



RESERVE  
BANK  
*of*  
AUSTRALIA

PAYMENTS SYSTEM BOARD

ANNUAL REPORT 2008

*Reserve Bank*

## Payments System Board

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

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

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# PAYMENTS SYSTEM BOARD

ANNUAL REPORT 2008

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*Reserve Bank*



# Functions and Objectives of the Payments System Board

The responsibilities of the Payments System Board are set out in the *Reserve Bank Act 1959*. In particular, the Act requires the Board to determine the Reserve Bank's payments system policy so as to 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.

In order to give effect to these responsibilities, the Bank has powers that are set out in two Acts: the *Payment Systems (Regulation) Act 1998* and the *Payment Systems and Netting Act 1998*.

Under the *Payment Systems (Regulation) Act* the Bank has the power to designate payment systems and to set standards and access regimes in designated systems. The Act also sets out the matters that the Bank must take into account when using these powers. The *Payment Systems and Netting Act* provides the Bank with the power to give legal certainty to certain settlement arrangements so as to ensure that risks of systemic disruptions from payment systems are minimised.

In addition, the *Reserve Bank Act* gives the Board responsibility for ensuring that clearing and settlement facilities contribute to the stability of the financial system. The relevant powers are set out in the *Corporations Act 2001*, which gives the Bank the power to determine financial stability standards for licensed securities clearing and settlement facilities.

This Report discusses the activities of the Board over the past year, including the Board's reviews of the recent reforms to retail payment systems and of settlement practices in the equity market.

# Governance

## Composition of the Payments System Board

The Payments System Board comprises the Governor, who is Chairman, one representative of the Bank appointed by the Governor, one representative of the Australian Prudential Regulation Authority (APRA) appointed by APRA and up to five other members appointed by the Treasurer for terms up to five years. Details of the current members are set out on page 5. Five members form a quorum at a meeting of the Board.

## Meetings of the Payments System Board

The *Reserve Bank Act 1959* does not stipulate the frequency of Board meetings. Since its inception, the Board's practice has been to meet at least four times a year, and more often as needed; there were five meetings in 2007/08 (Table 1).

**Table 1: Number of Meetings Attended by Each Member in 2007/08<sup>(a)</sup>**

Glenn Stevens	5	(5)
Philip Lowe	5	(5)
John Laker	5	(5)
Joe Gersh	5	(5)
Robert McLean	5	(5)
John Poynton	5	(5)
Catherine Walter <sup>(b)</sup>	4	(4)

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

(b) Catherine Walter was appointed to the Board on 3 September 2007.

## Conduct of Payments System Board Members

On appointment to the Board, each member is required under the *Reserve Bank Act 1959* to sign a declaration to maintain secrecy in relation to the affairs of the Board and the Bank. Further, members must by law meet the general obligations of directors of statutory authorities, as set out in the *Commonwealth Authorities and Companies Act 1997* (CAC Act). The CAC Act sets standards of conduct

for directors and officers of Commonwealth authorities, with many of these requirements being modelled on comparable areas of the Corporations law. As such, members of the Payments System Board must:

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

## **Remuneration**

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

## **Indemnities**

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

# Payments System Board | August 2008



Members of the Payments System Board as at August 2008. From left to right, John Poynton, Philip Lowe, John Laker, Catherine Walter, Glenn Stevens (Chairman), Robert McLean and Joe Gersh.



**Glenn Stevens (Chairman)**

Chairman since 18 September 2006  
Present term ends 17 September 2013

Governor – Reserve Bank of Australia  
Chairman – Council of Financial Regulators

**Philip Lowe (Deputy Chairman)**

Deputy Chairman since 8 March 2004

Assistant Governor (Financial System)  
– Reserve Bank of Australia

**John Laker AO**

Chairman – Australian Prudential Regulation  
Authority  
Member since 24 July 1998

**Joe Gersh AM**

Member since 15 July 1998  
Present term ends 14 July 2013

Executive Chairman – Gersh Investment  
Partners Ltd  
Chairman – Australian Reinsurance Pool  
Corporation

**Robert McLean**

Member since 29 November 2006  
Present term ends 28 November 2011

Chairman – Elders Australia Limited  
Chairman – Greenway Capital Limited  
Chairman – Imagination Entertainment  
Limited

**John Poynton AM**

Member since 26 May 2000  
Present term ends 24 May 2010

Executive Chairman – Azure Capital Pty Ltd

**Catherine Walter AM**

Member since 3 September 2007  
Present term ends 2 September 2012

Chairman – Australian Synchrotron  
Chairman – Equipsuper Pty Ltd  
Director – Australian Foundation Investment  
Company  
Director – James Hardie Industries NV  
Director – Melbourne Business School  
Director – Orica Limited  
Member – Financial Reporting Council

**Susan McCarthy**

The term of Ms McCarthy, a foundation  
member of the Board, ended on 14 July 2007.

# Developments in the Payments System

The Board continues to monitor developments in payment systems, both domestically and internationally. The past year has seen a continuation of many of the trends noted in the Board's Annual Reports of recent years, including strong growth in debit card use, declining cheque use and increased electronic crediting and debiting of accounts. In addition, fraud rates remain low overall, although they have risen in some areas. Another notable feature over the past year has been a steady increase in the extent of surcharging for credit card transactions. Payments processed through the high-value real-time gross settlement (RTGS) system continued the steady increase seen over previous years.

## Trends in Retail Payments Use

### Cash payments

As part of its review of the payments system reforms over the past year, the Reserve Bank undertook a major study into how individuals make payments. A central element of this study was a survey of how around 600 individuals paid for goods and services over a two-week period in June 2007. The results of this survey were published in *Household Payment Patterns in Australia* in April 2008.<sup>1</sup>

**Table 2: Payment Methods – Survey Results**  
Per cent

	Share of number	Share of value
Cash	70	38
EFTPOS	11	14
MasterCard/Visa debit card	4	6
MasterCard/Visa credit card	9	17
American Express/ Diners Club card	1	2
Petrol/Store card	*	*
Cheque	1	9
BPAY	2	9
Other <sup>(a)</sup>	1	3

\* Less than 0.5 per cent.  
 (a) 'Other' payment methods include, amongst others, money orders and Cabcharge payments.  
 Source: Roy Morgan Research

A particular focus of the study was the use of cash as, unlike most other payment instruments, there are no comprehensive statistics on the use of cash to make payments. The study found that despite the very strong growth in the use of electronic payment methods over recent years, cash remains the most widely used payment method, accounting for around 70 per cent of all consumer payments (Table 2). It is particularly important for small transactions, accounting for nearly all payments under \$10 and close to 90 per cent of transactions under \$25. In part, this reflects the fact that the tender time for small cash transactions is considerably shorter than for other forms of payment, allowing

<sup>1</sup> Reserve Bank of Australia, Payments System Review Conference, April 2008.

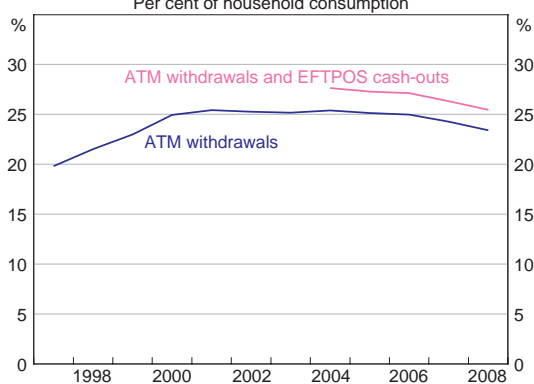
transactions to be completed more quickly. In addition, cash is anonymous, is accepted almost universally for point-of-sale transactions, and some merchants impose minimum transaction values for card payments. Not surprisingly, the use of cash is highest in industries where transaction sizes tend to be small; for example, in the take-away food sector cash accounts for around 95 per cent of the number of transactions.

The survey also provided some insights into how consumers obtain cash. Around 65 per cent of both the number and value of withdrawals are from ATMs, while EFTPOS cash-outs make up around 20 per cent of the number of withdrawals, but only ten per cent of the value. Over-the-counter withdrawals are relatively uncommon but, on average, are for relatively large amounts and account for around 20 per cent of the value of withdrawals. The average value of withdrawals from all sources is around \$180, which supports around seven cash payments.

Assessing how the use of cash has changed over time is difficult because of the lack of time-series data on its use. One guide though is data on the aggregate value of ATM withdrawals and EFTPOS cash-outs. These data show a decline in the value of withdrawals relative to household consumption over the past couple of years, suggesting that individuals are substituting electronic forms of payment for cash (Graph 1).

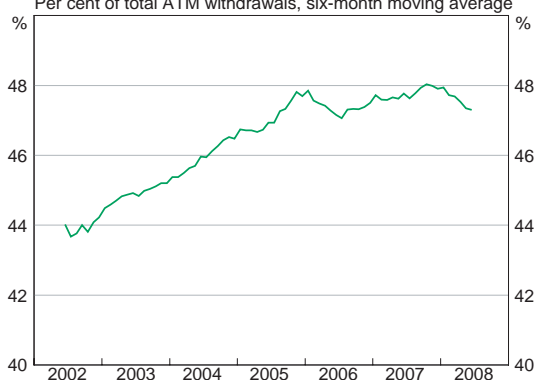
In absolute terms, the number of ATM withdrawals rose by around three per cent in 2007/08, while EFTPOS cash-outs increased by six per cent. The proportion of these ATM withdrawals conducted at ‘foreign’ ATMs fell slightly in the first half of 2008, reflecting increases in ‘foreign’ fees charged by some banks (see ‘Pricing to cardholders’ later in this chapter), but remains close to its average of recent years (Graph 2).<sup>2</sup> In June 2008 there were 25 650 ATMs in Australia, up 9 per cent on 3 years ago, and there were 657 500 EFTPOS terminals.<sup>3</sup>

**Graph 1**  
**Debit Card Cash Withdrawals**  
Per cent of household consumption



Sources: ABS; RBA

**Graph 2**  
**‘Foreign’ ATM Withdrawals**  
Per cent of total ATM withdrawals, six-month moving average



Source: RBA

2 A ‘foreign’ ATM is an ATM owned by an institution other than the cardholder’s financial institution.

3 Source: Australian Payments Clearing Association.

## Non-cash payments

Data on the use of non-cash payment methods are available via the Reserve Bank’s ongoing statistics collection. Of these payment methods, debit cards, credit cards and credit transfers made through the direct entry system are the most common forms of payments. Each of these methods accounts for around one-quarter of the total *number* of non-cash payments, although in *value* terms, direct credits make up almost half of total non-cash payments, reflecting the use of this system for many large payments, including salaries. On average, each person made around 250 non-cash payments during the year.

