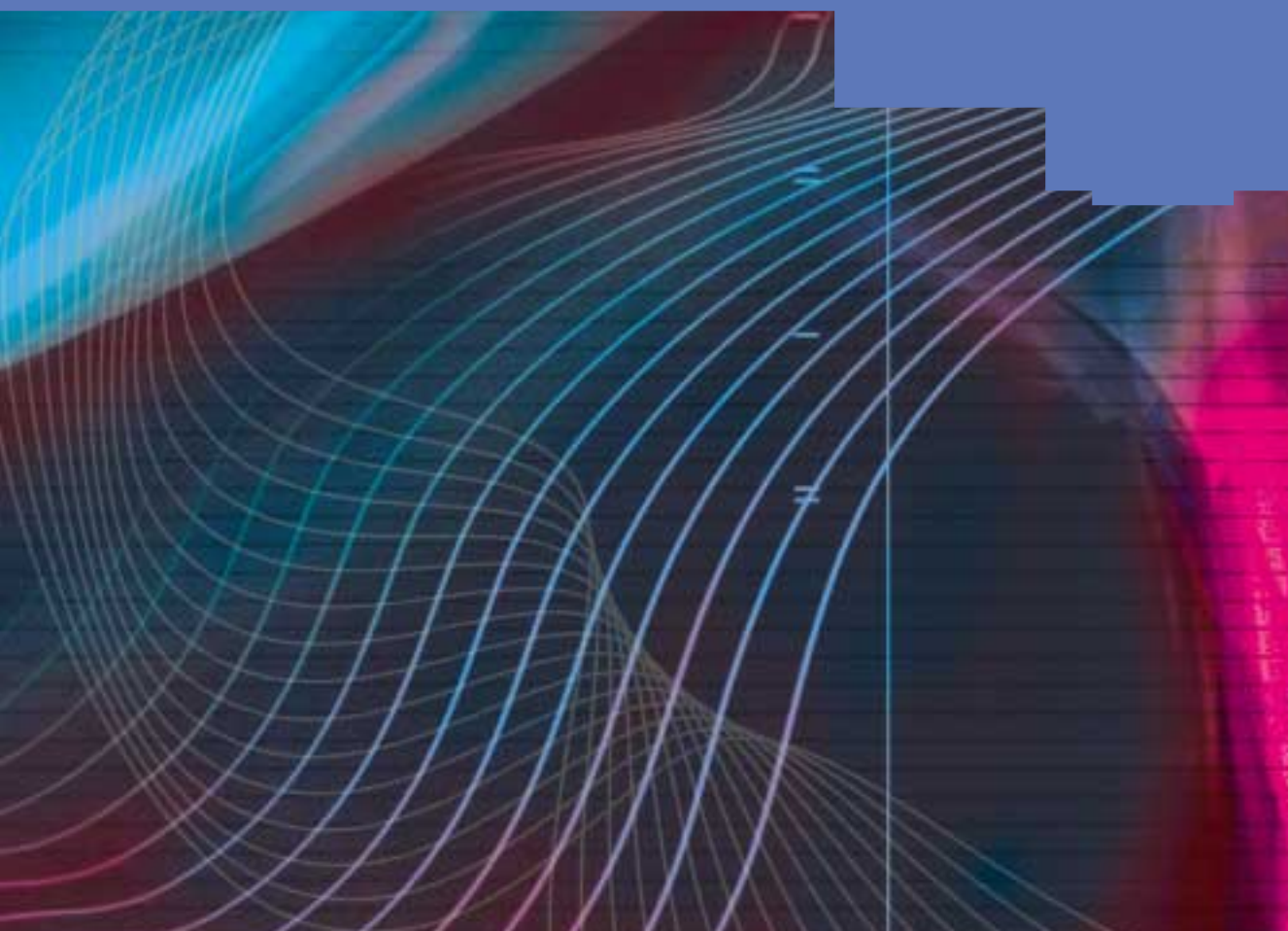
PAYMENTS SYSTEM BOARD

ANNUAL REPORT 2003 / **RESERVE BANK OF AUSTRALIA**



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.

ISSN 1442-939X (PRINT)
ISSN 1448-523X (ONLINE)

CONTENTS

Overview	2
The Australian Payments System	4
Competition and Efficiency	14
Safety and Stability	22
Glossary of Terms and Abbreviations	32
References	33
Payments System Board	34

OVERVIEW

The Payments System Board and the Reserve Bank have a clear legislative mandate to promote competition, efficiency and stability in Australia's payments system and the stability of the systems used to clear and settle transactions in financial instruments. The Government has given the Bank explicit powers under the *Payment Systems (Regulation) Act 1998* and the *Corporations Act 2001* to carry out these responsibilities, which the Board oversees.

The Board's preferred approach to carrying out its mandate has been to work with industry participants in order to understand the nature of the systems they operate and the business pressures they face. It has complemented this with analysis of the price incentives facing both the providers of payment, clearing and settlement services and their ultimate customers – consumers, businesses and financial market participants – and by comparisons with developments in other countries.

This approach has assisted the Board in identifying areas where there is scope to improve efficiency by allowing competitive forces to operate more effectively and to redesign systems to make them safer and more efficient. Where the industry has been receptive, the Bank has worked with participants to explain its analysis and conclusions and to explore with them ways in which reforms might be voluntarily introduced. This is consistent with the co-regulatory approach envisaged by the Government under which the Bank would use its powers when other avenues for reform had been exhausted.

Over recent years much of the Board's focus has been on the retail payments sector. This work stems from recommendations of the Financial System Inquiry (the Wallis Inquiry) that led to the establishment of the Board in 1998 and the Board's early investigations along the lines described above. The early projects focused on gathering information. The Board's first major research initiative was on card payment systems in Australia and was undertaken jointly with the Australian Competition and Consumer Commission (ACCC). Data on the costs of these systems in Australia were collected from financial institutions and then analysed and reported in *Debit and credit card schemes in Australia,* published in October 2000. Similarly, the Board undertook a project looking at the use of direct debits in Australia. More recently, the Bank has launched a new retail payments statistics collection, the first instalment of which was published in 2003.

These information-gathering exercises have allowed the Board to form views about the operation of the payments system in Australia and to look at reform proposals to address its concerns. Following the preferred approach, the Board and the Bank have sought to work with industry participants to achieve a more competitive and efficient payments system. As a result of the work on debit card systems, participants in the ATM network and the debit card system are pursuing voluntary reform and the Bank has encouraged and facilitated that process. In the case of ATMs the focus has been on eliminating interchange fees (fees paid between ATM owners and card issuers) which are unrelated to costs, and fees to cardholders which are not transparent at the time of a transaction. They would be replaced by direct charges made clear to cardholders before they withdraw cash. The Board strongly supports this initiative, which will introduce competition into the cash dispensing market. Overseas experience

suggests that most cardholders will find ways to pay no fees or only limited fees. While operators of some machines may levy higher charges, there are likely to be ATMs in many locations where they were not previously available.

Industry participants have also accepted the Board's view that there is no justification for the current interchange arrangements for debit cards and they have proposed to the ACCC that they be reduced to zero. The ACCC has not been convinced that such a move would be in the public interest unless there is also liberalisation of access to the debit card system that would increase competition in the provision of services to cardholders and merchants. The ACCC has invited the industry to address both questions simultaneously. The Board encourages the industry to undertake this work, with a view to increasing competition and efficiency in the debit card system.

On the other hand, the Bank has had to use its powers to achieve reform of credit card schemes. It became clear in early 2001 that a voluntary approach to dealing with reform of credit card schemes was not feasible and the Board initiated a formal regulatory process under the *Payment Systems (Regulation) Act 1998*. This culminated in August 2002 when the Board determined standards that abolished the "no surcharge" rule applied by the international credit card schemes and set a cost-based benchmark that is expected to reduce interchange fees in credit card schemes substantially. It also foreshadowed an access regime that provides for non-discriminatory treatment by the card schemes of specialist organisations supervised by the Australian Prudential Regulation Authority that wish to participate in the credit card business. The Board expects that these reforms, which are being introduced over the course of 2003, will improve competition in the Australian payments system, increase efficiency and reduce costs currently borne by merchants and passed on to all consumers in the form of higher prices for goods and services.

Shortly after the reforms were announced, MasterCard International and Visa International initiated legal action seeking to have them overturned on procedural and jurisdictional grounds. The case was heard during May and June 2003 and, at the time of writing, the judge was considering his decision.

On the safety and stability side, the Board has encouraged the reduction of risk in foreign exchange settlements through the establishment of the Continuous Linked Settlement (CLS) Bank. CLS became operational in September 2002 and by early 2003 most banks active in the Australian dollar foreign exchange market were participating in its settlement arrangements.

In May 2003 the Board finalised financial stability standards for central counterparties and securities settlement systems that clear and settle transactions in debt instruments, equities and derivatives. The standards drew on international work in this area and benefited from consultation with financial market participants. They focus on the need for clearing and settlement facilities to control the risks to which they are necessarily exposed in carrying out their roles. The standards apply to facilities operated by the Australian Stock Exchange and the Sydney Futures Exchange. The Board's assessments of their compliance with the standards will be included in next year's Annual Report.

17 September 2003

THE AUSTRALIAN PAYMENTS SYSTEM

Prior to 1998, the Reserve Bank had focused on Australia's wholesale payment systems, with a view to ensuring that these systems were stable, did not introduce an undue amount of risk into the financial system or have the potential to act as a conduit for financial problems from one institution to the system as a whole. This was also the case overseas where central banks had a clear mandate for the stability of the financial system. This changed in Australia when the Financial System Inquiry (the Wallis Inquiry) focused on the scope for improving the efficiency of the payments system. In response to the Wallis Inquiry, the Government gave the Reserve Bank a clear mandate to promote efficiency and competition in the payments system as well as safety and stability, and established the Payments System Board to oversee these responsibilities. Since its creation in 1998, the Payments System Board has been examining the Australian payments system with a view to identifying areas where efficiency, competition and safety could be improved. This has involved focusing heavily on retail payment systems, which in the past have not attracted much attention from regulators.

The Board has used two main techniques to assess the efficiency of the Australian payments system. The first has been to look at the price signals facing users of payment services. In practice, it is very difficult to create formal measures of the efficiency of the payments system. Instead, the Board has looked at the incentives faced by users of payment services and relied on a fundamental insight of microeconomics: when incentives are misaligned, it can be concluded that outcomes will be inefficient. For example, if prices do not adequately reflect the cost to society of the payment services, users will generally receive incorrect price signals which will result in inefficient consumer decisions. This was the approach used, for example, when looking at the level and effect of interchange fees and "no surcharge" rules in card payment schemes.

The second approach has been to compare features of the Australian payments system with overseas payments systems and/or any international standards of best practice to develop informal benchmarks of efficiency and safety. This has involved comparisons of features of specific payment systems as well as broader comparisons of the payments systems as a whole. Many issues identified by the Board over the past five years, including direct debit use, cheque

use and some issues in card payment systems have been informed by these benchmarking exercises.

