

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.

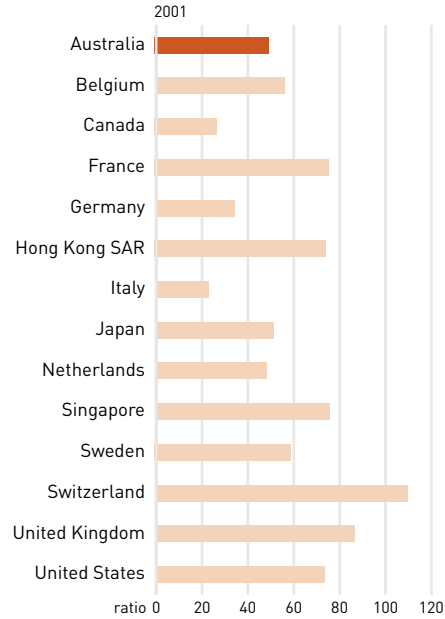
In the main, Australia’s payments system compares favourably with those overseas. Australia has a diverse, modern payments system that is evolving in broadly the same direction as systems in comparable countries. The high-value payments system incorporates international best practices for design of these 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.

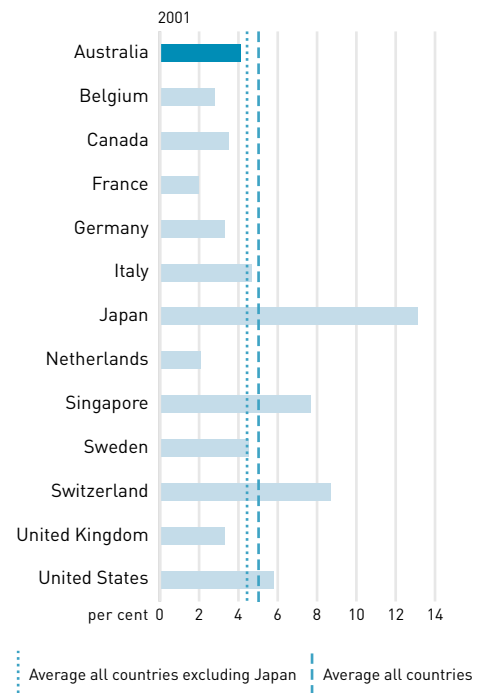
Sources: European Central Bank; various central bank publications.

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.

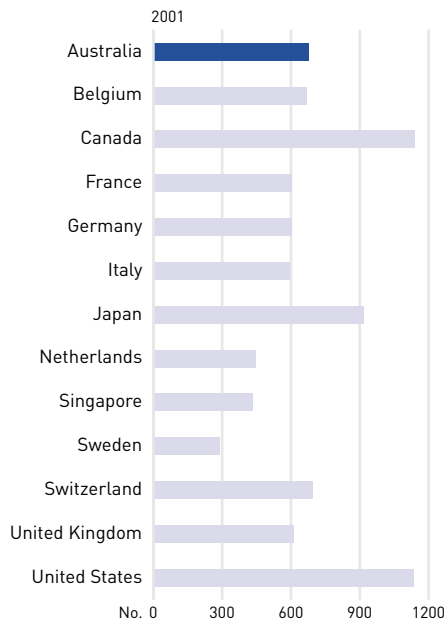
The wide and increasing availability of ATMs is also evidence that, even though electronic payment instruments have become increasingly important, consumers value the ability to obtain and use cash. The penetration of ATMs in Australia is about average for industrialised countries. Not surprisingly, 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

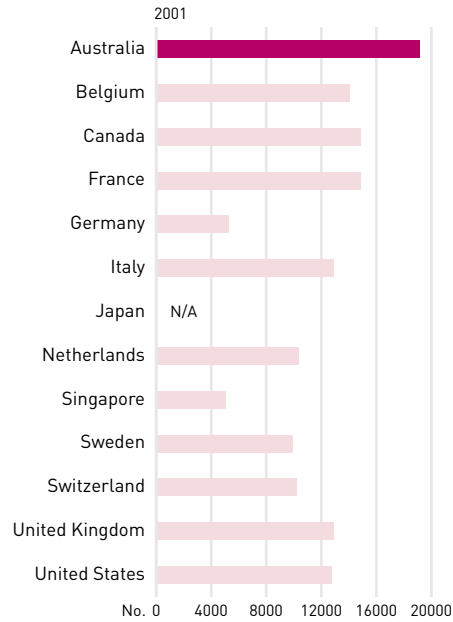
cash obtained in this way is much smaller than through ATMs (around \$750 million a month in Australia). But with substantially more EFTPOS terminals than ATMs, it is a very accessible facility. Australia has a high number of EFTPOS terminals per head of population, reflecting a well-developed electronic 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.