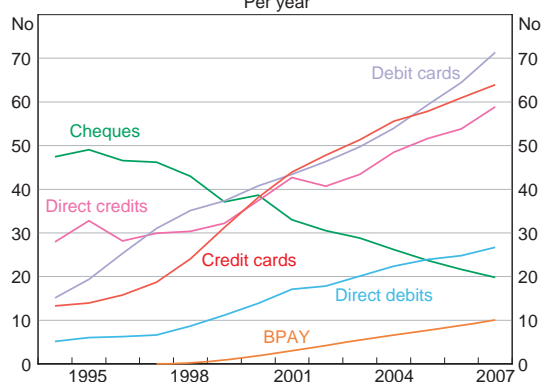
**Table 3: Non-cash Retail Payments**

	2007/08			Growth, 2007/08	
	Per cent of total		Average value (\$)	Per cent	
	Number	Value		Number	Value
Cheques	7.2	12.9	4 525	-8.3	2.6
Direct debits	10.7	35.4	8 355	10.6	14.6
Direct credits*	23.3	48.3	5 218	9.2	13.9
Debit cards	29.5	0.8	69	15.2	15.5
Credit cards*	25.2	1.4	144	6.9	11.4
BPAY	4.1	1.2	709	14.3	19.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>2 522</b>	<b>9.1</b>	<b>12.6</b>

\*Adjusted to remove the double counting of BPAY transactions.  
Sources: BPAY; RBA

**Graph 3**

**Non-cash Payments per Capita\***  
Per year



\*Apart from BPAY, data from 2002 onwards are based on the RBA’s Retail Payments Statistics. Data for earlier years come from APCA and the RBA, and have been adjusted for differences between these sources and the Retail Payments Statistics.  
Sources: ABS; APCA; BPAY; RBA

Overall, non-cash retail payments in Australia rose strongly in 2007/08, as they have for the past decade. The total number of payments increased by 9 per cent, and the total value by 13 per cent (Table 3). The long-term shift towards electronic payment instruments continued, with the number of cheques written per person declining further and use of all electronic payment instruments rising (Graph 3).

The broad trends in Australia are similar to those seen in many other countries. In 1998, cheques accounted for almost half of all non-cash payments in the major countries, but

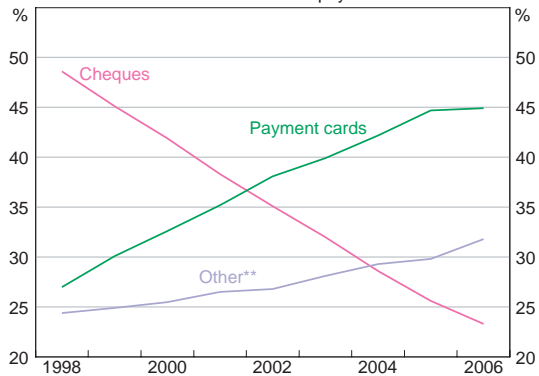
by 2006 this share had fallen to less than a quarter (Graph 4). Conversely, the share of payments using cards has increased rapidly, although there are significant differences across countries in the type of cards that are used (Table 4). Credit cards are heavily used only in a narrow range of countries (including Canada, the United States, Australia and the United Kingdom) whereas the use of debit cards is widespread. One area where developments in Australia have differed, up until recently, from those in many other countries is that credit card use was growing more rapidly than debit card use (Graph5).

For example, over the period from 2000 to 2006, debit card payments per capita in the major countries grew at an annual average rate of 16 per cent, compared to an average increase of 5 per cent for credit cards, whereas in Australia growth in credit card use outpaced that for debit cards. Over the past three years however, this pattern has reversed in Australia, with growth in debit card transactions now faster than that for credit card transactions.

**Graph 4**

**Non-cash Payments - International\***

Per cent of non-cash payments



\* G10 countries, plus Hong Kong and Singapore  
 \*\* Includes direct credit, direct debit and e-money transactions  
 Source: BIS

**Table 4: Non-cash Retail Payments In Selected Countries**

Number per capita, 2006

	Cheques	Direct debits	Direct credits	Debit cards	Credit cards
Australia	22	25	62 *	64	63
Canada	41	20	29	101	66
France	61	43	41	89 **	na
Germany	1	89	88	25	5
Netherlands	0	70	84	89	4
Sweden	<1	22	63	110	22
Switzerland	<1	5	86	39	15
United Kingdom	29	47	51	77	34
United States	102	29	21	87	75

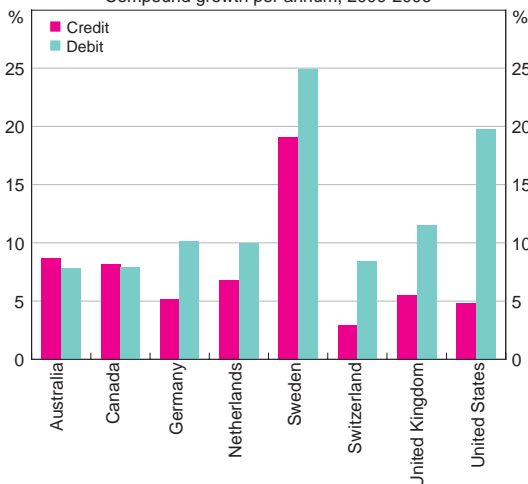
\* Includes BPAY transactions

\*\* Split between debit and credit cards not available

Sources: ABS; BIS; RBA

**Graph 5**

**Credit and Debit Card Payments per Capita**  
Compound growth per annum, 2000-2006



Sources: ABS; APCA; BIS; RBA

### *Card-based payments*

Around 1.6 billion debit card transactions were made in Australia in 2007/08, compared with 1.4 billion credit and charge card transactions. Despite the number of credit and debit card transactions being broadly equivalent, the value of credit card transactions is close to double the value of debit card transactions, reflecting the significantly higher average transaction size of credit card transactions (\$144 compared with \$69).

The study of payment patterns undertaken by the Bank as part of its review of the payments system reforms provides some insights into these patterns. While cards are used less frequently than cash for very small transactions, they account for the majority of consumer payments of between \$50 and \$200, with debit cards tending to be used for lower-value transactions than credit and charge cards. For example, EFTPOS is the most commonly used card-based payment method for payment values up to \$35, and is used about twice as much as credit and charge cards for transaction values under \$25. In contrast, credit and charge cards are used more often for higher-value transactions, partly reflecting daily transaction limits – typically of \$800 or \$1 000 – for EFTPOS.

Use of EFTPOS is skewed towards supermarkets and petrol stations; these two categories account for 40 per cent of EFTPOS transactions and 32 per cent of EFTPOS values. On the other hand, credit cards tend to be used more heavily in sectors with relatively high transaction sizes and where payments do not take place at the point of sale. These include the ‘housing and utilities’, and ‘travel and accommodation’ merchant categories.

Card use also differs according to the age group and income level of the cardholder, and whether the cardholder tends to pay off his/her credit card balance each month (a transactor) or carry a balance from one month to the next (a revolver). In general, the use of EFTPOS relative to credit cards declines with age and income; and transactors tend to use their credit card more frequently than revolvers – reflecting the fact that revolvers incur an interest charge immediately on an additional purchase.

In total, the number of card-based payments in Australia increased by 11 per cent in 2007/08. Debit card payments grew significantly faster than credit card payments, increasing by 15 per cent, compared with seven per cent for credit card payments (Graph 6). The difference was less marked in value terms; debit card payments increased by 15 per cent, while the value of credit card payments increased by 11 per cent. The average size of a credit card payment rose by \$5

in 2007/08, while the average size of a debit card payment was little changed. Since 2003, the average debit card transaction has increased by only three dollars, while the average credit card transaction has increased by around \$20.

The increase in the number of credit card transactions in the past year partly reflects the five per cent increase in the number of credit card accounts. Balances outstanding on credit and charge cards rose by 10 per cent, with an average balance of \$3 139 in June 2008, up from \$3 014 in June 2007. The proportion

of total balances accruing interest remained around its long-run average of 72 per cent. The number of debit card accounts increased by four per cent over the year.

One driver of the recent growth in debit card use is the increased promotion of scheme debit cards by a number of banks. A scheme debit card draws funds from a deposit account held at a financial institution, much the same as an EFTPOS card, but does so through the networks owned by the international card schemes. Scheme debit cardholders are able to not only make payments at the point of sale but also in card-not-present environments (such as online purchases) as they would with a credit card, but using their own funds.

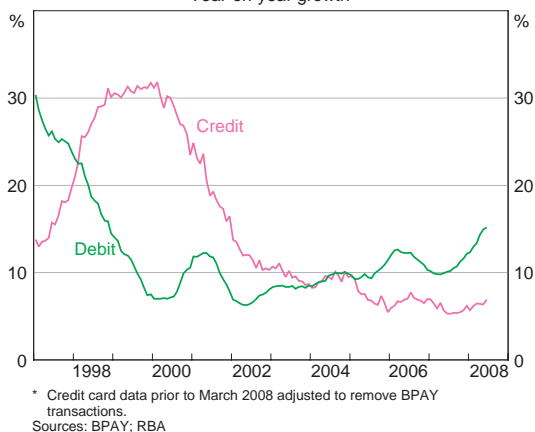
The Bank has recently amended its statistics collection to better reflect developments in the debit card market. Existing data do not allow for separate identification of EFTPOS and scheme debit transactions; new data are being collected on the number of scheme debit cards on issue and the split of debit card payments between those processed through the EFTPOS network and those processed through scheme networks. Preliminary data suggest that scheme debit accounts for around one-fifth of the value of debit card payments and a somewhat smaller proportion of the number of debit card payments. The Bank will begin publishing these new data during the coming year once validation and quality control checks have been passed. The Bank has also amended its statistics collection to capture EFTPOS deposit transactions once they are introduced.

### *Other electronic payments*

Direct entry payments continued to grow strongly in 2007/08. Direct debits and direct credits each grew by around 10 per cent in number and around 14 per cent in value.

The average values of direct entry payments are higher than the average values of other non-cash retail payments. In 2007/08, the average value of a direct debit was \$8 355 and the average value of a direct credit was \$5 218. Direct credits are typically used for payments such as salary, rent, social security and tax refunds, while direct debits are used for mortgage repayments and

**Graph 6**  
**Number of Card Payments\***  
Year-on-year growth



regular bill payments. Many service providers, particularly those in the telecommunications, internet and pay-television industries, now stipulate payment by direct debit as a condition of standard contracts, while others encourage its use via their fee structures. The consumer survey found that more than 60 per cent of respondents had a direct debit from a deposit account during the two-week survey period.

An alternative to direct debit for electronic bill payments is BPAY, with BPAY payments accounting for around four per cent of the number of non-cash retail payments, but only one per cent of the value. Growth in BPAY payments has been stronger than most other payment instruments, with the number increasing by 14 per cent, and the value by 20 per cent, over 2007/08. The average BPAY payment was \$709, up from \$676 in 2006/07. This is higher than the average value of card payments but significantly lower than the average value of direct entry payments. Use of BPAY tends to be concentrated in a small number of merchant categories for which payments are typically large and infrequent. These include housing and utilities, and insurance payments, as well as payments of taxes and fines.

### *Cheques*

While the use of all forms of electronic payments continues to increase, the number of cheque transactions has declined steadily over the past decade, with cheques currently accounting for 7 per cent of the number and 13 per cent of the value of non-cash payments. Consumers tend to use cheques more frequently to pay for services and utilities than for goods purchased at retailers; the survey of the use of payment instruments suggested that around 13 per cent of payments for professional services are made by cheque. In 2007/08 cheque payments decreased by eight per cent, although their value increased by three per cent.