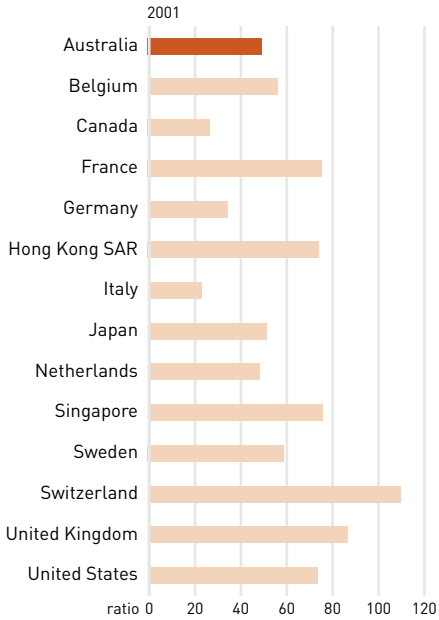
In the main, Australia's payments system compares favourably with those overseas. Australia has a diverse, modern payments system that is evolving in broadly the same direction as systems in comparable countries. The high-value payments system incorporates international best practices for design of these types of systems. In the retail payments area, Australia is now moving relatively quickly to replace cheques with other more efficient retail payment instruments. Automated direct credit and debit transfers are growing rapidly in Australia and overseas. Direct debit transfers, which five years ago were notably lower per capita in Australia than overseas, are growing faster in Australia than in overseas countries. In the area of card payments, Australia is fairly typical in that card-based payments are growing very quickly, but unusual in that credit card payments have increased faster than debit card payments over recent years.

WHOLESALE PAYMENT SYSTEMS

Payment systems that handle high-value electronic payments have attracted the most attention from central banks, both in Australia and overseas. These payments are normally made between financial institutions and corporations relating to transactions on financial markets or investments. In Australia, payments totalling around $135 billion per day are exchanged between Australian banks in the high-value payment system. Over a year, this amounts to around 50 times GDP. In some other countries, this ratio is significantly higher, reflecting turnover in their financial markets and banking structure.

These wholesale payment systems are of critical importance to the health of both the domestic and the international financial systems. The common feature of most of these systems is that they settle payments one at a time continuously throughout the operating day (known as real-time gross settlement (RTGS)).

High-value payments to GDP



Sources: Australian Bureau of Statistics; Bank for International Settlements; Reserve Bank of Australia.

Before 1990, only a handful of countries had RTGS systems for high-value payments. But since then, there has been a rapid move to implementing them. Australia's RTGS system, introduced in 1998, was developed during the "second wave" of implementation of RTGS systems, at which time a number of countries redesigned their systems. An increasing number of countries continue to move to RTGS systems for high-value payments.

Internationally co-ordinated efforts to ensure that high-value payment systems meet very high standards of security and reliability have resulted in international standards for such systems. The Bank for International Settlements (BIS) released *Core principles for systemically important payment systems* in 2001 setting out guidance on the desirable features of these systems. As discussed in the Board's 2000 Annual Report, Australia's RTGS system complies with these core principles.

RTGS Implementation

Country	Year
United States[a]	1918
Netherlands	1985
Sweden	1986
Switzerland	1987
Germany	1987
Japan	1988
Italy	1989
Korea	1994
United Kingdom	1996
Hong Kong SAR	1996
France	1997
New Zealand	1998
Australia	1998
Singapore	1998
Malaysia	1999
Indonesia	2000
Japan[b]	2001
Germany[b]	2001
Thailand	2001
Brazil	2002
Philippines	2002

(a) Fedwire was the first automated RTGS system; the modern version of Fedwire was launched in the early 1970s.

(b) System redesign.

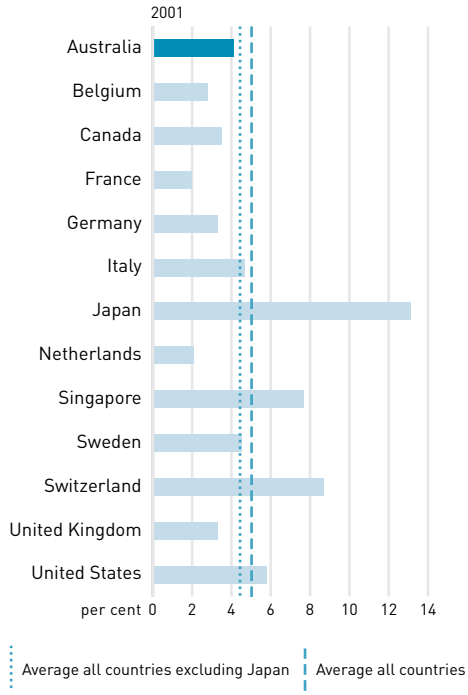
Sources: European Central Bank; various central bank publications.

CASH PAYMENTS

At the other end of the spectrum from the wholesale payment system is the traditional cash system. In contrast to non-cash payments, which involve accounting entries on the books of financial institutions, the number and value of cash payments is very difficult to measure. One imperfect measure is the ratio of currency to GDP, which measures the amount of cash in circulation rather than how frequently it is used. On this measure, Australia is near the average of industrialised countries. In the countries with the highest ratios – Japan and Switzerland – it has been part of the culture for many years for consumers to make even quite large value payments by cash.

The ratio of currency to GDP gives no indication of how many or what value of payments are made using cash. Some idea of these magnitudes can be gleaned from data on cash withdrawals. Every month, around $10 billion is withdrawn from ATMs in Australia, around the same amount as is spent on credit and charge cards each month. But this $10 billion is used to finance more than $10 billion worth of payments as some notes pass from hand to hand a number of times before finding their way back into a financial institution. The number of cash payments is also much larger than the number of card payments, as the average value of a cash transaction is typically much lower than for other forms of payment.

Currency to GDP



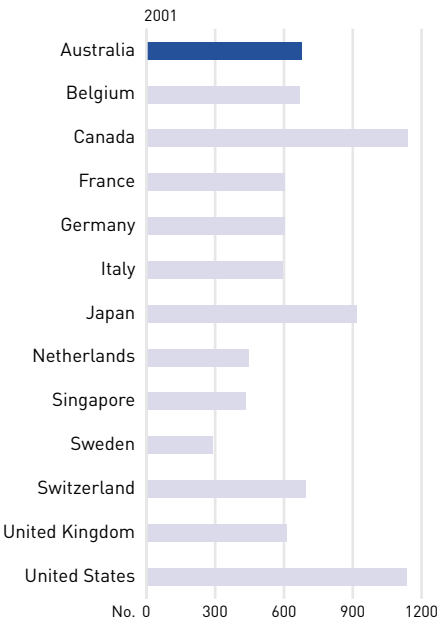
Sources: Australian Bureau of Statistics; Bank for International Settlements; Reserve Bank of Australia.

The wide and increasing availability of ATMs is also evidence that, even though electronic payment instruments have become increasingly important, consumers value the ability to obtain and use cash. The penetration of ATMs in Australia is about average for industrialised countries. Not surprisingly, given the use of currency in those countries, Japan and Switzerland both have relatively high numbers of ATMs per head of population. More interesting is that the highest numbers of ATMs relative to population are to be found in the United States and Canada where the numbers of ATMs have grown rapidly in recent years as the ability of owners to levy direct charges has facilitated their deployment in locations that were previously uneconomic.

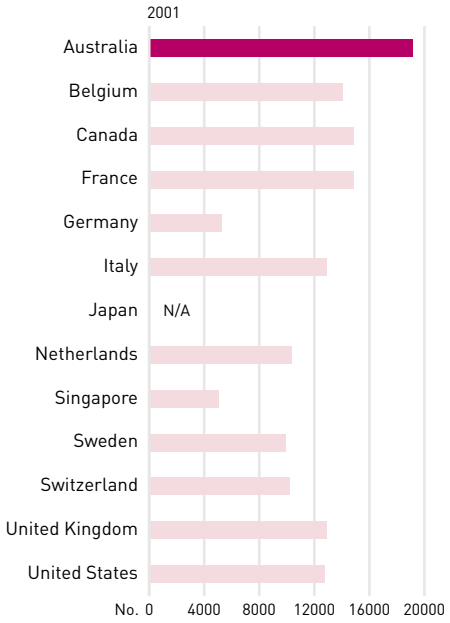
In addition, in a number of countries including Australia, customers have the ability to obtain cash when undertaking an EFTPOS transaction. The amount of cash obtained in this way is much smaller than through ATMs (around $750 million a month in Australia). But with substantially more EFTPOS terminals than ATMs, it is a very accessible facility. Australia has a high number of EFTPOS terminals per head of population, reflecting a well-developed electronic retail payments system.

Cash withdrawals from bank branches are another source of cash. Financial institutions in Australia have, for a number of years, been charging higher fees for this method of obtaining cash. Fees for cash withdrawals from ATMs and EFTPOS clearly favour these cash distribution channels in Australia. Customers of financial institutions have responded to these incentives by increasing their use of these cash distribution methods. The number of ATM transactions per head in Australia has risen from 26 in 1999 to 40 in 2002.

ATM terminals per million inhabitants



EFTPOS terminals per million inhabitants



Sources: Australian Bureau of Statistics; Australian Payments Clearing Association; Bank for International Settlements.

Transaction Charges of Major Banks [a]
A$ per transaction

	1995	1998	2003
Counter withdrawals	1.00	2.00	2.50
Cheques	0.70	0.65	1.35
Own bank's ATM	0.40	0.55	0.60
Other ATM	0.40	1.05	1.45
EFTPOS	0.40	0.45	0.45
Telephone banking	N/A	0.30	0.45
Internet banking	N/A	0.20	0.25

(a) Average for the four largest banks. Fees are those on transactions above a fee-free threshold. Based on public information on selected, widely used accounts. As at June of each year.

Sources: Cannex; Reserve Bank of Australia.

NON-CASH RETAIL PAYMENT SYSTEMS

There is international consensus on the desirable features of wholesale payment systems, and over recent years an increasing degree of homogeneity in their design and operation. In contrast, partly because they rarely raise systemic financial stability issues, there have been no internationally consistent policy pressures that have shaped the development of retail payment systems.

The relative importance of cash and the various non-cash retail payment instruments varies quite markedly, even among countries with similar levels of industrial development. For instance, as noted above, both Japan and Switzerland are relatively high users of cash but they are both low users of non-cash retail payments. The United States has the highest number of non-cash payments per person because its use of cheques, particularly at point-of-sale, is much higher than elsewhere. In terms of the total number of non-cash payments, Australia is around the middle of the group.

The nature of the Australian retail payments system has changed considerably over recent years. Many of the changes have been in line with international trends. Cheque use has been falling both in countries which have been relatively heavy users of cheques and in European countries where cheque use has generally been relatively limited. The number of cheques written per head in Australia has fallen by 8 per cent per annum over the past few years, as financial institutions have sought to recover a higher proportion of cheque costs from users and more efficient electronic alternatives have become more widely used.

One such alternative is payment by direct credit and debit to customers' accounts. Direct entry credits are a significant component of retail payments in Australia and have been for many years, being the main payment method used for salaries and government benefits. However, they have previously been little used in Australia for payments initiated by retail customers to make payments to businesses or individuals. This has been in contrast to European experience where direct credits have traditionally been used in this way. This is now changing in Australia as retail customers are increasingly using the Internet and telephone banking to instruct their banks to make direct credit payments to pay bills. Preliminary data for 2002 reported to the Reserve Bank show that Internet banking initiated credit transfers made up 5 per cent of the value and 16 per cent of the number of credit transfers.

