasurer for terms up to five years. Details of the current members are set out on page 41. Five members form a quorum at a meeting of the Payments System Board.

Meetings of the Payments System Board

The *Reserve Bank Act* does not stipulate the frequency of Board meetings. Since its inception, the Board's practice has been to meet at least four times a year, and more often as needed.

Conduct of Payments System Board Members

On appointment to the Board, each member is required under the *Reserve Bank Act* to sign a declaration to maintain secrecy in relation to the affairs of the Board and the Reserve Bank. Further, members must by law meet the general obligations of directors of statutory authorities, as set out in the *Commonwealth Authorities and Companies Act 1997 (CAC Act)*. The *CAC Act* sets standards of conduct for directors and officers of Commonwealth authorities, with

Table 9: Number of Meetings Attended by Each Member in 2005/06(a)

Ian Macfarlane	5	(5)
Philip Lowe	5	(5)
John Laker	5	(5)
Joe Gersh	5	(5)
Susan McCarthy	5	(5)
John Poynton	5	(5)
John Thom	5	(5)

(a) Figures in brackets show the number of meetings each member was eligible to attend.

many of these requirements being modelled on comparable areas of the Corporations Law. As such, members of the Payments System Board must:

- discharge their duties with care and diligence;
- act in good faith, and in the best interests of the Reserve Bank;
- not use their position to benefit themselves or any other person, or to cause detriment to the Reserve Bank or any person;
- not use any information obtained by virtue of their position to benefit themselves or any other person, or to cause detriment to the Reserve Bank or any person; and
- declare any material personal interest where a conflict arises with the interests of the Reserve Bank.

Remuneration

Fees of the non-executive members of the Payments System Board are determined by the Remuneration Tribunal.

Indemnities

Under the provisions of Section 27 of the *CAC Act* and pursuant to a resolution by the Reserve Bank Board on 3 November 1998, members of the Payments System Board have been indemnified against liabilities incurred arising out of the proper discharge of their responsibilities, provided that any such liability does not arise from conduct involving a lack of good faith. This indemnity does not extend to claims by the Reserve Bank itself or any subsidiary of the Bank.

Payments System Board



Chairman: Ian Macfarlane AC
Chairman since 1 July 1998
Governor of Reserve Bank of Australia
Present term expires
17 September 2006



Deputy Chairman: Phillip Lowe
Deputy Chairman since
8 March 2004
Assistant Governor (Financial
System)
Reserve Bank of Australia



John Laker
Chairman
Australian Prudential
Regulation Authority
Member since 24 July 1998



Joe Gersh AM
Managing Director
Gersh Investment Partners
Ltd
Member since 15 July 1998
Present term expires
14 July 2008



Susan McCarthy
Director
Member since 15 July 1998
Present term expires
14 July 2007



John Poynton AM
Executive Chairman
Azure Capital Pty Ltd
Member since 26 May 2000
Present term expires
24 May 2010



John Thom
Chairman
Centre for Money, Banking
and Finance
Macquarie University
Member since 15 July 1998
Present term expires
14 July 2006

Tribute to Ian Macfarlane AC

Ian Macfarlane will retire from the Reserve Bank of Australia on 17 September 2006 after a ten-year term as Governor and, from 1998, as the inaugural Chairman of the Payments System Board. At its meeting on 15 August, the Payments System Board passed the following resolution:

‘This Board warmly thanks Ian Macfarlane for his outstanding leadership of the Board over the past eight years. His insights into the Australian payments system have fundamentally shaped the work of the Board. He has been forthright in questioning long-standing practices and astute in developing new perspectives. Thanks to his tremendous drive, enthusiasm and tenacity, Australians have a payments system that is not only more secure than it was a decade ago, but also more efficient and more competitive. The Board wishes him all the best for the future.’

RESERVE BANK *of* AUSTRALIA