## **Other Retail Payments Developments**

### **Fraud**

Fraud rates on payment instruments in Australia remained relatively low in 2007 compared with rates overseas. Credit and charge cards continue to be more prone to fraud than proprietary debit cards (EFTPOS/ATM cards) and cheques. In 2007, the fraud rate on credit and charge cards was around 44 cents for each \$1 000 transacted (0.044 per cent), compared with the proprietary debit card and cheque fraud rates of around seven cents and one cent, respectively, for each \$1 000 transacted (Graph 7). The substantially lower fraud rates for proprietary debit cards than for credit and charge cards primarily reflects the extra security of PIN (rather than a signature) authorisation of proprietary debit card transactions and the fact that these cards cannot be used when the card is not present (i.e. over the internet, phone, mail and fax).

The fraud rate for Australian-issued credit and charge cards increased considerably from around 37 cents for each \$1 000 transacted in 2006 to the current level of 44 cents per \$1 000 transacted. This increase is mainly attributable to a rise in fraud related to card-not-present transactions.

Taking debit and credit cards together, the weighted-average fraud rate was 28 cents for each \$1 000 transacted during 2007, compared with 24 cents during 2006. Despite the increase, this fraud rate remains relatively low by international standards; for example, it is less than one third



of that experienced in the United Kingdom over the same period where high card-not-present fraud was experienced in conjunction with the introduction of chip and PIN security for point-of-sale transactions.

In addition to the increase in fraud on Australian-issued cards, there has been an increase in fraud in Australia on cards issued overseas, primarily due to an increase in counterfeiting and skimming (the use of altered or illegally reproduced cards) and an increase in fraud on transactions where the card is

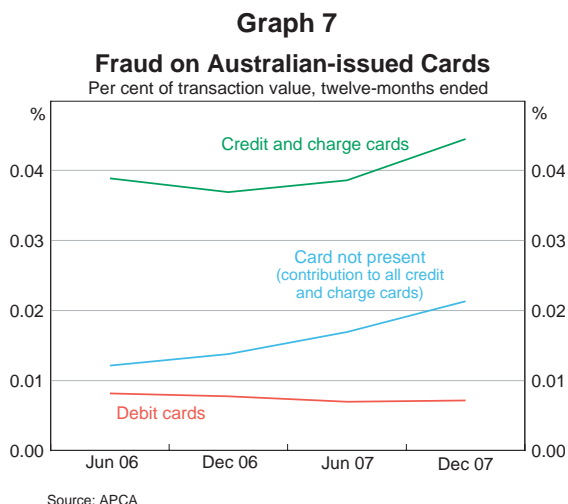
not present. The introduction of chip and PIN in some countries has meant that fraudsters are increasingly being driven to countries that have not yet implemented this technology; for example, following migration to chip and PIN in the United Kingdom, there has been an increase in fraud committed in Australia on UK-issued cards. In contrast, there has been a decline in fraud committed on UK-issued cards in countries that have migrated to chip and PIN.<sup>4</sup>

In Australia, some steps have been taken in this direction. Over the past year, the card schemes have provided financial incentives to issuers and acquirers to upgrade to chip in the form of differential interchange rates. In addition, from 4 June 2008, cardholders in Australia have been given the option of authorising scheme debit and credit card transactions at point of sale by entering a PIN rather than signing the receipt. By providing the option of authorising by PIN, the new arrangements are intended to reduce fraud for point-of-sale transactions and may also lower tender times.

Instances of cheque fraud in Australia remain low, with around 1 600 occurrences in 2007 compared with around 2 400 in 2006, although when fraud does occur it tends to be for high values; in 2007, cheque fraud averaged around \$9 200 for each fraud, compared with an average of around \$340 for each card fraud.

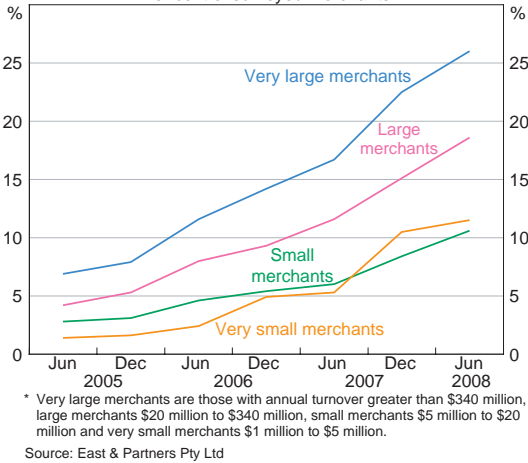
## Surcharging

One of the Board's objectives has been to improve the price signals that consumers face when making payments. One important element of the reforms has therefore been the removal of the schemes' no-surcharge rules and the Board has closely monitored the extent of surcharging. According to data from East & Partners' half-yearly survey of the merchant acquiring business, surcharging continues to increase, although the majority of merchants still do not surcharge (Graph 8). Surcharging is most common among very large merchants, with around 26 per cent of merchants with annual turnover in excess of \$340 million placing a surcharge on at least one



4 APACS, Fraud – The Facts 2008, April 2008.

**Graph 8**  
**Merchants Surcharging Credit Cards\***  
 Per cent of surveyed merchants



of the cards they accept.<sup>5</sup> The survey suggests that the fear of losing customers is the main reason merchants do not surcharge, but some merchants also cite administrative or technological difficulties.

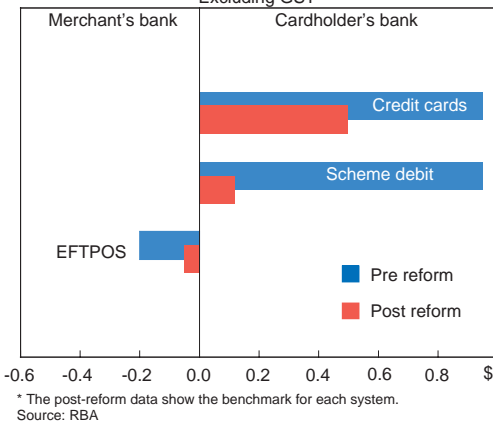
The surcharge on a particular card generally tends to be set around the level of the merchant service fee paid for that card, although some merchants apply a single surcharge to all of the cards they accept. Surcharges on American Express and Diners Club cards are around 2 per cent on average, while those on MasterCard and Visa cards are around 1 per cent on average.

## Interchange fees

The Board's reforms to interchange arrangements have resulted in lower interchange fees and a smaller differential between the fees in the various systems (Graph 9). Interchange fees for credit card transactions have halved since 2003 while those on scheme debit have fallen by considerably more.

Furthermore, the difference in interchange fees between the EFTPOS and scheme debit systems has declined from around \$1.15 on a \$100 transaction prior to the reforms to around \$0.17 currently.

**Graph 9**  
**Interchange Fees on a \$100 Payment\***  
 Excluding GST



As discussed in last year's Annual Report, MasterCard and Visa introduced new interchange categories and reset their interchange fees in 2006/07. Under the new structures, the interchange fee paid depends on a number of factors, including: the nature of the account (consumer/commercial/premium);

the merchant industry (government/charity/petroleum); and the card type (chip enabled). Lower interchange fees were also introduced for micropayments and high-volume merchants (Table 5). Neither scheme changed interchange categories and fees during 2007/08.

<sup>5</sup> East & Partners, Australian Merchant Acquiring and Cards Markets: Special question placement report prepared for the Reserve Bank of Australia, June 2008.

**Table 5: Interchange Fees**

As at June 2008, excluding GST

	Credit card		Debit card	
	MasterCard	Visa	MasterCard	Visa
Consumer standard	0.43%	0.55%	36.4¢	0.31%
Consumer electronic	0.43%	0.40%	9.1¢	8.0¢
Consumer chip	0.63%	0.50%	13.6¢	–
Commercial	1.15%	1.15%	36.4¢	–
Commercial chip	1.35%	–	40.9¢	–
Premium	0.95%	0.90%	–	–
Premium chip	1.15%	1.00%	–	–
VMAP*	–	0.30%	–	–
Tiered merchants	0.34%	–	3.6¢	–
Petroleum	0.34%	–	9.1¢	–
Government and utility				
– electronic	0.30%	30.0¢	29.1¢	8.0¢
– standard	0.30%	74.0¢	29.1¢	37.0¢
Micropayment	–	2.5¢	0.50%	2.5¢
Charity	0.00%	0.00%	0.00%	0.00%
Recurring payments	0.30%	0.40%	9.1¢	8.0¢
Quick/express payments	0.30%	0.40%	0.50%	8.0¢
Electronic incentive	–	–	–	4.0¢
<b>Benchmark</b>	<b>0.50%</b>	<b>0.50%</b>	<b>12.0¢</b>	<b>12.0¢</b>

\* Visa Merchant Alliance Program  
Sources: MasterCard website; RBA; Visa website

In 2006/07 the schemes also increased the categories of interchange fees on scheme debit products. There is a mix of flat per transaction fees and percentage fees and some variation in interchange fees for a similar transaction between schemes (Table 5).

An interchange benchmark for EFTPOS transactions was established in 2006, at between four cents and five cents for a purchase-only EFTPOS transaction – flowing from the issuer to the acquirer. Actual interchange fees are negotiated bilaterally between participants. Previous liaison has suggested that the interchange fee for transactions involving a cash-out component has in some cases fallen in line with the benchmark for purchase-only transactions, while in others the fee has remained around, or slightly higher than, the pre-regulated rate of 20 cents per transaction paid to the acquirer.

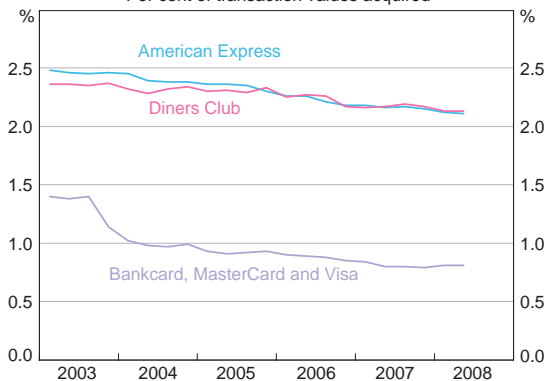
### Merchant service fees

The average merchant service fee for the regulated four-party schemes was unchanged over 2007/08, after having fallen a total of 0.59 percentage points since the reforms were introduced in 2003 (Graph 10). This decline has been larger than that in interchange fees so that the margin between merchant service fees and interchange fees has fallen considerably (Graph 11). There is also some evidence that the modifications to the honour-all-cards rules for MasterCard and

**Graph 10**

**Merchant Service Fees**

Per cent of transaction values acquired

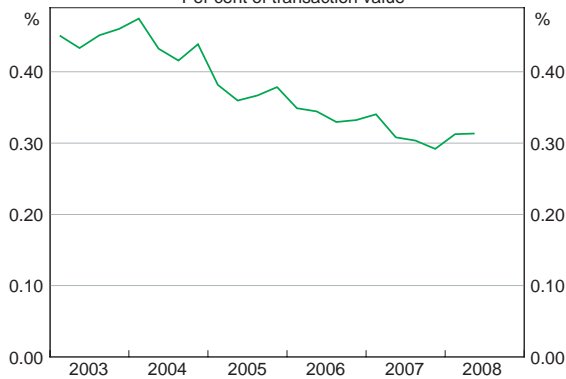


Source: RBA

**Graph 11**

**Credit Card Merchant Service Fee Margin Over Interchange Fee**

Per cent of transaction value

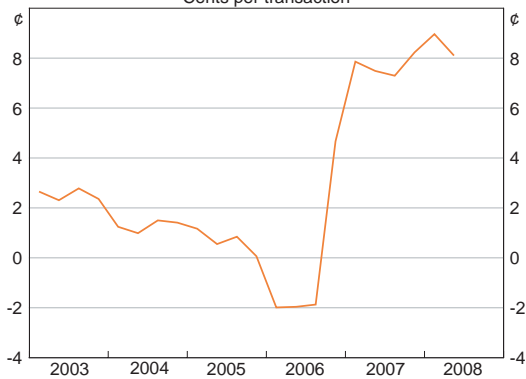


Source: RBA

**Graph 12**

**EFTPOS Merchant Service Fees**

Cents per transaction



Source: RBA

Visa have helped some merchants negotiate lower fees on scheme debit transactions.