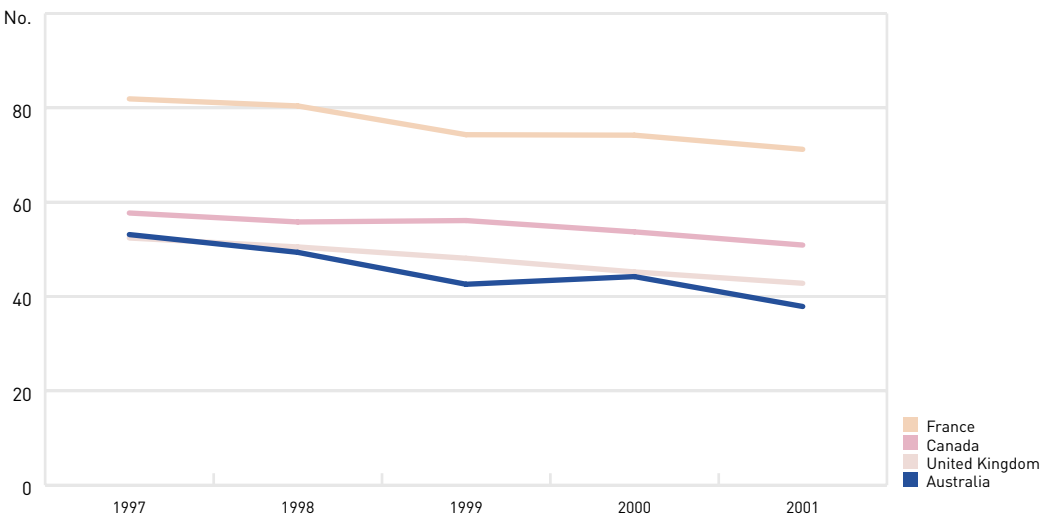
Direct debits require account holders to authorise billers to debit their accounts, usually a specified number of days after an account has been issued. They can be particularly efficient and convenient for paying recurring bills such as telephone and energy accounts because, after the initial authorisation, the customer need take no further action other than ensure that their account has sufficient funds to cover the payment. Direct debits are still less used in Australia than in some other countries but have grown strongly over the past five years. Billers are increasingly recognising that they are a particularly cheap and efficient way of collecting bill payments and that they can integrate them with their accounting systems – the number of billers using the system has more than trebled over the past five years. To reap these cost savings, billers have had to encourage their

Non-cash Retail Payments in Selected Countries transactions per person 2001

	Cheques	Debit cards[a]	Credit cards	Direct credits[b]	Direct debits	Total
United States	145	44	60	13	8	270
France	71	60	–	36	34	201
Canada	51	72	42	19	16	199
United Kingdom	43	46	29	32	36	186
Australia	38	36	42	39	16	171
Germany	4	15	5	84	62	169
Switzerland	1	31	11	47	7	96
Japan	2	0	18	10	–	29

(a) Debit card transactions also include stored-value cards for some countries.
(b) Credit transfers exclude transfers made using real-time gross settlement systems.
Sources: Bank for International Settlements; Reserve Bank of Australia.

Cheque transactions per capita for selected countries



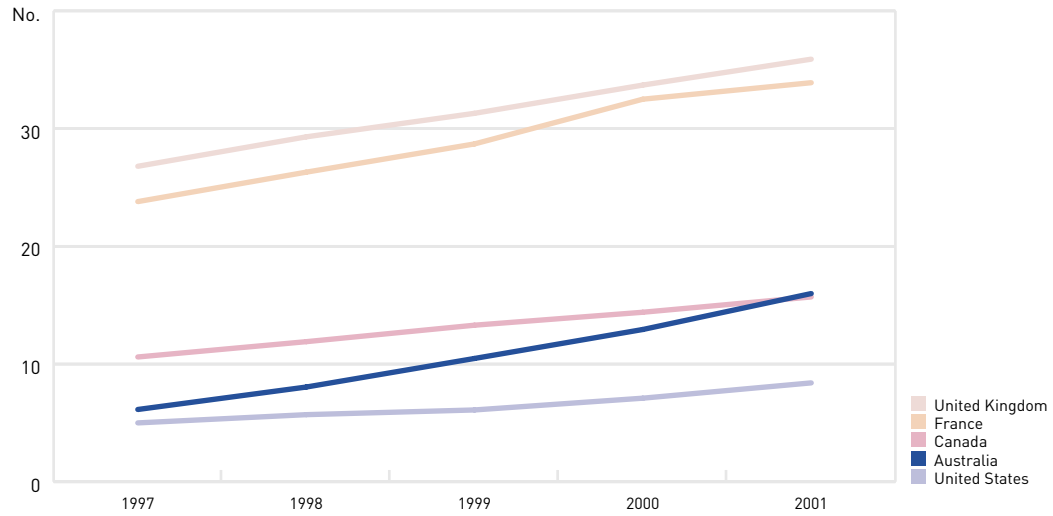
Sources: Australian Bureau of Statistics; Australian Payments Clearing Association; Bank for International Settlements.

customers to overcome a traditional reluctance to authorise debits to their accounts. To do so, some billers have started offering discounts for payment by direct debit. Many billers have also committed to a direct debit charter, reported in the Board's 2001 Annual Report, to reassure customers that any errors can be promptly corrected.

Going forward, electronic bill presentment may provide more opportunities for refinement of this system to allow efficient individual authorisation of direct debit payments. Experience in other countries, particularly in the United Kingdom and France, where direct debits are heavily used by consumers, provides useful models for thinking about ways of further improving the Australian direct debit system.

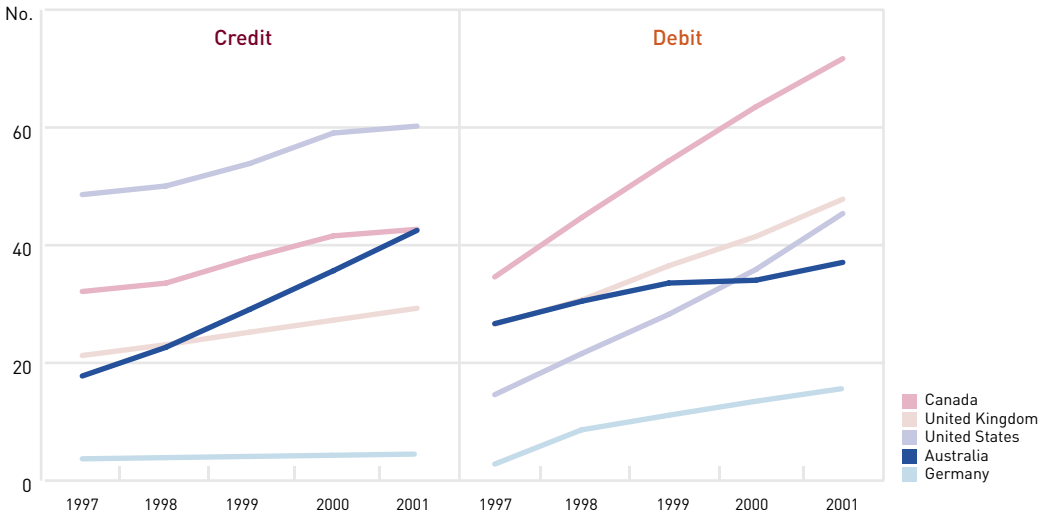
Card-based payments have also grown strongly in most countries. In most cases, debit card payments have grown much more rapidly than credit card payments. But in Australia growth in debit card transactions has been slower than for credit cards. Although some countries have been observing strong growth from a small number of transactions, Australia now sits around the middle of the table in terms of debit card payments per capita, when for many years it was a leader. In contrast, credit card usage in Australia has more than doubled since 1997, moving it well ahead of the United Kingdom and closer to North American levels. An important factor explaining these developments is the structure of interchange fees in Australia's debit and credit card schemes and their impact on incentives faced by cardholders.

Direct debit transactions per capita in selected countries



Sources: Australian Bureau of Statistics; Australian Payments Clearing Association; Bank for International Settlements.

Card transactions per capita in selected countries



Sources: Australian Bureau of Statistics; Bank for International Settlements; Reserve Bank of Australia.

THE ROLE OF THE BOARD

As noted above, the Payments System Board of the Reserve Bank was established on 1 July 1998 with a mandate to promote safety, efficiency and competition in the Australian payments system. In September 2001, the Board was also given responsibility for the safety of systems that clear and settle financial product transactions in Australia.

The Board's responsibilities and powers in the payments system are set out in the amended *Reserve Bank Act 1959*. The Board is responsible for determining the Reserve Bank's payments system policy and it must exercise this responsibility in a way that 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.

The powers that support this mandate are vested in the Reserve Bank and are set out, in the main, in the *Payment Systems (Regulation) Act 1998*. Under this Act, the Reserve Bank may:

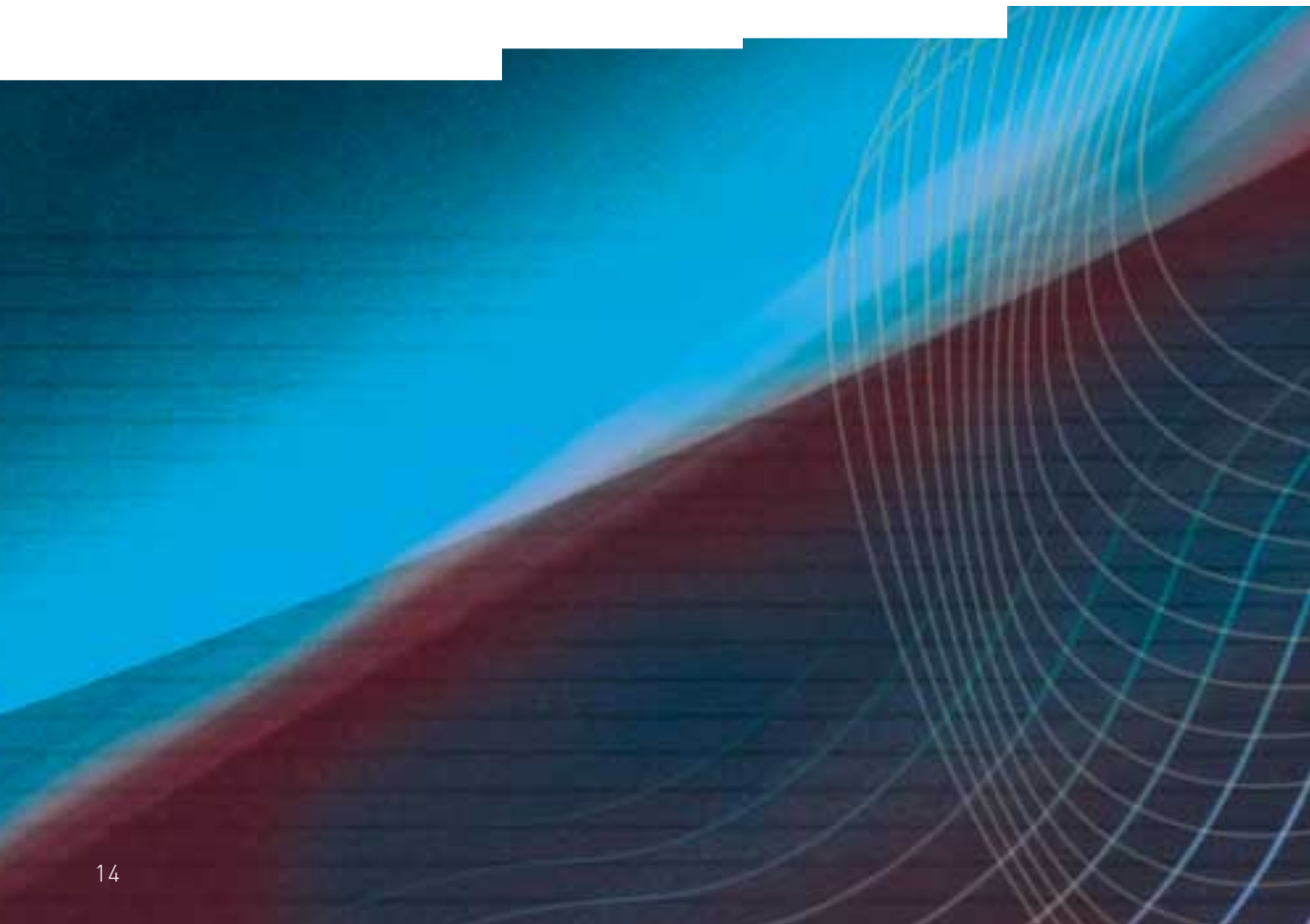
- "designate" a particular payment system as being subject to its regulation;
- determine rules for participation in that system, including rules on access for new participants;
- set standards for safety and efficiency for that system; and
- arbitrate on disputes in that system over matters relating to access, financial safety, competitiveness and systemic risk, if the parties concerned wish.