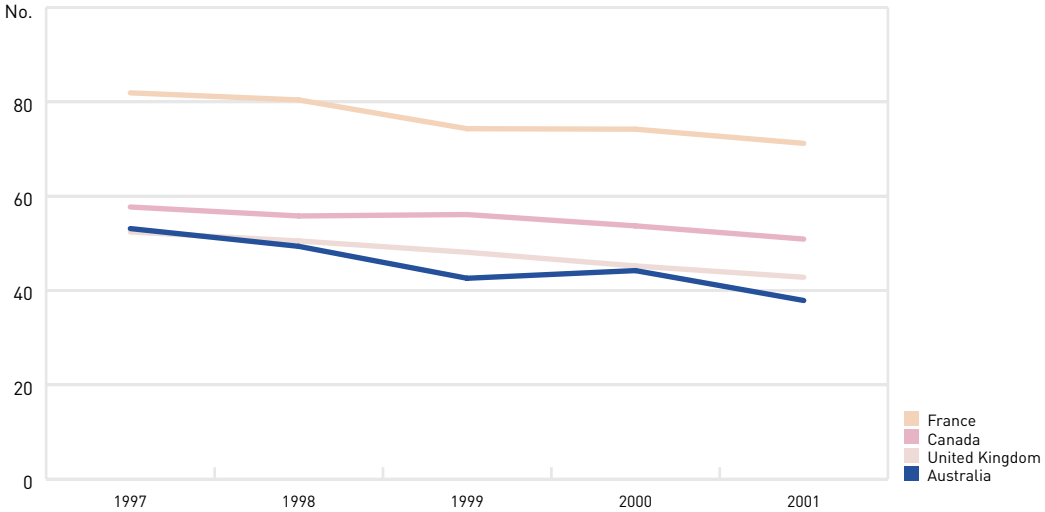
Direct debits require account holders to authorise billers to debit their accounts, usually a specified number of days after an account has been issued. They can be particularly efficient and convenient for paying recurring bills such as telephone and energy accounts because, after the initial authorisation, 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



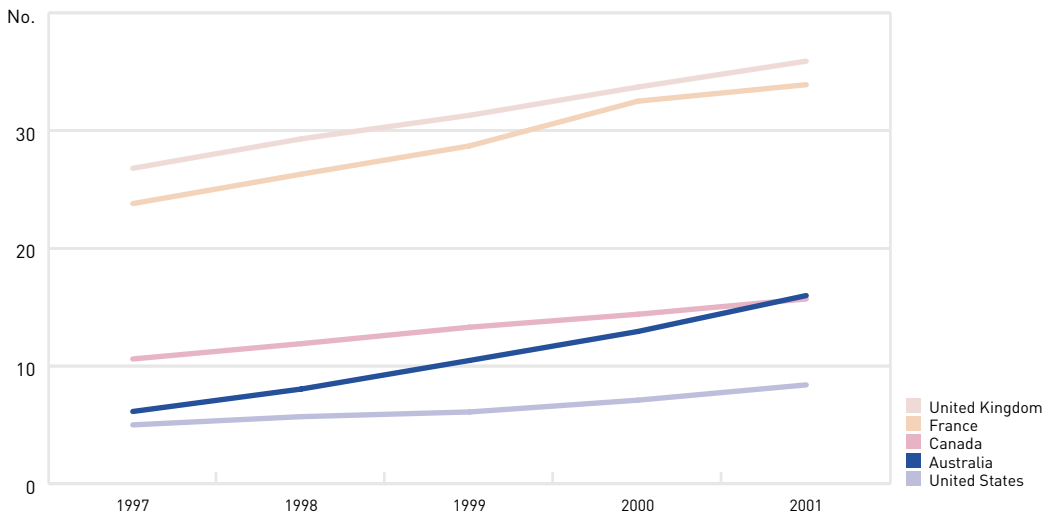
Sources: Australian Bureau of Statistics; Australian Payments Clearing Association; Bank for International Settlements.

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.

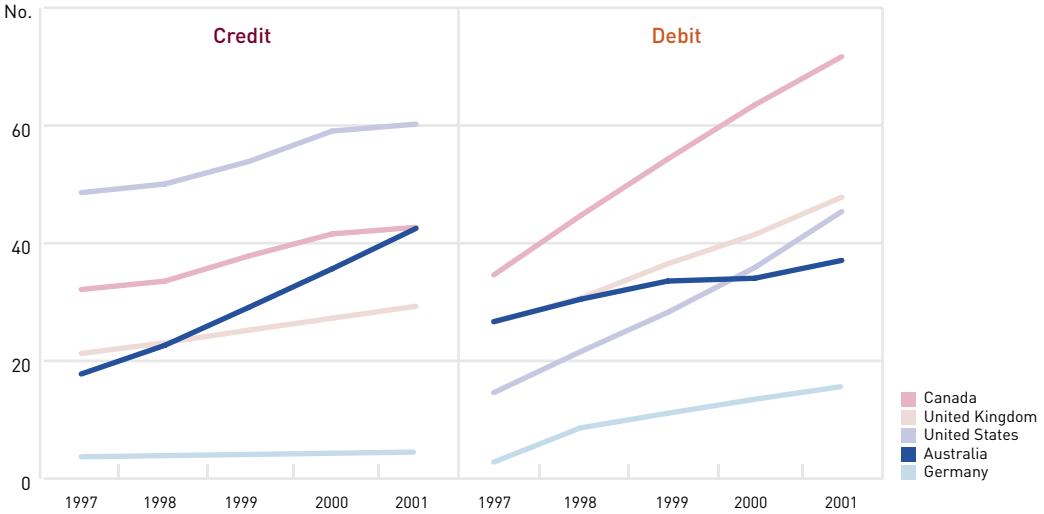
Card-based payments have also grown strongly in most countries. In most cases, debit card payments have grown much more rapidly than credit card payments. But in Australia growth in debit card transactions has been slower than for credit cards. Although some countries have been observing strong growth 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.