American Express and Diners Club have seen a modest further reduction in their average merchant service fees. The average fee fell 0.06 percentage points during 2007/08 to 2.11 per cent, some 0.32 percentage points below the average merchant service fee prior to the reforms.

The aggregate net savings to merchants over 2007/08 from declines in merchant fees across all four schemes since the reforms were introduced is estimated at \$1.1 billion. Equivalently, this represents a reduction in costs for merchants of around 72 cents per credit or charge card transaction over the period.

In the EFTPOS system, interchange fees flow from the issuer to the acquirer – the opposite direction to scheme products. As a consequence, the Board’s reforms to reduce interchange fees have led to higher, rather than lower, merchant service fees. Average merchant service fees for the EFTPOS system increased modestly in 2007/08 after increasing by 9.3 cents in the previous year (Graph 12). Nonetheless, increased competition in the acquiring market has reduced the margin between interchange fees and the merchant service fee over time (Graph 13). Since 2005, this margin has fallen by around seven cents per transaction.

One factor affecting the acquiring market is the ability of large merchants to effectively

bypass acquirers. In 2007/08 a second major retailer launched its own switch, allowing it to send transactions directly to major issuers, and hence bypass the scheme networks for a substantial proportion of transactions.

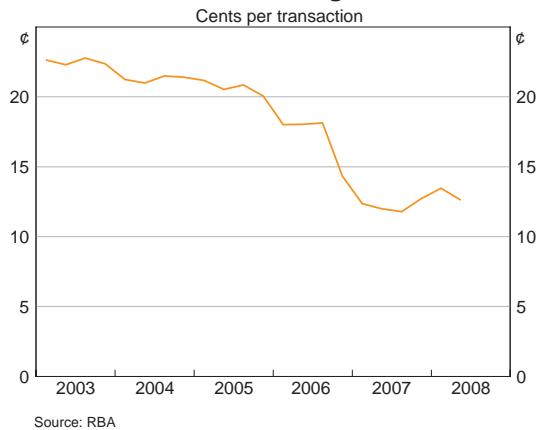
### Pricing to cardholders

The average annual fees on both standard and gold credit cards at the largest banks were unchanged in 2007/08 at \$85 and \$140 respectively (Graph 14).

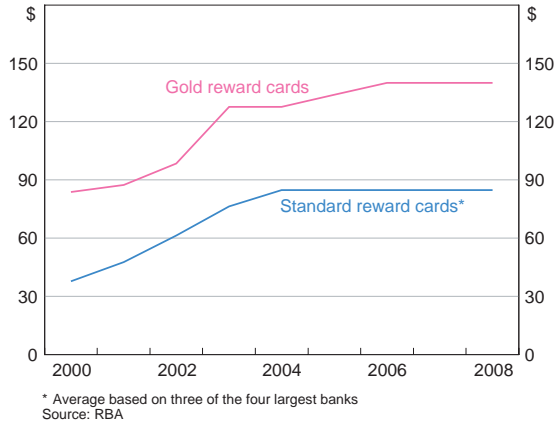
The decline in the value of reward points has continued over the past year, albeit at a slower rate than in previous years. A useful benchmark for comparing reward programs is the spending required to obtain a \$100 shopping voucher. For a MasterCard or Visa credit card issued by one of the four largest banks, a cardholder needs to spend, on average, around \$16 700 to obtain a \$100 voucher, up from \$16 300 in 2007, and \$12 400 in 2003 (Table 6). Caps on the number of points that a cardholder can earn during a given period have also been introduced by some issuers.

Interest rates on credit cards rose substantially over 2007/08, reflecting, in part, a rise in the Reserve Bank's target cash rate and tighter funding conditions more generally (Graph 15). The average interest rate spread to the cash rate on standard credit cards rose by 70 basis points to 12.25 percentage points. Interest rate spreads on low-rate cards rose by 50 basis points on average, reversing the downward trend of

**Graph 13**  
EFTPOS Merchant Service Fee Margin  
Over Interchange Fee



**Graph 14**  
Credit Card Annual Fees  
Average of four largest banks

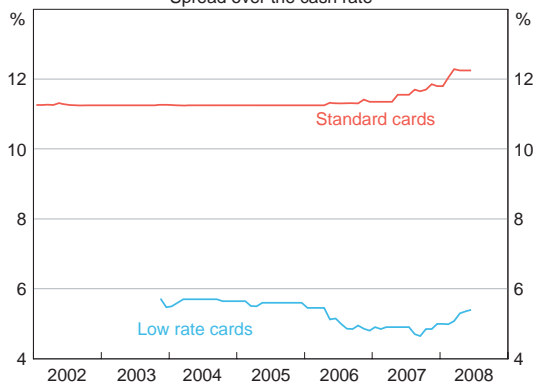


**Table 6: Credit Card Rewards Programs**  
Four largest banks, June 2008

	Average spending required for \$100 voucher	Benefit to cardholder as a proportion of spending (%)
2003	\$12 400	0.81
2004	\$14 400	0.69
2005	\$15 100	0.66
2006	\$16 000	0.63
2007	\$16 300	0.61
2008	\$16 700	0.60

Sources: Banks' websites; Cannex

**Graph 15**  
**Credit Card Interest Rates**  
 Spread over the cash rate



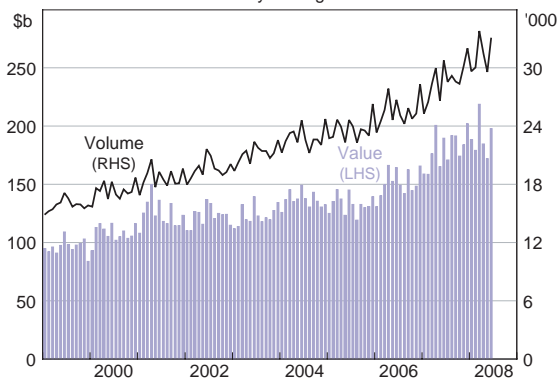
Source: RBA

BPAY and direct entry transactions, for a fixed account-keeping fee of around \$4-\$6 per month. However, the fees that banks charge their customers to use an ATM not deployed by that bank rose over 2007/08, with all of the largest banks now charging \$2. It is anticipated that there will be significant change to the way that banks and ATM deployers charge customers for ATM transactions following the introduction of ATM industry reforms in March 2009. Further details on these reforms are provided in the chapter ‘Other Regulatory Responsibilities’.

## High-value Payment Systems

Over 2007/08, the number of transactions settled across the RTGS system rose by around 14 per cent, while the value increased by 16 per cent. On average, over 30 000 transactions settled per day over this period, with a value of around \$194 billion (Graph 16). On the peak value day in 2007/08, around 47 000 RTGS transactions were processed with a total value of \$312 billion.

**Graph 16**  
**RTGS Transactions**  
 Daily average



Source: RBA

recent years. Despite this rise, the average interest rate spread on low-rate cards, at 5.4 percentage points, was still below the levels seen when these cards were first introduced and less than half the average interest rate spread on standard credit cards.

The pricing of EFTPOS transactions to cardholders has not changed significantly over the past year, as ‘all you can eat’ transaction accounts remain the standard pricing model for many banks. These accounts come with an unlimited number of electronic transactions, including EFTPOS, own ATM,

Although specifically designed as a system for the settlement of large-value payments, a significant number of small-to-medium sized payments are settled in the RTGS system, with the number of such payments growing strongly over recent years. The number of payments over \$1 million has, until the 2007/08

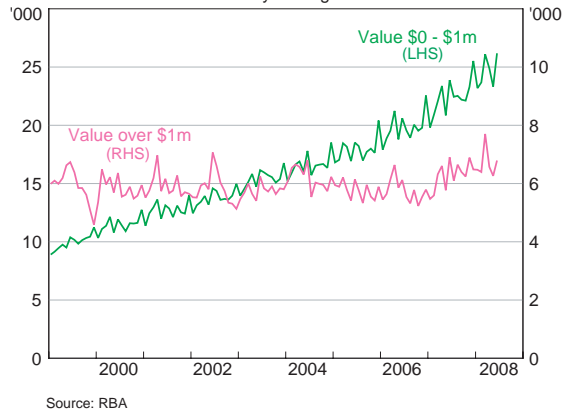
period, remained fairly constant (Graph 17). The more recent growth in this category of payments appears to have been driven by banks' customer payments, of which the number over \$1 million rose by 21 per cent over the year.

Around 90 per cent of the value of interbank settlements takes place through the RTGS system, with the remainder occurring on a deferred net basis. Around 70 per cent of the value of RTGS settlements arises from banks' domestic and correspondent banking customer

payments, including foreign exchange-related payments. The remainder is accounted for by the settlement of transactions in debt securities and money market instruments.

Payments related to equity transactions are settled across Exchange Settlement accounts in a daily net settlement batch: the CHES batch. The average value of participants' cash settlement obligations in this batch in 2007/08 was approximately \$630 million. Similarly, interbank obligations arising from retail payment systems are settled across Exchange Settlement accounts in a batch: the 9am batch. In 2007/08 the average value of participants' obligations in the 9am batch was \$1.7 billion. Due to the effect of multilateral netting, this is significantly less than the total interbank exposures arising from retail payment systems which are typically around five to six times higher than the net.

**Graph 17**  
**Number of RTGS Transactions**  
 Daily average



# Regulation of Card Payment Systems

## Review of the Payments System Reforms

Over 2007/08, the Board has spent considerable time undertaking an extensive review of the payments system reforms of recent years. As reported in last year's Annual Report, the review process commenced in May 2007 with the release of an issues paper seeking industry submissions on three interrelated questions:

- what have been the effects of the reforms to date?
- what is the case for ongoing regulation of interchange fees, access arrangements and scheme rules, and what are the practical alternatives to the current regulatory approach? and
- if the current regulatory approach is retained, what changes, if any, should be made to the standards and access regimes?

The Bank received 27 submissions in response to the Issues Paper and 20 parties took up the invitation to discuss their submissions with the Bank. The Bank also held a significant number of other meetings to discuss the reforms, including with industry participants, associations and consumer groups.

In addition to its bilateral consultation with interested parties, the Bank held an industry conference in November 2007 to discuss the reforms, with the conference being co-hosted with the Centre for Business and Public Policy at the Melbourne Business School. In total, around 90 people participated including all members of the Board.