These powers are intended to be exercised if the Bank is not satisfied with the performance of a payment system in improving access, efficiency and safety, and other means of achieving these objectives have proved ineffective.

The Board also has responsibility for determining policies with respect to the safety of clearing and settlement facilities and, as with the payments system, the powers to carry out those policies are vested in the Reserve Bank. The Board's responsibilities are set out in the *Reserve Bank Act 1959* and the Bank's powers in Part 7.3 of the *Corporations Act 2001*, which allows the bank to set financial stability standards for clearing and settlement facilities.

The balance of this Report provides details of the Board's activities in carrying out its responsibilities over the past year.

COMPETITION AND EFFICIENCY

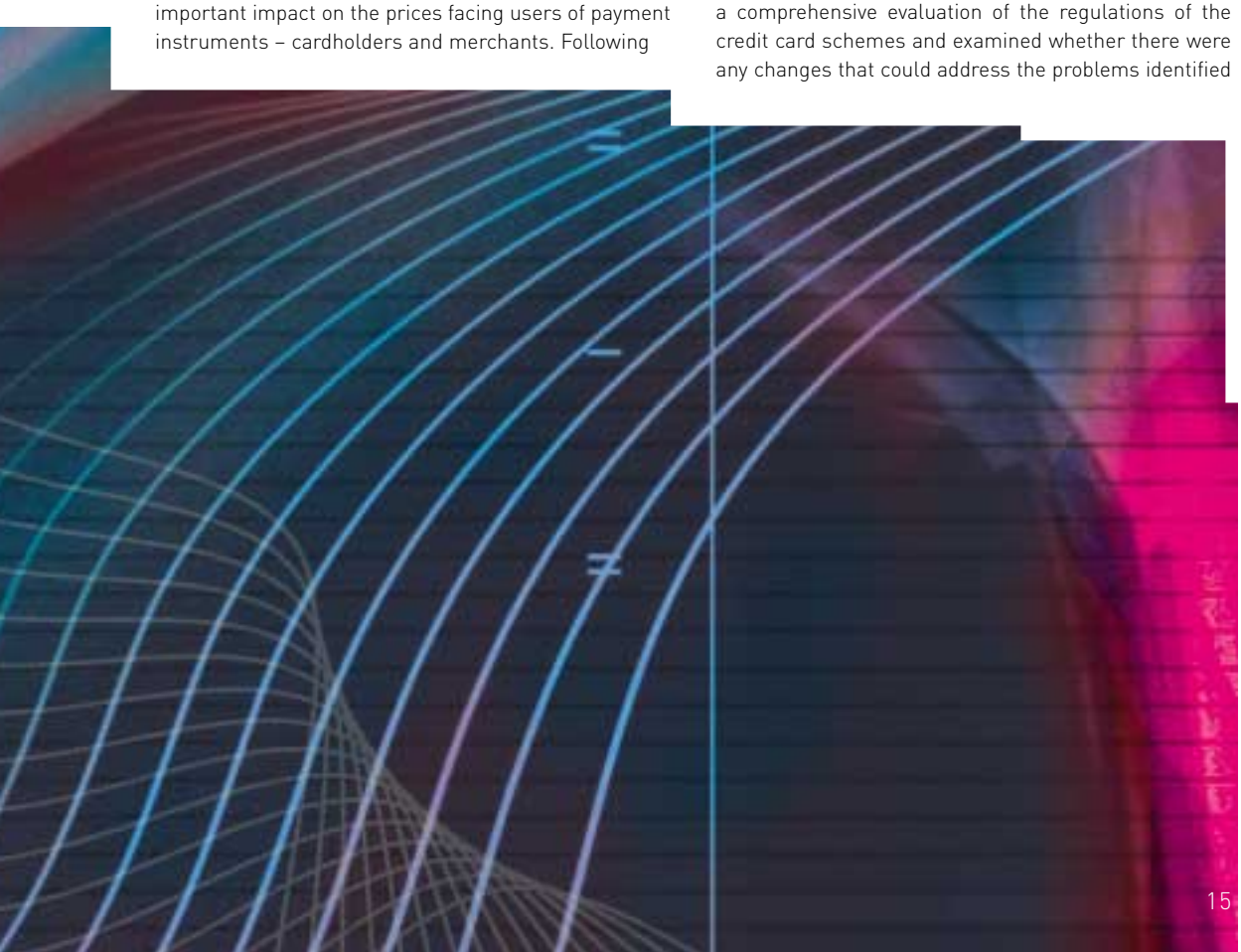


The Board's main focus over the past year continued to be card payment networks. It finalised regulatory reforms in the credit card market and encouraged industry efforts to address issues in the EFTPOS and ATM systems. In addition, the Board took steps to clarify and rationalise the regulatory framework under the *Payment Systems (Regulation) Act 1998* for purchased payment facilities and completed an important component of a project to collect and publish a broader and more detailed set of statistics on retail payment systems.

CREDIT CARD SCHEMES

The regulations of the credit card schemes have been a focus of the Board's work since 2000. The Board initially became interested in the credit card market in 1999. The Wallis Inquiry had recommended that the Board and the Australian Competition and Consumer Commission (ACCC) examine interchange arrangements in card payment networks. The Board recognised early on that interchange fees have an important impact on the prices facing users of payment instruments – cardholders and merchants. Following preliminary research, the Board endorsed a project, to be undertaken by the Reserve Bank and the ACCC, to find out more about these arrangements and to analyse their effects. The result was *Debit and credit card schemes in Australia: a study of interchange fees and access* (the Joint Study), published jointly by the Reserve Bank and ACCC in October 2000. The study concluded that a number of practices of the credit card schemes in Australia were distorting normal market mechanisms and hindering competition and efficiency in the payments system. It also concluded that interchange arrangements in Australia were resulting in a structure of price incentives that favoured credit cards over debit cards. However, it made no recommendations for action.

The Board's reform process for credit cards did not begin formally until April 2001, when the Reserve Bank designated the Bankcard, MasterCard and Visa credit card schemes in Australia as payment systems subject to its regulation under the *Payment Systems (Regulation) Act 1998.* The Reserve Bank then undertook a comprehensive evaluation of the regulations of the credit card schemes and examined whether there were any changes that could address the problems identified



in the Joint Study and thus improve competition and efficiency and further the public interest. The Board finalised its reforms on 27 August 2002 after extensive consultation and consideration of a large number of submissions from interested parties, including the designated card schemes. The reform measures, introduced under the *Payment Systems (Regulation) Act 1998*, are set out in *Reform of credit card schemes in Australia: final reforms and regulation impact statement* and involve standards on merchant pricing and interchange fees, and an access regime.

The first reform measure to take effect, the *Standard on merchant pricing*, came into force on 1 January 2003. It removed the restrictions imposed by the international credit card schemes on the freedom of merchants in Australia to charge according to the means of payment. The standard provides that neither the rules of a designated credit card scheme nor any participant in the scheme may prohibit a merchant from charging a credit cardholder any fee or surcharge for use of a credit card in a transaction. Although not captured by the Reserve Bank's regulatory measures, American Express and Diners Club (known as "three party" schemes) gave undertakings to remove their restrictions on merchant pricing at the same time as the standard came into force.

To date the incidence of surcharging by merchants has been limited. This response was expected by the Board and is in line with experience in other countries where the rule has been banned. This is because an important aim of the reform is to provide merchants additional leverage in negotiating lower merchant service fees for credit and charge cards (including those issued by "three party" schemes), even if they ultimately choose not to surcharge. Where they are able to negotiate an acceptable outcome, there is no incentive to surcharge. However, a small but growing number of merchants are exercising their new pricing freedom. One major national corporation began surcharging on 1 July 2003. There are also reports of some clubs and associations imposing surcharges on members electing to pay by credit or charge card.

Throughout this process the Reserve Bank has worked closely with the Australian Securities and Investments Commission (ASIC), which has responsibility for ensuring that merchants planning to impose surcharges properly disclose the relevant information to customers, and with the ACCC, which has responsibility for ensuring that merchants do not agree on surcharges in contravention of the *Trade Practices Act 1974*. Concerns by the credit card schemes that this freedom would be abused by merchants have not proven justified.

One issue that the Board is clarifying is the effect of restrictions similar to "no surcharge" rules applied to purchasing cards. These cards are typically issued by a company for use in locations bearing its brand. They operate in a number of ways, but there have been concerns that in some cases the rules imposed on outlets accepting these cards can prevent independent operators (such as franchisees) from imposing a surcharge on cardholders to cover their associated fees. Although cards issued outside the designated schemes are not subject to the Bank's standard, the Bank has consulted with issuers of these cards to clarify the operation of such rules. The Board believes some such policies have the potential to undermine the reforms and is working towards their liberalisation where appropriate.

The Bank's *Standard on interchange fees* came into effect on 1 July 2003. Under the standard, a cost-based benchmark for each scheme will set a ceiling on average interchange fees in the scheme. A benchmark is calculated for each scheme based on "eligible costs" incurred by card issuers in processing and authorising transactions, fraud and fraud prevention, and funding any interest-free period on their credit cards. For the first set of calculations, cost data for January to June 2003 will be used to set the benchmark for interchange fees beginning at the end of October 2003 and for the next three years. On the basis of data supplied by the largest card issuers in 2002, the Bank estimated that this would result in a reduction in average credit card interchange fees in Australia from around 0.95 per cent of the value of each credit card transaction to around 0.55-0.6 per cent – a reduction of around 40 per cent. This amounts to around $400 million a year.