Following the conference, the Board considered all the submissions and information made available to it and, in April 2008, released *Reform of Australia's Payments System: Preliminary Conclusions of the 2007/08 Review* (Preliminary Conclusions). Submissions in response to the Preliminary Conclusions were received in June 2008 and have been considered by the Board, which expects to release its final conclusions in late September.

## Costs and payment patterns

A major consideration in the Reserve Bank's original decision to regulate credit card interchange fees was that, for many cardholders, the effective marginal price of a credit card transaction was much less than the effective price of an EFTPOS transaction, despite the EFTPOS system having lower underlying resource costs. As part of the Review, both the Reserve Bank and a number of industry participants considered it important that the differences in costs between the two systems be re-examined. In addition, given the wide-ranging nature of the Review, it was also thought appropriate to examine the costs associated with a range of other payment methods, most importantly cash.

Over 2007, the Bank worked with financial institutions and merchants to construct new and more detailed measures of the cost of various payment instruments. The new cost study confirmed the earlier findings on payment instrument costs. In particular, the resource costs



involved in credit card transactions are significantly higher than for EFTPOS transactions, even after excluding those costs associated with the credit function. Furthermore, cash was found to be the lowest-cost payment method for the low-value transactions for which it is generally used.

Another consideration in the Reserve Bank's original decision was the assessment that, in many situations, credit and debit cards are close substitutes for one another and that, as a result, price signals to consumers could have a significant influence on payment patterns. It has also been noted that for many payments, cash is a ready substitute for card-based payments. Given the limited existing information on how various payment methods are used, the Bank, as a further input into the Review, undertook an extensive study of how individuals make their payments.

### **Payments System Review Conference**

The Payments System Review Conference, held on 29 November 2007, supplemented the Bank's normal consultation processes by providing an open forum in which the reforms could be discussed by industry participants with the members of the Payments System Board. The Bank's findings from its studies of the cost and use of payment instruments were also presented at the conference.

The conference was in two parts. The first part comprised commissioned papers which together examined three key issues for the Review:

- (i) lessons from the recent academic literature on payment networks, in particular about the appropriate configuration of interchange fees across payment systems;
- (ii) the extent to which changes in scheme rules and other aspects of card payment systems might add to competitive forces acting on interchange fees, and how such changes might affect the case for regulation; and
- (iii) the costs of the main payment methods (including cash) in Australia and the way in which these various payment methods are used by individuals.

The second part of the conference took the form of two open forums, moderated by Professor Ian Harper of the Melbourne Business School, discussing interchange fee regulation and access and innovation in the Australian payments system.

On interchange fees, some participants saw a strong case for continued regulation, arguing that the reforms have delivered gains in competition and efficiency, and that these would be lost if regulation was abandoned. Some went further arguing that interchange fees in all payment systems should be abolished by regulation, and that cardholders should not be 'subsidised' by merchants (through interchange fees) when using various payment methods. An alternative perspective was that interchange regulation could be removed given that the competitive environment has changed in recent years, owing to increased transparency and the removal of various restrictions on merchants. It was also argued that the case for allowing the international card schemes to once again set interchange fees would be strengthened by the development of an EFTPOS scheme (to replace the existing bilateral arrangements) and the establishment of a transparent methodology by industry for the setting of interchange fees. Other participants,

however, questioned the practicality of the industry agreeing upon a methodology and no concrete proposals were put forward.

On access and innovation in Australia's payments system, some participants argued that the Bank's regulatory intervention in card markets has created uncertainty about the returns from investment, thereby inhibiting innovation. In particular, the Bank's credit card interchange fee reductions were claimed to have delayed or prevented desirable innovations by reducing the revenue stream to issuing institutions. Others, however, suggested that lower interchange fees may promote innovation if the bulk of required investment is on the acquiring side, and disputed that the Bank's regulatory actions had been responsible for any reduction in investment in Australia's credit card or EFTPOS systems.

It was also argued that new (and especially small) institutions are often the primary source of innovation in networks and that, by improving access to Australia's card payment systems, the Reserve Bank has enhanced the prospects for development of new products in these systems. Some countered this view by suggesting that the Bank's access reforms have had little practical effect. Others, however, stated that these reforms have been important to their own institutions, and that any stepping back from the full suite of regulations by the Bank would undermine their capacity to compete.

The proceedings of the conference, including all papers and summaries of discussion, are available on the Bank's website, [www.rba.gov.au](http://www.rba.gov.au).

## **Preliminary Conclusions of the Review**

The Preliminary Conclusions of the Review were released in April 2008 with the Board concluding that the reforms had met their main objectives of: improving price signals in the Australian payments system; increasing transparency; improving access; and creating a more soundly-based competitive environment. The Board also concluded that close oversight of retail payment systems will continue to be necessary. To a large extent, this stems from the way in which competition between merchants affects their ability to decline to accept certain payment cards. The competitive environment means that, in aggregate, merchants are likely to be prepared to pay more for credit card acceptance than the benefit they receive. In the past, this distortion has been amplified by various rules that have been imposed on merchants by the schemes.

The Board saw no case for allowing the schemes to re-impose their no-surcharge rules. Similarly, the Board saw no case for allowing the schemes to re-impose their earlier honour-all-cards rules. Indeed, it proposed further changes to scheme rules to ensure that merchants can make independent acceptance decisions about pre-paid cards, and changes that would prohibit merchants being penalised with higher interchange fees if they do not accept all cards of a scheme. In addition, the Board proposed retaining the various access regimes. While access has been improved as a result of the reforms, further improvements are necessary, particularly to those systems based on bilateral contracts. With the current technology in a number of these systems nearing the end of its useful life, the Board encouraged the industry, as a matter of priority, to examine alternative approaches that would address this issue and possibly allow entry on the basis of one connection only.

The Board also concluded that there is a strong case for further improving the transparency of the payments system, in particular, by the publication of average interchange fees and scheme fees. In addition, the Board saw advantages in clarifying the conditions surrounding bypass of scheme switches.

While the Board's preliminary conclusions noted a strong case for ongoing interchange regulation, the Board indicated that it would be prepared to step back from the regulation of these fees if the industry took further steps to improve the competitive environment. In particular, the Board identified changes in three areas that would, in its opinion, further strengthen the competitive environment. These include: changes to the EFTPOS system that would enhance competition; further modifications to the honour-all-cards rule; and greater transparency around scheme fees and average interchange fees.

In the event that steps to improve the competitive environment were not made within a reasonable time, the Board concluded that interchange regulation should continue and that modifications would be made to the current standards. In particular, the Board would consider establishing a common benchmark for interchange fees in the EFTPOS and scheme debit systems of around 5 cents (paid to the issuer) and a further reduction in the credit card interchange fee benchmark to around 0.30 per cent. A number of technical changes to the operation of the interchange standards would also be made.

In response to the Preliminary Conclusions, the Board received 24 submissions and held meetings with 19 parties. There was broad support from financial institutions for the Board's proposal to step back from interchange fee regulation. Many submissions, however, expressed concerns about further modifications to the honour-all-cards rule to allow merchants to make separate acceptance decisions for any scheme card that had a separate interchange fee. Merchants on the other hand continued to argue for no interchange fees and supported further modifications to the honour-all-cards rule.

## **International Regulatory Developments**

In the time since the Bank first introduced its reforms, regulators in a number of other countries have investigated the setting of interchange fees and competition in payment systems more generally. Over 2007/08, notable regulatory developments occurred in Europe and the United States.

On 19 December 2007, the European Commission (EC) announced that it would prohibit multilateral interchange fees on all cross-border payments made using MasterCard consumer credit and debit cards. The decision followed a four-year review that was conducted in response to complaints from EuroCommerce, an association of European retailers. The EC is now reviewing interchange fees in the Visa scheme and those for MasterCard's commercial cards. Visa was granted an exemption for its cross-border interchange fees in 2002 but that exemption expired at the end of 2007.

In its decision on MasterCard, the EC ruled that MasterCard's interchange fees set a floor under merchant service fees which inflates the fees charged to merchants by banks. While noting that, in theory, interchange fees may be helpful in optimising benefits in a network, the EC came to the view that MasterCard's model for setting interchange fees did not achieve this in practice.

In addition, the EC stated that MasterCard has failed to produce any empirical evidence of the benefits from its interchange fees that could balance the negative effects of inflated merchant service fees that flow through to consumers as higher retail prices. MasterCard has appealed to the European Court of First Instance but, until the appeal is concluded, MasterCard has complied with the decision and ceased charging the relevant interchange fees on 30 June 2008.

Another related development in the EC is the commencement of the Single European Payments Area (SEPA) initiative. This initiative requires payments providers to offer solutions that operate throughout the European Union rather than being confined to individual countries as has commonly been the case. The EC is also encouraging the development of a pan-European card system to compete with the offerings of MasterCard and Visa. This is seen as a way of avoiding a decrease in competition that might occur as a result of the SEPA initiative if part of the existing European payment card infrastructure is shut down in favour of using the MasterCard and Visa schemes.

In the United States, interchange fees have been the subject of increased scrutiny. As well as continuing legal actions brought by merchants against MasterCard and Visa, the US Congress has been considering these fees. Proposed legislation affecting the setting of interchange fees was introduced into the US Congress on 6 March 2008. This legislation, known as the *Credit Card Fair Fee Act of 2008*, arose from hearings in July 2007 by the bipartisan House Judiciary Antitrust Taskforce Subcommittee into the fees, policies and practices of the credit card industry. A key concern highlighted in those deliberations was the imbalance of bargaining power in the setting of interchange fees. The legislation would offer immunity from antitrust laws to allow merchants to engage in collective negotiations with banks to reach agreements on the fees and other terms for their participation in electronic card systems. It would also establish a panel of judges that, in the absence of voluntary agreements, would judge which proposal from those offered by parties to the negotiations would be closest to an outcome reached if there were competition in fee setting.

# Oversight of Clearing and Settlement Facilities

Under the *Reserve Bank Act 1959*, the Board is responsible for ensuring that the powers and functions of the Bank to oversee clearing and settlement facilities are ‘exercised in a way that, in the Board’s opinion, will best contribute to the overall stability of the financial system’. The Board undertook two main activities in this area over 2007/08: assessments of the licensed clearing and settlement facilities against the Financial Stability Standards and a review of settlement practices for Australian equities.

## The Financial Stability Standards

Under powers in the *Corporations Act 2001*, the Reserve Bank has oversight responsibility for financial stability and risk issues arising from clearing and settlement (CS) facilities operating in Australia. To meet this responsibility, the Bank determined, in May 2003, Financial Stability Standards for central counterparties and securities settlement facilities.<sup>6</sup> These standards are supplemented by a number of minimum measures the Bank considers relevant for meeting the standards. As part of its obligations under the *Corporations Act*, the Bank conducts a formal annual assessment of how well each licensed CS facility has complied with the standards.

The latest assessment, covering the nine-month period to June 2007, was published in January 2008 (see below).<sup>7</sup> This was the first time that the assessments had been published. It followed a decision by the Board that publication of the report would assist public understanding of the risks in clearing and settlement and the way in which those risks are managed, and would also improve the transparency of the oversight process.