The Board and the Reserve Bank have been closely monitoring the implementation of the interchange

standard. Each scheme is required under the standard to appoint an independent expert to compile the cost data provided by issuing members of the scheme in accordance with the data collection requirements of the standard. Earlier this year, the Bank agreed to the appointment of independent experts for each of the designated credit card schemes. In June 2003 the Government enacted a regulation under the *Payment Systems (Regulation) Act 1998* to ensure that, in setting interchange fees collectively in compliance with the interchange standard, participants in the designated credit card schemes are not in breach of the *Trade Practices Act 1974*.

The Board expects that the reduction in interchange fees as a result of the implementation of the standard will be passed through to merchant service fees and ultimately, through a reduction in merchants' costs, to the community as a whole in the form of lower prices. To assist the Board's monitoring of the effects, the Reserve Bank has initiated a survey of merchant service fee income.

The third plank of the Bank's reform of credit card schemes, the *access regime,* will liberalise current barriers to entry to the designated credit card schemes for non-financial institutions. The new regime involves the creation of a special class of authorised deposit-taking institutions (ADIs), known as specialist credit card institutions, that will be authorised by the Australian Prudential Regulation Authority (APRA) to conduct only credit card activities. In July 2003 the Government enacted a regulation under the *Banking Act 1959*, which defined credit card issuing and acquiring activities as "banking business", thus giving APRA authority to supervise specialist credit card institutions. APRA's authorisation guidelines and prudential standards for specialist credit card institutions came into force on 1 August 2003. In light of release by APRA of its final prudential requirements for specialist credit card institutions, the Reserve Bank released a revised proposed access regime. The Bank provided the opportunity for interested parties to make further submissions on the revised access regime and will take them into account, as well as previous submissions, before the access regime is finalised.

Under the proposed access regime, specialist credit card institutions authorised by APRA will be able to apply to the designated card schemes for participation. Schemes will still be able to impose their own business and operational criteria in assessing applications but must not discriminate against these specialists as a class, as opposed to other ADIs such as banks, credit unions and building societies. Potential specialist credit card institutions will need to demonstrate to APRA that they have the skills, staffing, risk management and operational capacity to conduct the credit card activities proposed without compromising the safety of the schemes. Given the sole-purpose nature of these specialist institutions, non-financial corporations that conduct other commercial business and wish to establish a specialist credit card institution will generally need to establish a subsidiary, which will then be subject to APRA's requirements relevant to their credit card business. Accordingly, APRA has indicated that it may exempt specialist credit card institutions from consolidated supervision at the parent company level where the specialist subsidiary is the only ADI in a non-financial or commercial group, recognising that it does not engage in deposit-taking in the normal course of its operations.

APRA has also indicated that specialist credit card institutions will be required to maintain a higher minimum capital ratio than a traditional ADI, reflecting their concentration of risk in one business line. This requirement would primarily affect a specialist that proposed to conduct a card issuing and lending business; specialists that conduct mainly transaction acquiring would not generally hold assets such as loans and other financial assets which are the primary determinant of risk-based capital requirements. APRA has also issued prudential guidance on risk management of credit card activities. This guidance highlights the particular risks of the various aspects of credit card activities and applies to all ADIs conducting credit card activities, and not just to specialist credit card institutions. The Board believes this new structure appropriately balances risks and more open entry of non-financial organisations into the credit card market.

Over time, the Board expects that this package of reforms will allow normal market mechanisms to work more effectively in the Australian payments system and reduce its overall costs to the community. The Board will monitor the impact of the reform measures on an ongoing basis and report to Parliament, in the usual way, through its Annual Reports. The Board will also undertake a major review of credit and debit card schemes in Australia after five years, and on the basis of that review, it will consider whether the standards and access regime of the designated credit card schemes remain appropriate.

In September 2002, MasterCard International and Visa International each filed an application in the Federal Court to have the Bank's reforms overturned. The cases were heard together over a six-week period beginning 19 May 2003. The judge has reserved his decision.

More recently, the Board has devoted some attention to the issue of credit card fraud in Australia. The Board supports moves by the industry to reduce fraud but is still gathering information and seeking views on how this should be achieved. Consistent with its approach in other areas, the Board is of the view that incentives have an important role to play in encouraging investment in fraud-reducing technology by card issuers, acquirers and merchants that own their own terminals. In particular, the Board's view is that the schemes and their members need to face the costs of fraud and should not just pass them to their customers, particularly merchants.

DEBIT CARD PAYMENT NETWORK

The Board has also actively encouraged reforms in the Australian debit card network. The network structure and the direction of debit card interchange fee flows in Australia is unique. In most other countries, the interchange fees are either paid to the card issuer, or there are no interchange fees at all. In Australia, interchange fees for proprietary PIN-based debit card transactions (known as EFTPOS) are negotiated bilaterally and are paid by the card issuer to the card acquirer.

The Joint Study concluded that there was no convincing rationale for interchange fees (in either direction) in Australia's EFTPOS system. As with other means available for making payments at the point of sale, such as cheques and cash, financial institutions acquiring debit card transactions could seek to recover their costs directly from their own customers, as could merchants who in some cases own parts of the EFTPOS infrastructure.

Unlike the credit card system, however, for which voluntary reform was not forthcoming, participants in the EFTPOS system have themselves pursued a reform agenda. Under the co-regulatory arrangements embodied in the Board's mandate, the Board and the Bank have encouraged co-ordination on appropriate reform measures by the industry and to date have not found it necessary to use the Bank's formal powers to achieve reform.

In February 2003, after a public consultation process, a group of banks, building societies and credit unions submitted an application to the ACCC requesting authorisation to reduce interchange fees for EFTPOS transactions to zero. The application also recommended that the Australian Payments Clearing Association (APCA) consider measures to improve access as part of the renewal of the current authorisation of its Consumer Electronic Clearing System regulations and procedures due by early September 2003. The Board, through the Bank, supported this application.

In early August, after taking submissions, the ACCC issued a draft determination on the EFTPOS authorisation application. It was not satisfied that the proposal would, in itself, provide a net public benefit without corresponding liberalisation of access to the network. As a result, the ACCC proposed to deny the application. It suggested, however, that if the industry were to return with a suitable proposal for addressing access within a concrete timeframe, a net public benefit may result such that the ACCC could approve the interchange fee arrangements.

The logical place to address access is APCA's rules for the Consumer Electronic Clearing System. In the Board's view, APCA and its members need to develop a framework within these rules to provide fair and open access to new and existing network participants, based on appropriate technical, financial and operational conditions. The current EFTPOS network is complex, and there are difficult technical and business issues to confront, but there are a number of steps that could be

taken to address these access issues. These could include a set of business rules that would provide access rights to all firms that had been admitted to membership of the Consumer Electronic Clearing System. This would replace the need for prospective participants to negotiate separate commercial arrangements with all existing members. The rules would also provide rights to direct interchange links between members, subject to appropriate efficiency-based criteria; APCA would take responsibility for ensuring that links were established in a timely manner, with costs allocated on a fair and transparent basis. The Reserve Bank has put these views over recent months both as a member of APCA and to the ACCC.

In the longer term, the Board believes that the current technical structure of the network is likely to need to be reassessed in the light of developments in technology and in payment systems both in Australia and abroad. This would provide an opportunity to address more fully the issue of fair and open access with a view to promoting competition and efficiency in the EFTPOS system.

Although they have not yet come to the fore, similar issues arise in Australia's ATM network, where realisation of the potential benefits of moving to a direct charging regime depend on ensuring that competitive pressures are maximised by an access policy that does not place unnecessary barriers in the way of potential entrants, especially deployers of ATMs.

A longstanding concern of the Board remains the interchange fee arrangements of one particular debit card product – the Visa-branded debit card. Visa debit cards are linked to deposit accounts, typically at smaller financial institutions, and do not require PINs to be entered at the point of sale. However, issuers of these cards currently earn the same interchange fee rates as for credit cards, even though features of the product and costs of providing it are quite different.

The Bank has recently held discussions with Visa and financial institutions that issue Visa-branded debit cards. Visa and its members are considering a number of changes to the product. The Board is encouraged that some of the proposals under discussion are attempting to meet its concerns about interchange fees for this product. The Board is hopeful that appropriate changes can therefore be achieved over the coming months.

A related issue is the so-called "honour-all-cards" rule of Visa and MasterCard which effectively ties acceptance of other cards within the brand to acceptance of that brand's credit card. This rule effectively requires merchants accepting, for example, Visa credit cards also to accept Visa debit cards (and vice versa). While the Board has not previously examined the operation of this rule in Australia, the recent settlement in a major court case in the United States brought by large merchants against the card schemes has resulted in an agreement to eliminate the rule in that country. The effect of this settlement is that merchants can make separate decisions about whether to accept credit cards and debit cards offered by a scheme. This development has raised the issue of the applicability of this tying rule in Australia. The Reserve Bank has asked Visa whether it intends to maintain this rule in Australia and, if so, to identify the public benefits of doing so. As MasterCard does not currently have a debit card product in Australia, the issue has not arisen with MasterCard.

ATM NETWORKS

In previous Annual Reports, the Board has also expressed concern over interchange fees paid in the ATM network for so-called "foreign" ATM transactions. These bilaterally determined interchange fees are paid by the card issuer to the financial institution which owns the ATM, and generally set a floor on fees paid by cardholders for using another institution's ATM. The Joint Study found that foreign ATM fees charged to cardholders are considerably more than the cost of providing the service. Furthermore, there was no evidence that competitive forces would bring these fees more closely into line with costs.

As an alternative to the current interchange fee arrangements, the Joint Study suggested that a "direct charging" regime might improve transparency and promote competition in the pricing of ATM services. Under this pricing model, ATM owners could charge customers of other financial institutions a transaction fee which would be clearly displayed to customers at the

ATM. That fee would be debited to the cardholder's account along with the cash withdrawal, and the resulting amount settled between card issuers and ATM owners.

In March 2003, an industry working group of ATM owners including banks, building societies and credit unions released a discussion paper on a proposal to remove bilateral ATM interchange fees and move to a system of direct charging. Under this proposal, an ATM owner would be free to recoup its costs through a direct charge on cardholders using its ATM, rather than through an interchange fee paid by the card issuer. The Board supports this proposal to eliminate hidden fees and believes that it would lead to greater competition in the ATM market.

In response to concerns about the proposal expressed by a consumer organisation, the industry group is studying direct charging experience overseas and surveying potential consumer reaction in Australia toward such a regime. The Board's own work in this area suggests that a direct charging regime is likely to result in much greater availability of ATMs, particularly in locations where there were previously none. Some of these ATMs are likely to charge a higher fee than banks currently charge on their machines. Nevertheless, many ATMs are likely to continue to charge less than the "convenience" ATMs, providing consumers with choice.

The Board strongly encourages the industry to finalise the proposed reform by the end of 2003.

PURCHASED PAYMENT FACILITIES

As foreshadowed in last year's Annual Report, the Board has been working to rationalise the regulatory framework for purchased payment facilities in Australia. The current framework is the result of a recommendation by the Wallis Inquiry, which took the view that new electronic money payment facilities had the potential to become an important element in the Australian payments system. The Inquiry did not want providers of such facilities to be restricted to traditional financial institutions but it concluded that providers of such facilities may need to be subject to prudential regulation. The Reserve Bank was given very broad and wide-ranging powers under the *Payment Systems (Regulation) Act 1998* for the regulation of purchased payment facilities (that were not supervised by APRA). More recently, as a result of reforms to financial services licensing, ASIC has also been given responsibilities in this area.

The distribution of responsibilities for purchased payment facilities among APRA, ASIC and the Reserve Bank has generated some overlap and uncertainty among potential participants. At the same time, market developments have not supported the need for the extensive regulatory structure envisaged by the Wallis Inquiry. As a result, the Board is seeking comments on general exemptions from regulation, consistent with the *Payment Systems (Regulation) Act 1998*, that will reduce the potential for regulatory uncertainty and burden on smaller, low-risk purchased payment facilities. In order to avoid regulatory duplication for other facilities not falling under these exemptions, the Reserve Bank also intends to rely, to the extent practical, on ASIC's financial services licensing regime, which also requires licensing of purchased payment facilities under the *Corporations Act 2001*. Subject to comments on its proposals, the Board aims to have the new arrangements in place by end 2003.

RETAIL PAYMENTS STATISTICS COLLECTION

In 2003, a major component of a long-running project to improve the data on retail payments was completed. When the Board was formed in 1998, data on the retail payments system were sparse and of low quality. The Reserve Bank had been collecting and publishing data on credit and debit card transactions monthly since 1994. The data were collected from domestic banks and a few foreign banks that issued cards in Australia. Data on other payment instruments such as cheques and direct entry transactions were collected annually by APCA. These data were collected over a one-month period during the year and were not timely.

Accordingly, in 1999, the Bank started a project to design a collection of a more comprehensive and timely set of data on retail payment systems. The project involved determining which data would be desirable to collect, liaising with institutions on their data needs and on the practicalities of collection, introducing new forms, guiding participants through the new process and working with them to ensure a consistent and accurate series. The project came to fruition in July 2003 when the Reserve Bank began publishing the

first data from the new collection. Further series will be published over coming years.

The new collection increases the number of direct reporting institutions from 14 under the old transaction cards reporting, to more than 50. New participants include larger building societies and credit unions and their industry service providers and some non-deposit taking institutions (including, for example, the Reserve Bank itself and charge card issuers) that are significant providers of payment services. Data for a number of other smaller institutions, primarily credit unions, are obtained indirectly through the institutions that act as their agents. The new collection redefines a number of series and adds considerable detail in a number of areas. Details of the collection can be found in "The changing Australian retail payments landscape", published in the Reserve Bank *Bulletin* in July 2003. Key series from the new data collection are published monthly in the *Bulletin*; additional data can be found on the Reserve Bank's website at *www.rba.gov.au.*

SAFETY AND STABILITY

The safety and stability of the overall financial system require robust arrangements for clearing and settlement of transactions. Payment systems, securities clearing and settlement systems, and foreign exchange settlement arrangements each have unique safety issues. Recognising this, policy makers have developed separate high-level standards to assist in assessing the safety and stability of these arrangements.

For payment systems, the internationally accepted minimum standards are set out in *Core principles for systemically important payment systems* released in 2001 by the Bank for International Settlements (BIS). For securities clearing and settlement facilities, the BIS published *Recommendations for securities settlement systems* in 2001 (a joint paper by the BIS's Committee on Payment and Settlement Systems and the International Organization of Securities Commissions); international work in this area is ongoing. In contrast, there are no standards set out for settlement of foreign exchange transactions. Instead, the focus of policy makers has been to draw market participants' attention to the risks involved and encourage participants to address these risks both on an individual basis and as a group. The most important industry response, Continuous Linked Settlement (CLS) Bank, was launched in September 2002.

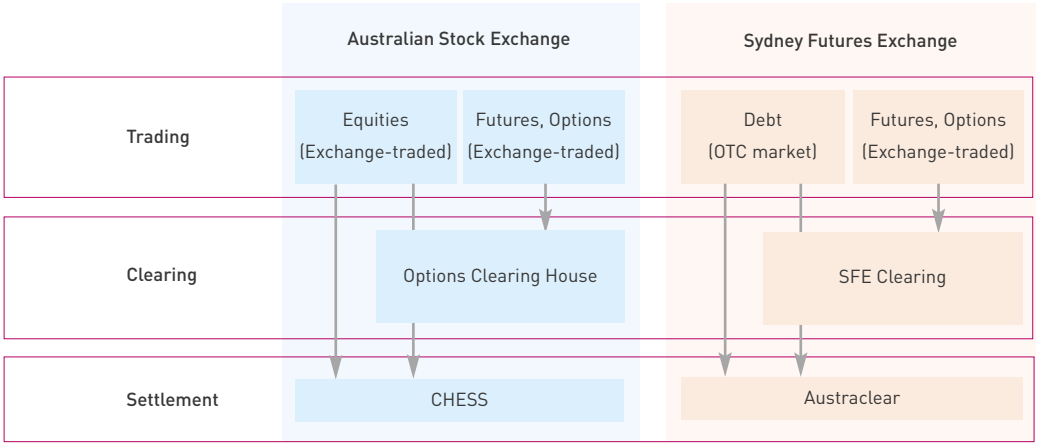
During 2002/03, the Board's interest in the area of safety and stability was focused mainly on the second and third of these areas: financial stability standards for securities clearing and settlement systems, and CLS Bank and its effect on foreign exchange settlement risk.

CLEARING AND SETTLEMENT FACILITIES

The Reserve Bank has a longstanding interest in clearing and settlement of financial instruments in Australia. Until recently, the Bank owned the settlement system for Commonwealth Government securities. The Bank provides access to Exchange Settlement Accounts for the interbank settlement of payments associated with financial market transactions. Organisations that facilitate the clearing and settlement of these financial market transactions, known as clearing and settlement facilities, are critical to Australia's financial architecture, and their smooth and secure operation is one of the Board's key interests. To this end, the Bank has been given powers under the *Corporations Act 2001* to set financial stability standards for these facilities.

Clearing and settlement take place after market participants have entered into a transaction in a financial instrument. *Clearing* is the process of transmitting and reconciling instructions following the transaction, and calculating the obligations to be settled. It may involve the netting of obligations and also the replacement, or "novation", of the original contract between the buyer and seller with two separate contracts – one between the buyer and the central counterparty, and the other between the central counterparty and the seller. *Settlement* is where the

Australia's Clearing and Settlement Facilities for Financial Instruments



obligations of parties to the transactions are discharged. In a securities transaction, this typically involves the delivery of a security in return for payment; in a derivatives transaction, it usually involves only a one-way payment.

The principal clearing and settlement facilities in Australia are owned by:

- the Australian Stock Exchange (ASX), which operates the Options Clearing House (OCH) and the ASX Settlement and Transfer Corporation (ASTC – the operator of the Clearing House Electronic Subregister System, CHESS); and
- the Sydney Futures Exchange (SFE), which operates the SFE Clearing Corporation (SFECC) and Austraclear.

The values cleared and settled each day in Australia are large, underlining the importance of clearing and settlement facilities to Australia's financial infrastructure. A disruption in these systems – such as a major operational problem, the default of a participant, or a liquidity or solvency crisis within the facility itself – could result in the disruption being transmitted to other parts of the financial system (such as the financial markets, or to financial institutions not originally involved in the disruption).

Turnover and Settlement Values in Wholesale Markets average daily turnover 2002/03 (A$)

	OCH	ASTC	SFECC	Austraclear
Notional Turnover[a]	828m	–	51b	–
Transaction Value	–	2b	–	18b
Settlement Value	27m	208m	41m	16b

(a) The OCH and SFECC data represent the notional values of derivatives contracts traded, and are not comparable with the values of debt and equities securities trades.

Sources: Australian Stock Exchange; Reserve Bank of Australia; Sydney Futures Exchange.

Where an organisation in Australia provides a regular mechanism for parties involved in financial market transactions to meet their obligations to each other, it is deemed to be a "clearing and settlement facility" and is required to hold a clearing and settlement facility licence under the *Corporations Act 2001*. Licences have been granted to the ASTC, OCH and SFECC. Under transitional arrangements, Austraclear has until 11 March 2004 to obtain a licence.

Under the regulatory framework, licensed facilities are required to comply with financial stability standards set by the Reserve Bank. Before determining financial stability standards, the Reserve Bank is required, under subsection 827D(3) of the *Corporations Act 2001*, to consult with the Australian Securities and Investments Commission (ASIC) and with the clearing and settlement facility licensees that will be required to comply with the standard. The Bank released two draft standards for public comment in November 2002. The Bank considered all submissions and the draft standards were modified in light of these submissions. Prior to the public consultation period, the Bank held informal discussions with relevant clearing and settlement facilities and with ASIC.

The Board approved the standards in May 2003 and they came into force on 30 May 2003. Transitional arrangements apply for the ASTC and OCH and for Austraclear, until such time as it obtains a licence.

The standards take the form of high-level prudential obligations, supplemented by a series of measures which the Reserve Bank considers relevant for the purposes of meeting the standard. The measures are further complemented by guidance notes which provide greater detail and examples of how, in the Reserve Bank's view, the measures could be satisfied. However, it is open to clearing and settlement facilities to meet the objective test set out in the standard by other means.

These standards, measures and guidance aim to ensure that each licensed facility identifies and properly controls the risks associated with its operation; they proceed from the premise that the primary responsibility for risk management lies with the board and senior management of the facility. Due to the differences in the risks to which they are exposed, separate standards have been determined for central counterparties and securities settlement systems.

Standard for central counterparties

Central counterparties interpose themselves between the two parties to a trade and become the buyer to every seller and the seller to every buyer. As such, they become parties to trades and take on the same risks as any other market participant. If a party cannot meet its obligations to a central counterparty, the central counterparty could face liquidity pressures and eventual losses; if such difficulties were to threaten the solvency of the central counterparty itself, the consequences for financial stability could be severe.

Because it centralises risk management, a central counterparty concentrates risks within the financial system. If these risks are not managed prudently, a central counterparty may be a source of systemic risk in the event of shocks to financial markets or to the economy more broadly. A summary of the Bank's standard for central counterparties, along with the minimum measures which in its opinion are relevant for the purposes of meeting the standard, is set out on the next page.

Standard for securities settlement systems

Securities settlement or "scorecard" systems maintain a record of title to securities and ensure that title changes take place according to instructions from the seller of the securities. Their main purpose is to record changes in ownership; in contrast to central counterparties, the systems do not become a counterparty to the trades they record.