Four licensed CS facilities are currently obliged to meet the Financial Stability Standards:<sup>8</sup>

- The Australian Clearing House (ACH) and SFE Clearing Corporation (SFECC) are obliged to comply with the standard for central counterparties. ACH is the central counterparty for cash equities, warrants and equity-related derivatives traded on the ASX market. SFECC is the central counterparty for derivatives traded on the Sydney Futures Exchange; and
- ASX Settlement and Transfer Corporation (ASTC) and Austraclear are required to meet the standard for securities settlement facilities. ASTC provides the settlement facility for cash equities and warrants traded on the ASX market. Austraclear settles fixed-income securities traded in over-the-counter markets.

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<sup>6</sup> The standard for securities settlement facilities was varied in June 2005.

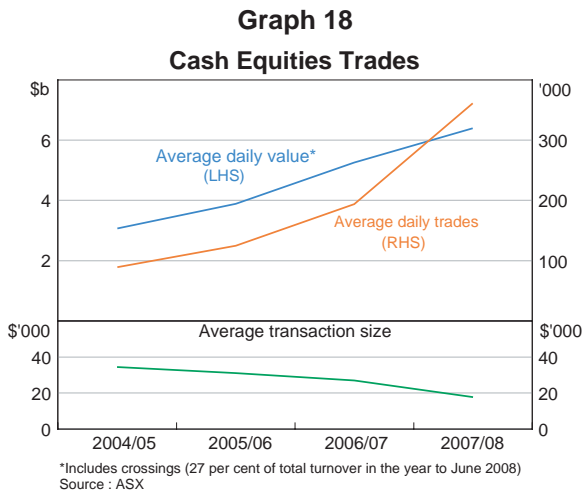
<sup>7</sup> Until September 2006, assessments were carried out with reference to the year ending in September. In 2007, a new assessment timetable was adopted, with the reference year ending in June.

<sup>8</sup> A fifth licensed facility, IMB Limited, falls outside the scope of the Financial Stability Standard for Securities Settlement Facilities due to its small size and the limited nature of its operation.

Since the merger of the Australian Stock Exchange Limited and Sydney Futures Exchange Limited in July 2006, all four facilities have been part of the same corporate group, the Australian Securities Exchange.

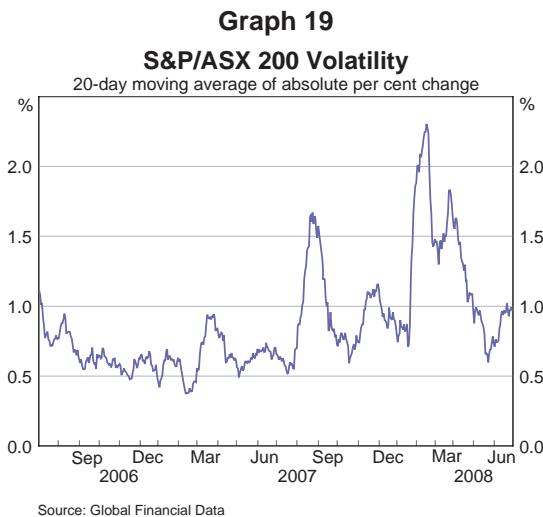
## Developments in the Clearing and Settlement Industry

The past 12 months have seen a substantial increase in volatility and traded volumes in a number of markets served by Australia's clearing and settlement facilities. The most notable growth has been in cash equities volumes, which rose by 86 per cent, outstripping growth of 22 per cent in values traded. Reflecting the faster growth in volumes than values, the average



transaction size has continued to fall (Graph 18). This is partly the result of more widespread application of automated trading strategies and other mechanisms to split large orders and release them gradually into the market.

As traded values have grown, the average settlement value on each side of the daily net CHES settlement batch has also increased, rising by 20 per cent over the year to approximately \$630 million. The peak value of settlements was \$3.7 billion, on 25 September 2007.

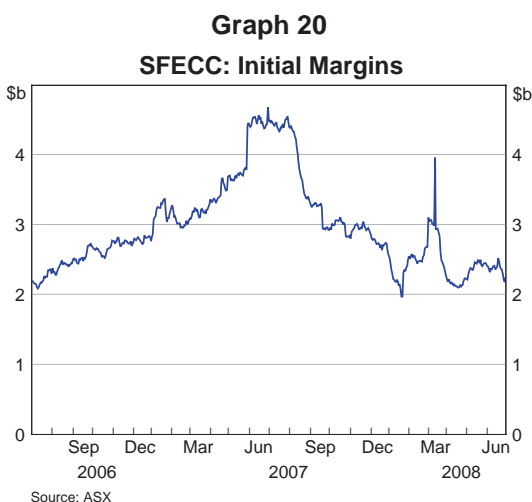


Volumes traded on the ASX derivatives market were broadly flat over the assessment period, although the daily notional value of contracts traded expanded by 18 per cent to \$2.3 billion. Volumes and notional values traded on the much larger SFE market both expanded by around 3 per cent over the period, with daily notional value traded averaging \$152 billion. This was slower than the growth in previous years reflecting, in particular, the scaling back of traders' positions during the first half of 2008 in response to higher market volatility (Graph 19).

The average daily settlement of debt securities through Austraclear, comprising outright purchases and sales of debt securities and repos, also increased significantly over the period, rising by 27 per cent to \$42 billion.

As values traded have risen, exposures faced by the central counterparties, ACH and SFECC, have grown. On average, 73 per cent of cash equities and warrants traded on the ASX market were novated to ACH during the year to June 2008. The resultant exposure faced by ACH can be captured by the sum of participants' settlement obligations to the central counterparty in respect of their trades. ACH's average exposure (over the three-day settlement cycle) rose by 37 per cent over the year, from \$950 million to \$1.3 billion. ACH does not routinely levy margins in respect of participants' cash equity positions, but has recently introduced a regime whereby participants are required to post collateral to cover large exposures.

ACH and SFECC manage the risk associated with participants' derivatives positions partly via the imposition of initial margins. For ASX-traded derivatives, aggregate initial margins held during 2007/08 rose by 44 per cent to an average of almost \$730 million. This reflected both the increase in notional values traded and higher market volatility. On the SFE market, where traders scaled back their positions markedly, initial margins posted to SFECC declined from a peak of \$4.7 billion on 29 June 2007 to between \$2 billion to \$3 billion during most of the first half of 2008 (Graph 20). The average for the year as a whole was approximately \$3 billion, similar to the previous year.



## 2006/07 assessment

During 2007/08, the Bank completed its assessment of the four licensed CS facilities against the Financial Stability Standards for the nine-month period ending June 2007. The Bank concluded that all four licensed facilities met the relevant standards over this period. For the first time, the Bank published its assessment of each of the CS facilities against the relevant standards, a practice that will be continued.<sup>9</sup>

For the two central counterparties in the ASX group, the principal focus during the assessment period was on risk-management capabilities and the adequacy of resources in the event of a participant default. A key consideration in the assessments of these areas is the capital stress-testing regime, the process by which the central counterparties establish the magnitude of risk exposures under alternative extreme but plausible market scenarios. Both ACH and SFECC took steps to enhance their stress-testing capabilities during 2006/07 and have continued to implement improvements in 2007/08.

In June 2007, ACH introduced a new suite of capital stress tests, expanding the range of scenarios considered to include a variety of market-wide, sector-specific and stock-specific

<sup>9</sup> The report is available at:  
[http://www.rba.gov.au/PaymentsSystem/StdClearingSettlement/2006\\_07\\_report\\_clrg\\_settlement\\_facilities.pdf](http://www.rba.gov.au/PaymentsSystem/StdClearingSettlement/2006_07_report_clrg_settlement_facilities.pdf)

scenarios. Further modifications to the scenarios were implemented in 2007/08. The breadth of the new scenarios adds considerable richness to the framework, although the changes also entail a reduction in the magnitude of the extreme upside and downside market-wide stress scenarios. Prior to implementation of the new scenarios, the Bank held extensive discussions with ASX to satisfy itself that the overall revision to the framework remained consistent with the Financial Stability Standard for Central Counterparties. ACH has plans in place to further enhance its risk-management capabilities, including intraday monitoring of positions and further expansion of the range of stress-test scenarios.

Also in June 2007, ACH introduced a framework for liquidity stress testing. The stress-test approach is designed to ensure that ACH has sufficient liquidity to assume a defaulter’s cash equity settlement obligations and close out its outstanding derivatives positions.

During the assessment period, SFECC also consulted with industry participants and the Bank on a new stress-test regime. This new regime was ultimately introduced in two steps after the assessment period; the first in November 2007 and the second in March 2008. The new regime comprises 30 stress-test scenarios, based on a range of individual and composite price changes in the four largest contracts.

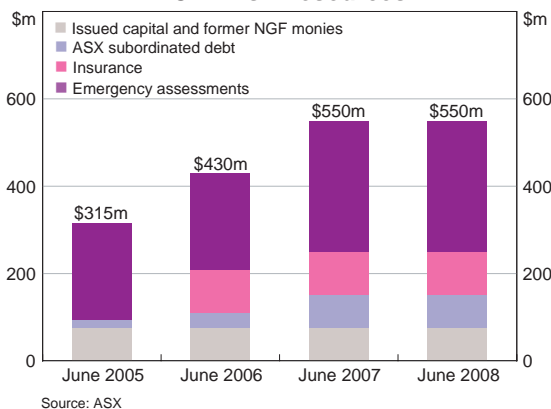
The stress-test outcomes map directly to the calibration of risk resources for the central counterparties with these resources comprising a mix of capital, subordinated debt, participant commitments and insurance. At ACH, stress-test exposures are gauged primarily against those elements of total resources directly held by ACH and readily available to meet obligations arising in the event of a participant default (that is, capital and subordinated debt). Taken together these make up what ACH terms the Risk Resource Requirement (RRR).

As trading activity has increased over recent years, ACH’s total risk resources have grown (Graph 21). In March 2007, ACH increased its RRR to \$150 million (from \$110 million), at the same time raising the total amount payable by participants under ‘emergency assessments’ to \$300 million (from \$220 million). These assessments can be called in the event that clearing losses exceed the sum of the RRR and \$100 million in funds available under a default insurance policy held with a third party. As a further safeguard, ACH began the phased introduction of a scheme

of ‘Contributions and Additional Cover’, whereby participants are required to post cash or collateral in the event that their positions are large enough that projected stress-test losses exceed the RRR.

SFECC has for some time had in place an Additional Initial Margins (AIMs) scheme, which is similar to ACH’s Contributions and Additional Cover Regime. Some modifications have been made to this scheme since the end of the assessment period, with SFECC also substantially

**Graph 21**  
**ACH: Risk Resources**





increasing the size of its pooled risk resources, the Clearing Guarantee Fund. The fund was doubled to \$400 million, via a combination of increases in own capital, participant contributions and default insurance (Graph 22).

Operational performance and capacity were also a key focus for all licensed CS facilities. ASTC implemented a significant upgrade to the processing capacity of its main settlement system, CHES, in December 2006. Austraclear completed a major system upgrade

in August 2006, just prior to the start of the assessment period. Several significant outages occurred during the period shortly after implementation, the most significant of these being in October and November 2006 and February 2007. Participants also experienced some connectivity problems and slow processing. The Bank was satisfied that Austraclear gave high priority to the resolution of these operational problems. Operational performance improved substantially through the period and during 2007/08 Austraclear has maintained a high level of reliability. Since the end of the assessment period, Austraclear has worked closely with OMX, the system provider, to in-source key levels of system support.