A securities settlement system which acts as a scorecard provides a mechanism for counterparties to a securities transaction to meet their obligations to each other. The final settlement of a securities trade involves up to three steps: title of the security needs to be transferred from seller to buyer; funds must be transferred from the buyer's to the seller's deposit account at their respective financial institutions; and, where buyer and seller hold accounts at different financial institutions, funds must be transferred from the buyer's financial institution to that of the seller across Exchange Settlement Accounts at the Reserve Bank. These steps need to be linked to ensure that transfer of securities occurs if, and only if, cash payment occurs. Such "delivery-versus-payment" (DvP) arrangements guarantee that the change in ownership of securities is final and irrevocable,

Standard for Central Counterparties

The standard

A clearing and settlement facility licensee must conduct its affairs in a prudent manner, in accordance with the standards of a reasonable clearing and settlement facility licensee in contributing to the overall stability of the Australian financial system, to the extent that it is reasonably practicable to do so.

The standard is implemented by a series of minimum measures, briefly summarised below, which the Reserve Bank considers relevant in meeting the standard.

Measures

1. Legal framework

A central counterparty must have a well-founded legal basis, with rules that are clear and enforceable.

2. Participation requirements

The participation requirements of a central counterparty must ensure that participants have sufficient resources, both financial and otherwise, to meet obligations arising from participation in the facility.

3. Understanding risks

A central counterparty's rules and procedures must enable participants to understand the risks that they face through participation in the facility. Rules and procedures should be clear, comprehensive and accompanied if necessary by appropriate explanatory material.

4. Novation

The measure requires that the rules and procedures of the central counterparty must clearly identify both the nature and scope of novation and the point in the clearing process at which trades are novated.

5. Settlement

A central counterparty's exposures must be clearly and irrevocably extinguished on settlement. This requires the delivery-versus-payment (DvP) settlement of obligations where the exchange of assets occurs, or real-time settlement of payment obligations arising from derivatives transactions.

6. Default arrangements

A central counterparty's rules and procedures should provide for timely settlement (typically by the end of the settlement day) notwithstanding a default.

7. Risk controls

A central counterparty must have comprehensive risk control arrangements. In particular, it must ensure that, in all but the most extreme circumstances, if the participant with the largest settlement cannot meet its obligations to the central counterparty, the central counterparty will still be able to settle all of its obligations in a timely manner.

8. Governance

A central counterparty must have effective, accountable and transparent governance arrangements, with appropriate expertise and independence.

9. Operational risks

A central counterparty must identify sources of operational risk and minimise these through the development of appropriate systems, controls and procedures.

10. Reporting to the Bank

A central counterparty must report to the Bank such matters as participant defaults and breaches or likely breaches of the standard. It must also provide audited annual accounts and management accounts and results of stress testing at least quarterly.

freeing the buyer of a security to undertake further transactions with that security.

A securities settlement system does not take on credit risk and is not exposed to daily financial market volatility. Nonetheless, such systems do generate risks. DvP arrangements need to be robust in all circumstances so that settlement exposures between participants cannot build up. Systems also face legal risks that participants do not have clearly defined and enforceable title to securities, and operational risks that arise through the business activities of the facility.

A summary of the Bank's standard for securities settlement facilities, along with the minimum measures which in its opinion are relevant for the purposes of meeting the standard, is set out below.

Standard for Securities Settlement Facilities

The standard

A clearing and settlement facility licensee must conduct its affairs in a prudent manner, in accordance with the standards of a reasonable clearing and settlement facility licensee in contributing to the overall stability of the Australian financial system, to the extent that it is reasonably practicable to do so.

The standard is implemented by a series of minimum measures, briefly summarised below, which the Reserve Bank considers relevant in meeting the standard.

Measures

1. Legal framework

A securities settlement facility must have a well-founded legal basis, with rules that are clear and enforceable.

2. Participation requirements

The participation requirements of a securities settlement facility must ensure that participants have sufficient resources, both financial and otherwise, to meet obligations arising from participation in the facility.

3. Understanding risks

A securities settlement facility's rules and procedures must enable participants to understand the risks that they face through participation in the facility. Rules and procedures should be clear, comprehensive and accompanied if necessary by appropriate explanatory material.

4. Certainty of title

A securities settlement facility licensee should ensure that the facility's participants have proper title to securities held in the facility.

5. Settlement

The securities settlement facility must ensure that settlement occurs on a final and irrevocable basis, reducing the risk of systemic disturbance by eliminating principal risk. Primarily, this requires the delivery-versus-payment (DvP) settlement of obligations arising from a trade.

6. External administration

A securities settlement facility must be able to suspend or cancel the participation of the party subject to external administration. Any arrangements for dealing with unsettled trades of a participant in external administration must be clear to all participants and must be able to be carried out in a timely manner.

7. Operational risks

A securities settlement facility must identify sources of operational risk and minimise these through the development of appropriate systems, controls and procedures.

8. Reporting to the Bank

A securities settlement facility must report to the Bank such matters as participant defaults and breaches or likely breaches of the standard. It must also provide audited annual accounts and management accounts and results of stress testing at least quarterly.

Implementation

The Bank is required to undertake an assessment, at least once a year, of compliance by each clearing and settlement facility licensee with the standards and its obligation under the *Corporations Act 2001* to do all other things necessary to reduce systemic risk. After conducting an assessment, the Bank is required to provide a written report on the assessment to the Government, with a copy to ASIC. The Bank plans to present its assessment on the Australian Stock Exchange's facilities at the end of November every year; the assessment of the Sydney Futures Exchange's facilities will be presented at the end of May. The reports will be summarised in the Board's Annual Reports.

Under the Act, any enforcement of the standards is carried out by ASIC. ASIC and the Reserve Bank have entered into a Memorandum of Understanding which is designed to facilitate this process, as well as to minimise the regulatory burden on clearing and settlement facility licensees.

FOREIGN EXCHANGE SETTLEMENT RISK

High-value payments are usually settled on a real-time gross settlement (RTGS) basis. As discussed in the previous chapter, this means that final settlement occurs on a transaction-by-transaction basis continuously throughout the operating day. But RTGS by itself does not eliminate all risks. If the payment is made in exchange for another asset, such as a government security or another currency, the party that either first pays, or delivers the asset, is exposed to principal risk. As noted above, for securities settlements, best practice is therefore to ensure that delivery of the security occurs simultaneously with the payment. Foreign exchange transactions also involve making a payment in exchange for an asset (another currency). Traditionally those payments have occurred through the payment system relevant for high-value transactions in each country and no mechanism existed for ensuring simultaneous payment on each side.

This is the essence of foreign exchange settlement risk. It arises when a party to a foreign exchange transaction delivers the currency that has been sold before receiving the currency that has been bought. The risk lasts from the time that the irrevocable instruction is given to make the payment of one currency until the time when the other currency is received with certainty. This length of time is affected by a number of factors.

First, time zones are important. Traditionally, the settlement of each leg could occur only in the domestic payment system of each country, using correspondent banks to settle on behalf of banks not represented locally. This meant that financial institutions might pay the currencies they had sold before they received the currency they had purchased. For example, in the case of Australian dollar/US dollar foreign exchange transactions, banks would pay Australian dollars when the Australian payment system was open but not receive US dollars in return until some 15 hours later, when (prior to 1997) the US payment system opened.

Second, the practices of the financial institutions have a significant impact on risk. Since settlement risk lasts from the time the irrevocable instruction to pay has been made, procedures that require long lead times in the execution of payment instructions can exacerbate this risk. Similarly, since settlement risk lasts until the funds are confirmed as received, procedures that delay this process also exacerbate risk.

Foreign exchange settlement risk has been a concern for policy makers ever since a European bank failed in 1974 and left its counterparties, who had already met their payment obligations on foreign exchange transactions but had not yet received currency from the bank in return, with losses. These risks were identified and quantified in two BIS reports (*Settlement risk in foreign exchange transactions,* in 1996 and *Reducing foreign exchange settlement risk: a progress report,* in 1998). The Reserve Bank undertook similar surveys of foreign exchange settlement practices, values and duration of exposure, which were published in two reports (*Foreign exchange settlement practices in Australia,* in 1997 and *Reducing foreign exchange settlement risk in Australia: a progress report,* in 1999).

These reports did not set out a specific set of standards to apply to foreign exchange settlement risk. Rather, they firstly encouraged banks to adopt internal measures to control the identified risks. The Basel Committee on Banking Supervision also released supervisory guidance in 2000, aimed at improving banks' practices in managing foreign exchange

settlement risk. Second, central banks encouraged the private sector to work to develop solutions that would reduce foreign exchange settlement risk. The service now provided by CLS Bank is one such solution.

CLS Bank eliminates foreign exchange settlement risk in transactions it settles by providing a bridge between individual countries' payment systems. Previous Annual Reports of the Board have described CLS Bank in some detail. It ensures that the two sides of a foreign exchange transaction are settled simultaneously and cannot later be unwound or separated. Each country's payment system used by CLS Bank needs to meet a number of prerequisites. Some of these prerequisites relate to technical issues but others relate to whether payment system design and legal arrangements provide for settlement finality.

CLS Bank commenced operations on 9 September 2002. The Australian dollar was one of seven "first wave" currencies (together with the Canadian dollar, euro, Japanese yen, pound sterling, Swiss franc and US dollar). Most Australian banks active in foreign exchange settlement services offer settlement through CLS Bank. The four Australian major banks are shareholders in CLS Bank; other banks have overseas parents that are shareholders.

Over the next few years, the number of currencies that can be settled through CLS Bank will be expanded. The Danish krone, Norwegian krone, Swedish krona and the Singapore dollar were added to the currencies that can be settled through CLS Bank in September 2003. The Hong Kong and New Zealand dollars, which have been endorsed in principle, are expected to be added in 2004. In August 2003, CLS Bank also endorsed in principle the inclusion of the Korean won.

Since it commenced operations, transactions settled in CLS Bank have grown strongly. Taking all eligible currencies together, around 85 000 transactions are settled each day with a total value of US$900 billion. Settlement of the Australian dollar leg of transactions accounts for around 3 per cent of transactions valued at around A$45 billion. This represents roughly 30 per cent of foreign exchange trading involving the Australian dollar that is eligible for settlement and results in a significant reduction in foreign exchange settlement risk for those involved in Australian dollar transactions.

While finality of payment (and elimination of foreign exchange settlement risk) in CLS Bank is achieved by settlement of transactions individually on a real-time gross basis, liquidity requirements are determined by participants' net obligations. On a typical day, Australian dollar "pay-ins" to CLS (the liquidity required to settle net obligations in the Australian dollar) are around A$3 billion. In other words, the netting benefit of CLS Bank is over 90 per cent of the underlying gross foreign exchange settlement obligations.

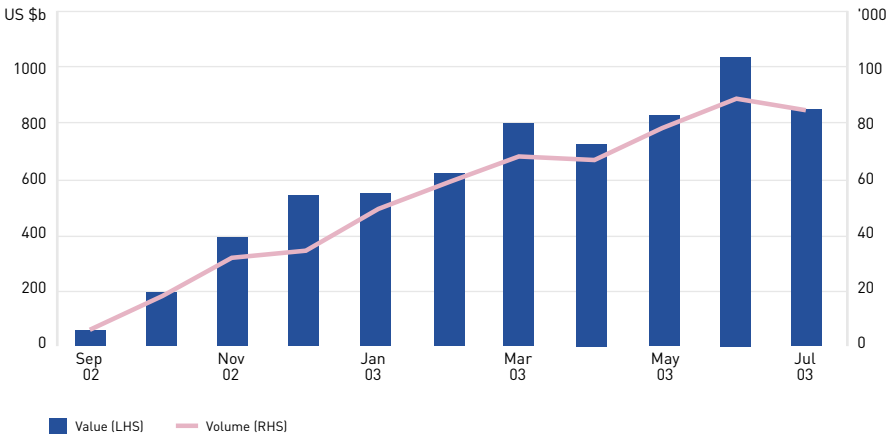
The introduction of CLS Bank has therefore significantly reduced foreign exchange settlement risk, but it has not eliminated it from the financial system entirely. The inclusion of new currencies will increase the share of trades being settled through CLS Bank, but there is also a need for more financial institutions that are not members to consider the benefits of settling their trades through CLS Bank.