A final notable development during 2006/07 was the Bank's approval, in May 2007, of ASTC's netting arrangements under the *Payment Systems and Netting Act 1998*. The approval will protect the netting undertaken by ASTC from a legal challenge in the event that a participant in the netting arrangement enters external administration. This significantly strengthens the legal framework underpinning ASTC's batch settlement process in CHES.<sup>10</sup>

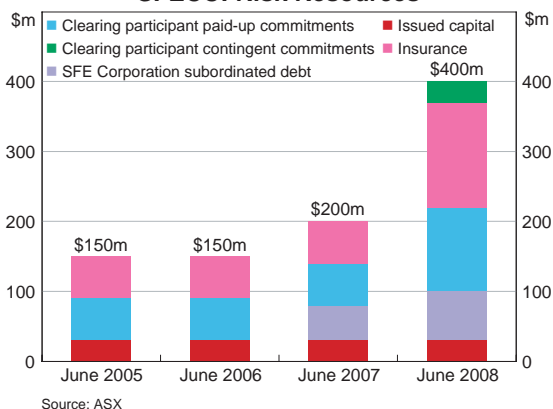
## Developments of relevance for the 2007/08 assessment

During 2007/08, the Board has continued to assess the licensed CS facilities against the standards. The formal assessment for the year to end June 2008 will be published later this year. There have been a number of important developments in the organisation, operational processes and risk management of the licensed CS facilities since the 2006/07 assessment, which will feature in the 2007/08 assessment. In particular:

- The financial difficulties experienced by several brokers in early 2008, two of whom were ACH participants, highlight the potential risks to central counterparties from their participants. As a result, special consideration has been given in the 2007/08 assessment to the processes in place at the central counterparties for setting and enforcing participation requirements and ongoing participant monitoring. Currently, ACH participants clearing either cash equities or exchange-traded options must hold liquid capital in excess of a 'total risk requirement' (which captures counterparty, position, large exposure and operational risks), subject to a

**Graph 22**

**SFECC: Risk Resources**



<sup>10</sup> The details of this approval were provided in the 2007 Annual Report of the Payments System Board.

minimum of \$100 000. ACH intends to raise the minimum capital requirement to \$2 million by the end of 2008, increasing this further to \$10 million by end 2009. SFECC has similar minimum requirements for its clearing participants which it intends to increase. Currently, participants are required to hold minimum net tangible assets of \$5 million; SFECC plans to raise this to \$10 million in due course, and to \$20 million for those clearing for third parties. ACH also intends to invite bank Authorised Deposit-taking Institutions (ADIs) to become clearing participants.<sup>11</sup>

- Steps have been taken since the merger of the Australian Stock Exchange Limited and Sydney Futures Exchange Limited to harmonise practices across the two central counterparties, ACH and SFECC. As part of this process, ASX Limited has established a separate wholly owned subsidiary, ASX Clearing Corporation (ASXCC). ASXCC is the immediate holding company for the two central counterparties and will, subject to the passage of proposed rule changes, become responsible for the conduct of treasury operations on their behalf. It is intended that this will entail the investment of margins, contributions, and other risk resources held by the central counterparties, as well as management of the capital structure of the two central counterparties.
- Further steps were taken towards harmonisation of the central counterparties' processes and operations, including: the establishment of a single internal-ratings model to support participant risk management; the establishment of common (revised) treasury investment limits; establishment of common margin-setting arrangements; and the proposed harmonisation of an internal rating-dependent trigger to call for Contributions and Additional Cover at ACH and Additional Initial Margins at SFECC.

## Review of Settlement Practices for Australian Equities

Over 2007/08, the Board also undertook a review of settlement practices for Australian equities. The Review was prompted by significant delays in the settlement of Australian equities in January 2008 as a result of one participant's inability to meet its obligations in the daily net batch settlement process run by ASTC.

The findings of the Review were published in May 2008.<sup>12</sup> It concluded that while the current batch arrangements are operationally efficient and minimise participants' liquidity requirements, the events of late January highlighted how one participant's difficulties could disrupt settlement across the system as a whole. The Review identified several features of current arrangements that warrant attention and made several recommendations for changes to existing arrangements. In particular, the Review noted that although batch settlement typically takes place at around noon each day, there is no fixed time by which settlement must be completed, and there is an apparent lack of clarity over timelines and decision points. Also, the settlement delays were in part related to difficulties arising from the troubled participant's obligations in respect of securities lending transactions. These transactions are not novated to the central counterparty, ACH, but settle

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11 ADIs have, in the past, been unable to become ACH participants because of the possibility of an unlimited levy being imposed to recapitalise the National Guarantee Fund (NGF). APRA's prudential standards prohibit ADIs from entering into arrangements that could result in such unlimited liability. However, following a recent amendment to relevant Corporations Act provisions in respect of the NGF, ADIs are now able to participate directly in ACH if they wish.

12 The report is available at:  
[http://www.rba.gov.au/PaymentsSystem/StdClearingSettlement/Pdf/review\\_sttmt\\_prac\\_au\\_equities\\_052008.pdf](http://www.rba.gov.au/PaymentsSystem/StdClearingSettlement/Pdf/review_sttmt_prac_au_equities_052008.pdf)

together with novated trades in the batch. While securities lending is a critical feature of a well-functioning equities market, and there are efficiencies to be derived in settling novated and non-novated trades together, these events revealed a lack of transparency around securities lending activity and any risks such transactions bring to the settlement process.

The Review therefore considered several possible modifications to settlement arrangements that might address the risks exposed by the events of late January and concluded that:

- there is a case to move to trade-by-trade settlement over the medium term;
- consideration should be given by ASX to enhancing the existing batch settlement model;
- ASX should take steps to strengthen the settlement fails regime; and
- arrangements should be put in place to improve the transparency of securities lending.

The Board concluded that there was a case to move to a trade-by-trade settlement model for equities over the medium term, as this would reduce the dependence of market-wide settlements on a single participant. Fixed income settlement in Austraclear already occurs in this way. The Board also suggested some possible modifications to existing batch settlement arrangements to increase their robustness, including:

- the introduction of an explicit window for completion of settlement;
- clarification of lines of communication and deadlines for decisions, including by settlement banks; and
- an amendment to the cut-off time for new settlement instructions, so as to allow more time prior to the batch for participants to ensure that securities and funds are in place.

Since publication of the Review, the Bank has consulted with a range of interested parties. Neither ASX nor market participants are persuaded of the need to move to trade-by-trade settlement, citing in particular the high cost of transition to a new settlement model. While the Board acknowledges these costs, it continues to see a case for considering such a move over the medium term, although it does not see the matter as being so pressing as to require a change through regulation. The Bank does, however, continue to see a strong case to implement changes to the existing settlement model to strengthen its resilience and remains in close dialogue with ASX on this matter.

In respect of changes to the settlement fails regime, the Board was keen to stress the importance of timely settlement. In particular, it noted that a single failed settlement could trigger a chain of failures, undermining the integrity of the market and potentially leading to instability. A number of options were therefore discussed for enhancing arrangements for dealing with settlement fails to ensure that market participants face adequate incentive to meet their obligations on the intended settlement date. These included increases in the penalties for failed trades and consideration of borrowing and buy-in arrangements. ASX was, in parallel, considering changes to the settlement fails regime, releasing details of a prospective new arrangement in May 2008.<sup>13</sup>

Finally, given the circumstances leading to the events of late January, securities lending was an important focus in the Bank's Review. It was concluded that greater transparency of activity in this market would yield a number of benefits. In particular, it would: improve

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13 The media release is available at: [http://www.asx.com.au/about/pdf/mr260508\\_settlementrisk\\_new\\_measures.pdf](http://www.asx.com.au/about/pdf/mr260508_settlementrisk_new_measures.pdf)

general understanding of potential settlement risks; ensure that all participants had access to data on the volume and value of securities lending, rather than just those directly involved in such transactions; and assist in the 'ex post' analysis of market events. Since publication of the Review, the Bank has been in dialogue with ASX, other regulators and market participants to identify an efficient and cost-effective means of aggregating and publishing such data.

## Other Relevant Developments

Over the past couple of years, a number of companies have indicated an interest in competing with the ASX market in offering trading services and three new entrants have applied for licences to operate trading platforms for ASX-listed securities. In response to this, the Australian Securities and Investments Commission (ASIC) has been working to develop a regulatory framework for these new trading platforms, which has involved two public consultations on competition for market services.<sup>14</sup> ASIC has now completed this process and provided advice on the new framework to the Minister for Superannuation and Corporate Law in March 2008.

The Board's interest in these developments relates to the arrangements to be put in place to enable the new trading platforms to clear and settle via ACH and ASTC. The Bank has, therefore, been in close dialogue with ASX and ASIC on these matters. On 19 March 2008, ASX issued a high-level public consultation document, laying out the relevant issues to be addressed in establishing access to its CS facilities. This was followed by the publication of issues papers for industry consultation in April 2008 and July 2008.

In another prospective change to the clearing and settlement landscape, the US-based central counterparty The Clearing Corporation has announced that it will provide clearing services for derivatives products traded on a new Australian exchange, The Financial and Energy Exchange (FEX). FEX, via its subsidiary, Mercari, already operates a platform trading OTC derivatives products and is planning to expand its offering to include a range of exchange-traded energy, environmental, commodity and financial derivatives.

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<sup>14</sup> CP86: Competition for Market Services – trading in listed securities and related data (*July 2007*) and CP95: Competition for Market Services – response to CP 86 and further consultation (*November 2007*).

# Other Regulatory Responsibilities

## Exchange Settlement Accounts

The Payments System Board has ongoing responsibility for the Bank's policy on access to Exchange Settlement (ES) accounts. These accounts provide a means for ultimate settlement of interbank obligations via the exchange of a settlement asset that carries no credit risk – a deposit held with the Reserve Bank.

Over the past decade, access to ES accounts has been liberalised. Under current policy, both Authorised Deposit-taking Institutions (ADIs) and third-party payment providers supervised by APRA are eligible to hold ES accounts, provided the Bank is satisfied that they have the liquidity to meet settlement obligations under routine conditions, during seasonal peaks and under periods of stress. Organisations not supervised by APRA that operate in the deferred net settlement systems are typically subject to ongoing collateral requirements. ADIs that account for at least 0.25 per cent of all RTGS payments are required to settle on their own behalf. Smaller institutions may elect to settle using another ES account holder as an agent.

In 2007/08, the Bank granted ES accounts to three applicants: Fortis Bank, Standard Bank and the Industrial and Commercial Bank of China. All but the latter applied for, and were granted, permission to appoint an agent to settle payments on their behalf. Several further applications are pending. A full list of ES account holders is available on the Bank's website.