Furthermore, CLS Bank is only one plank, albeit a large one, in the efforts to reduce foreign exchange settlement risk. The 1996 BIS report on *Settlement risk in foreign exchange transactions* identified a three-track strategy to address foreign exchange settlement risk. This involves action by:

- individual banks to control their foreign exchange settlement exposures;
- industry groups to provide risk-reducing multi-currency services; and
- central banks to induce rapid private sector progress.

The development of CLS Bank has addressed the second of the three tracks. With CLS Bank now operational and increasing in scale, central banks, including the Reserve Bank, are starting to look again at further steps in the first and third tracks. In particular, there is still a large amount of foreign exchange turnover that is not being settled through CLS Bank. The Board will be monitoring this and encouraging further risk reduction where appropriate, both by encouraging movement of settlement into CLS and further improvement in risk management practices in individual banks.

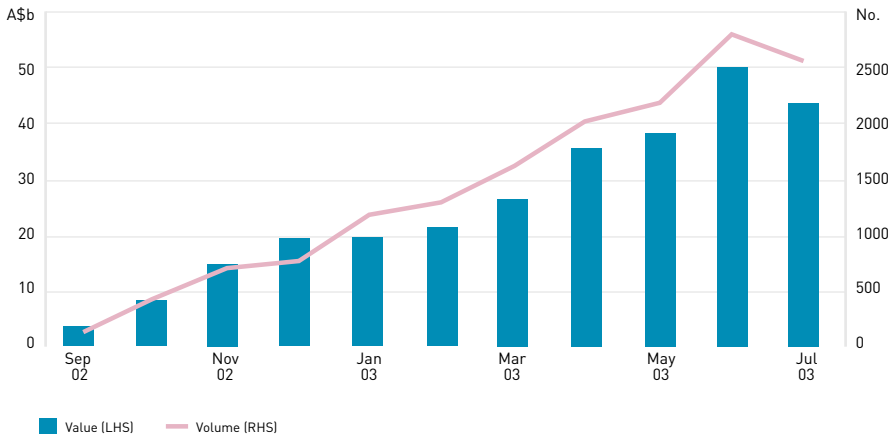
CLS Settlements : All Currencies daily average



Source: CLS Bank

In measuring total settlements, CLS Bank records both sides of each trade settled. The sale of A$10 million for US$5.5 million, for example, is counted as a settlement with a combined value of US$11 million.

CLS Settlements : Australian Dollars daily average



Source: CLS Bank

In measuring settlements in individual currencies,CLS Bank counts only the relevant side of each trade settled. The sale of A$10 million for US$5.5 million, for example, would be measured as an A$ settlement with a value of A$10 million.

AGENCY ARRANGEMENTS FOR RTGS

Prior to June 1998, when real-time gross settlement (RTGS) commenced in Australia, virtually all payments in Australia were settled on a net deferred basis. As payments exchanged each day amount to roughly 20 per cent of Australia's GDP, there was potential for considerable systemic disruption should a participant be unable to settle its obligations. The introduction of RTGS for high-value transactions had the potential to remove this risk if most high-value transactions were settled in the new system. However, if most banks chose to continue to settle their high-value transactions using the net deferred system, or by continuing to settle through other commercial banks as they did for cheques, the benefits of RTGS could have been limited. To ensure that the risk reduction benefits of RTGS were maximised and to prevent undue concentration of RTGS activity among a few institutions, the Bank required all banks to settle their RTGS transactions directly through their Exchange Settlement Accounts at the Reserve Bank.

Since 1998 the number of banks in Australia has grown, and many smaller banks and other authorised deposit-taking institutions (ADIs) specialise in banking activities that do not require extensive use of RTGS. For these ADIs, the Board recognises that, in some cases, it is more efficient to settle their small volume of RTGS transactions through other ADIs offering to provide such a service. The Board accepts that there is scope for small ADIs to enter into agency arrangements without compromising the risk reduction benefits of RTGS. As a result, in March 2003, the Bank announced a new policy on agency arrangements, whereby ADIs whose RTGS payments account for less than 0.25 per cent of the value of RTGS transactions can enter into agency arrangements with other institutions to settle their RTGS payments. Both ADIs entering into agency arrangements and ADIs offering such services need to satisfy the Australian Prudential Regulation Authority of the adequacy of their risk management practices. In addition, an ADI using an agency arrangement must maintain a back-up Exchange Settlement Account at the Reserve Bank for use in a contingency.

GLOSSARY OF TERMS AND ABBREVIATIONS

ACCC	Australian Competition and Consumer Commission
Acquirer	an institution that provides a merchant with facilities to accept card payments, accounts to the merchant for the proceeds and clears and settles the resulting obligations with card issuers
ADI	authorised deposit-taking institution
APCA	Australian Payments Clearing Association Limited
APRA	Australian Prudential Regulation Authority
ASIC	Australian Securities and Investments Commission
ASTC	ASX Settlement and Transfer Corporation
ASX	Australian Stock Exchange
ATM	Automated Teller Machine
Austraclear	a securities clearing and settlement system
BIS	Bank for International Settlements
Card issuer	an institution that provides its customers with debit or credit cards
CHESS	Clearing House Electronic Subregister System
Clearing	the process of transmitting, reconciling and in some cases confirming payment instructions prior to settlement; it may include netting of instructions and the calculation of final positions for settlement
CLS Bank	Continuous Linked Settlement Bank
Designation	the formal notification of action taken to exercise powers conferred by legislation
Direct debit	a pre-authorised debit on the payer's bank account initiated by the recipient
DvP	Delivery-versus-Payment
EFTPOS	Electronic Funds Transfer at Point of Sale
Interchange fee	a fee paid between card issuers and acquirers when cardholders make transactions
OCH	Options Clearing House
RTGS (real-time gross settlement)	a payment system in which processing and settlement take place in real time (continuously)
Settlement	the discharge of obligations arising from fund transfers between two or more parties
SFE	Sydney Futures Exchange
SFECC	Sydney Futures Exchange Clearing Corporation

REFERENCES

ATM Industry Steering Group, *Discussion paper: direct charging for 'foreign' automatic teller machine (ATM) transactions in Australia*, Sydney, March 2003

Australian Competition and Consumer Commission, *Draft determination in relation to the collective setting of EFTPOS interchange fees*, 8 August 2003

Australian Prudential Regulation Authority, *Guidelines on authorisation of specialist credit card institutions*, Sydney, August 2003

Bank for International Settlements, *Settlement risk in foreign exchange transactions (the "Allsopp Report")*, Basel, March 1996

Bank for International Settlements, *Reducing foreign exchange settlement risk: a progress report*, Basel, July 1998

Bank for International Settlements, *Payment systems in Australia*, Basel, June 1999

Bank for International Settlements, *Retail payments in selected countries: a comparative study*, Basel, September 1999

Bank for International Settlements, *Clearing and settlement arrangements for retail payments in selected countries,* Basel, September 2000

Bank for International Settlements, *Supervisory guidance for managing settlement risk in foreign exchange transactions,* Basel, September 2000

Bank for International Settlements, *Core principles for systemically important payment systems*, Basel, January 2001

Bank for International Settlements and International Organization of Securities Commissions, *Recommendations for securities settlement systems*, Basel, November 2001

Bank for International Settlements, *Statistics on payment and settlement systems in selected countries, figures for 2001*, Basel, April 2003

EFTPOS Industry Working Group, *Discussion paper: options for EFTPOS interchange fee reform*, Sydney, July 2002

Executives' Meeting of East Asia-Pacific Central Banks and Monetary Authorities (EMEAP), *Payment systems in EMEAP economies,* July 2002

Financial System Inquiry, *Final report*, AGPS, Canberra, March 1997

Reserve Bank of Australia and Australian Competition and Consumer Commission, *Debit and credit card schemes in Australia, a study of interchange fees and access,* Sydney, October 2000

Reserve Bank of Australia, *Foreign exchange settlement practices in Australia*, Sydney, December 1997

Reserve Bank of Australia, *Reducing foreign exchange settlement risk in Australia: a progress report*, Sydney, September 1999

Reserve Bank of Australia, *Reform of credit card schemes in Australia, I a consultation document, II commissioned report, III submissions received (volume 1), III submissions received (volume 2),* Sydney, December 2001

Reserve Bank of Australia, *Reform of credit card schemes in Australia, IV final reforms and regulation impact statement,* Sydney, August 2002

Reserve Bank of Australia, *Financial stability standards for central counterparties and securities settlement facilities,* Sydney, May 2003

Reserve Bank of Australia, *Reform of credit card schemes in Australia – access regime,* Sydney, August 2003

Reserve Bank of Australia, *The changing Australian retail payments landscape,* Bulletin, Sydney, July 2003

PAYMENTS SYSTEM BOARD

At end June 2003

Chairman
IJ MACFARLANE

Chairman since
1 July 1998.
Governor of Reserve
Bank of Australia.
Term Ends
17 September 2006.

Deputy Chairman
JF LAKER

Deputy Chairman
from 24 July 1998.
Assistant Governor
(Financial System)
Reserve Bank
of Australia.

GJ THOMPSON

Chief Executive Officer
Australian Prudential
Regulation Authority.
Member from
17 August 1998.

JI GERSH

Managing Director
Gersh Investment
Partners Ltd.
Member since
15 July 1998.
Term ends
14 July 2008.

S McCARTHY

Director
Member since
15 July 1998.
Term ends
14 July 2007.

JH POYNTON

Chairman
Poynton and Partners
Pty Ltd.
Member since
26 May 2000.
Term ends
25 May 2005.

JG THOM

Visiting Professor
Macquarie Graduate
School of Management.
Member since
15 July 1998.
Term ends
14 July 2006.

Dr JF Laker took up the position of Chair of the Australian Prudential Regulation Authority (APRA) from 1 July 2003 and became the APRA representative on the Board.

Dr JM Veale, Acting Assistant Governor (Financial System), was appointed on 2 July 2003 as the Reserve Bank representative on the Board and as Deputy Chairman.

Copies of Bank publications are available on the Bank's website, at head office or by writing to:

The Manager
Media Office
Information Department
Reserve Bank of Australia
GPO Box 3947
Sydney NSW 2001

RESERVE BANK OF AUSTRALIA

Head Office
65 Martin Place
Sydney 2000

T 02 9551 8111
F 02 9551 8000
W www.rba.gov.au
E rbainfo@rba.gov.au

designed and produced by billy blue creative

RESERVE BANK OF AUSTRALIA