## Account Switching

In February 2008, the Treasurer announced a reform package aimed at making it easier for retail customers to move their business between banks. A key element of the package is the introduction of a 'listing and switching' service to simplify the process of identifying existing direct debit and credit transactions (for example, payroll and bill payments) and redirecting these to the customer's new account. Currently, identifying and redirecting these payments can be a difficult and time consuming process and may limit competition by discouraging customers from moving between financial institutions.

The Australian Bankers' Association (ABA) and Abacus-Australian Mutuals (the industry association for building societies and credit unions) have committed to the introduction of this service, which is being co-ordinated through a group convened by the Australian Payments Clearing Association (APCA). The key elements of the service include the following:

- upon request, a customer's old financial institution will provide a list of direct debit and credit arrangements over the previous 13 months to the customer. The list will be provided as soon as practicable and no later than five business days after the customer's request;
- the new financial institution will provide the customer with information and support to help the customer make the switch. Institutions will provide customised 'switching packs', taking into account guidelines provided by APCA; and

- if requested by the customer, the customer's new financial institution will assist in notifying billing and crediting organisations of new direct debit and direct credit arrangements.

The industry has committed to having the listing and switching service operational by 1 November 2008. APCA has provided regular progress reports to the Bank, and these have been made available on the Bank's website.<sup>15</sup>

## ATM Reforms

As discussed in last year's Annual Report, in mid 2007 industry participants agreed to a set of reforms to the ATM system in Australia, bringing to an end many years of industry negotiation. The agreement addresses concerns that the Board has held for some time about the difficulties new players can face when attempting to join the ATM system, and the competitive pressures within the system, particularly those applying to interchange fees. The agreement involves several elements:

- the development of an objective and transparent access code by APCA, setting out the conditions that new entrants to the ATM system are required to meet, the rights of new entrants, and the requirements on current participants in dealing with new entrants;
- the clear disclosure of any charges levied by the ATM owner *before* the customer proceeds with a withdrawal, with the customer able to cancel the transaction at no cost; and
- the abolition of *bilateral* interchange fees paid by banks and other financial institutions to ATM owners for the provision of ATM services. With these fees abolished, ATM owners will be free to charge customers who use their ATMs but must disclose the fee, increasing the overall transparency of pricing.

Under these reforms, multilateral interchange fees in sub-networks – either those currently in existence (in the Rediteller and Cashcard networks) or those that may form in the future – would be possible. The Board has expressed the view that, if such fees exist, they should be publicly disclosed. In addition, the rules that govern access to sub-networks should be transparent and objective and not impair efficiency and competition in the payments system.

One element not covered in the agreement is the level of 'foreign fees' for the use of an ATM belonging to a network other than that of the card issuer. Currently the four largest banks charge fees of \$2 to their customers and pay an interchange fee that averages around \$1. Under the new arrangements issuing banks will no longer be paying interchange fees and the Bank sees no justification for foreign fees to remain at their current levels. Indeed, the Bank sees a strong case for foreign ATM transactions to be charged at the same rate as own ATM transactions given that the issuing costs involved will be almost identical.

Originally, the Board indicated that it hoped that the reforms would be implemented by 1 October 2008. The industry, however, subsequently set 3 March 2009 as the implementation date, citing a number of technical issues, including: the need to develop a technical specification for direct charging; the time required for the testing of bilateral links; the need to physically modify a large proportion of existing ATMs; and a shortage of resources available to make the required software changes to machines.

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<sup>15</sup> These reports are available at: <http://www.rba.gov.au/PaymentsSystem/Reforms/ASI/index.html>

The ABA and APCA have been asked to provide quarterly reports to the Bank on progress with the reforms.<sup>16</sup> The reports, along with the Bank's own liaison with industry players, indicate that substantial progress is being made, both on the centralised structures – such as the Access Code, the constitution of the ATM Access Company that will administer the Code, and amendments to the relevant clearing system rules – and on implementation at the individual institution or provider level. Nonetheless considerable work remains to be done, including how best to give regulatory certainty to the new arrangements.

One issue that has arisen is that the adoption of a single implementation date, rather than a progressive roll-out, will leave some machines without full direct charging functionality during a transition period. For around 2 500 ATMs, direct charging software cannot be turned on remotely and they will have to be converted progressively as technicians visit them. For a period (probably around 3 months), these machines will meet the disclosure requirements by the use of external signage and the direct charge will be effected by the host systems, rather than the ATM.

Another issue that has arisen in recent months has been the circumstances in which smaller financial institutions are able to have bilateral bespoke arrangements with larger networks for fee-free ATM access for their customers. Smaller institutions, which typically have no (or very few) ATMs, feel that without the ability to negotiate such arrangements, they will be unable to provide banking services on a basis that is competitive with larger institutions.

The Board recognises that there is a case for the continuation of these bespoke agreements provided they meet certain conditions. In a letter to APCA on 1 September 2008, the Bank clarified that an indirect connector is able to negotiate a bespoke agreement with another participant provided that:

- the agreement is one-way only – that is, it provides the customers of one institution with access to ATMs operated by a second institution, but not the other way around;
- an institution accessing another institution's ATMs in this way only has one such arrangement; and
- any such bespoke agreements be reported to the Bank.

## **Oversight of Continuous Linked Settlement (CLS) Bank**

CLS Bank was developed to provide a mechanism for settling foreign exchange transactions on a payment-versus-payment basis, thereby eliminating foreign exchange settlement risk. This risk arises when settlement of foreign exchange transactions occurs across different payment systems in different time zones, with the party settling its obligation first exposed to the risk that its counterparty fails to settle its obligation in the other currency. CLS eliminates this risk by settling both legs of a foreign exchange transaction simultaneously.

CLS is chartered in the United States and is, therefore, regulated and supervised by the Federal Reserve System. The operations of CLS are, however, also overseen by a group of central banks currently under the auspices of the Committee for Payment and Settlement Systems Subgroup on Foreign Exchange Settlement Risk (FXSR subgroup). The Reserve Bank is a member of this

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<sup>16</sup> These reports are available at: [http://www.rba.gov.au/PaymentsSystem/Reforms/ATM/ind\\_sub\\_reports.html](http://www.rba.gov.au/PaymentsSystem/Reforms/ATM/ind_sub_reports.html)

joint oversight group. Over the past year, there has been considerable work in formalising a new oversight group and the processes that group will use for overseeing CLS. When introduced, the new arrangements will involve an oversight committee separate from the FXSR subgroup. As CLS settles foreign exchange transactions involving the Australian dollar, the Bank will be represented on this new oversight committee.

During 2007/08, CLS Bank expanded its operations to settle one-sided payments, including non-deliverable forwards, foreign exchange option premiums and credit derivatives. The Bank, along with some other central banks, expressed reservations about this expansion beyond CLS's core foreign exchange business, as it could lead to a further concentration of payments late in the day, increasing operational and other risks. The Bank has therefore indicated to CLS that if the value of non-payment-versus-payment activity that it settles through its account at the Reserve Bank increases above 0.25 per cent of the value of RTGS transactions, the Bank would review CLS's ES account arrangements. Presently this threshold does not impose any practical constraint as the facility has yet to be used for Australian dollar products.

In parallel with these developments, CLS has expanded the range of currencies accepted for payment-versus-payment settlement to include the Israeli shekel and the Mexican peso.



# Engagement with Industry

## **Liaison with Industry**

Over 2007/08, the Bank continued its practice of consulting with industry participants on a range of topics. Discussions primarily focused on the review of the payments system reforms, the account switching project, ATM reforms, and the review of settlement practices in the Australian equities market. In addition, the Bank also liaised closely with Treasury, the Australian Securities and Investments Commission (ASIC) and the Australian Competition and Consumer Commission (ACCC) on a number of issues.

The review of the payments system reforms has represented a significant liaison effort by the Bank. As discussed above, in addition to its customary bilateral consultations, the Bank hosted a conference in November 2007 to which 90 interested parties including financial institutions, merchants, schemes and academics were invited.

The Bank has also consulted widely over the past year on issues related to the Australian equities market. It has had regular meetings with ASX management on matters related to the compliance of ASX-owned entities with the Financial Stability Standards. In addition, the Bank has commenced a program of liaison with market participants, including participants in the securities lending market.

Last year's Annual Report described new liaison arrangements between the Bank and the Australian Payments Clearing Association (APCA). As part of these new arrangements, over 2007/08, the Bank met with APCA management after each APCA Board meeting to discuss developments – eight meetings in total – and met with the APCA Board on one occasion. Bank staff also met with APCA throughout the year to discuss account switching, ATM reform and the development of APCA's access code, and possibilities for 'self governance' of the payments system.

Staff have also made a number of presentations over 2007/08 covering the review of the payments system reforms and payments system issues more broadly. The Deputy Chairman of the Board addressed a Visa forum on 'The Preliminary Conclusions of the Payments System Review' in June 2008 and the Head of Payments Policy Department gave presentations on the Review to Banktech07, Cards and Payments Australasia 2008 and the Australian Smart Cards Summit 2008, as well as more general presentations on the payments system to Indue's Church Funds and Charities Summit 2007 and the Commonwealth Bank's major merchant forums for 2008.

## **International Meetings**

The Bank continues to be represented on two international groups dealing with payments system issues: the Committee for Payment and Settlement Systems Subgroup on Foreign Exchange

Settlement Risk (FXSR subgroup) and the EMEAP Working Group on Payment and Settlement Systems.

As discussed in the chapter on ‘Ongoing Regulatory Responsibilities’, the FXSR subgroup is currently responsible for oversight of CLS Bank, and held three meetings over 2007/08. Its main focus this year has been on developing new arrangements for the joint oversight of CLS Bank and finalising the survey of foreign exchange settlement risk (which was published in May 2008). The EMEAP Working Group held two meetings in 2007/08 – the first in Korea in October 2007 and the second in Thailand in March 2008. Over the past year, this group’s main focus has been payments system resilience.

# The Board's Decisions and Reserve Bank Reports

This section lists developments since mid 2007. Details of earlier decisions of the Board and Reserve Bank reports can be found in the Payments System Board's 2006 and 2007 Annual Reports.

## 2007

Media Release 2007-13, 'Reform of the ATM System in Australia' (Announcing the Board's support for an industry-developed proposal for reform of the ATM system in Australia), 31 August 2007.

## 2008

Media Release 2008-01, 'Report on Clearing and Settlement Facilities' (Announcing the results of assessments undertaken by the Reserve Bank into how well clearing and settlement facility licensees complied with their obligations to meet the Bank's Financial Stability Standards), 18 January 2008.

Media Release 2008-05, 'Review of Payments System Reforms' (Announcing the release of the preliminary conclusions of the 2007/08 review of the payments system reforms undertaken by the Payments System Board), 21 April 2008.

*Proceedings of Payments System Review Conference*, Reserve Bank of Australia, Sydney, April 2008.

*Reform of Australia's Payments System: Preliminary Conclusions of the 2007/08 Review*, Reserve Bank of Australia, Sydney, April 2008.

*Review of Settlement Practices for Australian Equities*, Reserve Bank of Australia, Sydney, May 2008.

Media Release 2008-13, 'Payments System Board Meeting' (Announcing the expected timing of the final conclusions of the Payments System Review, encouraging the industry to finalise arrangements for the abolition of bilateral ATM interchange fees and foreshadowing discussion with PayPal in relation to its no-surcharge and no-steering rules), 20 August 2008.

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