



RESERVE BANK
OF AUSTRALIA

Payments
System Board
Annual Report

2014

RESERVE BANK OF AUSTRALIA



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G.R. Stevens
GOVERNOR

12 September 2014

The Hon Joe Hockey MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

PAYMENTS SYSTEM BOARD ANNUAL REPORT 2014

I am writing to seek your agreement to the tabling in the Parliament of the Payments System Board Annual Report for 2014. A copy of the report is enclosed.

In terms of the *Reserve Bank Act 1959*, the Payments System Board is required to inform the Government, from time to time, of the Reserve Bank's payments system policy. There is no statutory requirement to table an annual report, but tabling has proven a useful way of publicising the work of the Payments System Board.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'G.R. Stevens'.

Payments System Board

ANNUAL REPORT 2014

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Reserve Bank

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Governor's Foreword

The Payments System Board has paid close attention over the past year to the work that is ongoing in the Reserve Bank and the payments industry to implement the 2012 conclusions from the Board's *Strategic Review of Innovation in the Payments System*. Three aspects are particularly noteworthy. First, the Australian Payments Council, the new industry coordination body, has been formed and is expected to have its first meeting in October 2014. Second, the Board commends the achievement of one of the strategic objectives from the Review, namely the implementation of same-day settlement of direct entry payments in November 2013. Finally, the Board welcomes the substantial progress that has been made on the New Payments Platform (NPP) project to build a new real-time payments infrastructure that will link authorised deposit-taking institutions (ADIs) and facilitate real-time, data-rich payments for Australian households, businesses and government agencies. There has been significant interest in this project from other jurisdictions. The NPP is requiring a substantial commitment of investment and industry staff resources. The Bank will continue to work closely with the industry to achieve a successful outcome to this project.

The Reserve Bank has continued work to improve understanding of the Australian payments system. In June, the Bank published the results of its third survey of consumers' use of payment methods. The survey provides a rich dataset for analysing payment choice by consumers. The survey shows a decline in the use of cash and continued growth in electronic payments such as direct credit and debits, cards and BPAY. It also shows a further significant contraction in the use of cheques. Indeed, the successful implementation of the NPP and the development of new and improved ways to make payments will probably bring forward the time when the industry will be able to phase out the use of cheques, which are a high cost means of payment for financial institutions and businesses. The Bank is also working to improve its understanding of other aspects of the payments landscape, and has been undertaking a large-scale review of the costs of different payment instruments for financial institutions and merchants.

Studies such as these provide useful information for the industry and for public policy, including the current Financial System Inquiry. The Reserve Bank made a submission to the Inquiry in March and a supplementary submission in August 2014, with the material on the payments system detailing the Bank's reforms over the past 16 years.

The Board's activities in the regulatory sphere over the past year have included its work on the Access Regimes applying to the MasterCard credit, Visa credit and Visa Debit systems in Australia. The original access framework was implemented in 2004 and 2005 to expand access to the MasterCard and Visa systems while minimising any risks to the payments system as a whole. Since then, however, the schemes have changed from member-owned organisations to commercial organisations with a greater incentive to expand access. Accordingly, the Bank has consulted on changes to the access framework to facilitate new entry and in March announced a decision in principle to vary the Access Regimes. The new framework is contingent on some other changes – amendment of the *Banking Regulations 1966* and removal of the current ADI category of

specialist credit card institutions, as well as the Bank being satisfied with changes to the rules of the Bulk Electronic Clearing System – but should be effective around the end of 2014.

Over the past year, the Board has continued to focus increasing attention on stability issues. As the role of financial market infrastructures (FMIs) within the financial system has expanded, most notably with the G20's commitment to central clearing of all standardised over-the-counter derivatives, there is an increasing awareness internationally of their growing systemic importance. Close oversight of FMIs against high regulatory standards is therefore essential.

Consistent with this, the Bank has consolidated its implementation of the new international standards for the regulation and oversight of FMIs. In August 2013, the Board approved the first formal Assessments of the clearing and settlement (CS) facilities in the ASX group against the new Financial Stability Standards that align with these international standards. The Assessments revealed that ASX had made very good progress towards meeting the requirements of the new standards. A number of regulatory priorities were nevertheless set to ensure full observance of the standards and to address the requirements of a small number of standards that were initially subject to transitional relief. These have been the focus of the Bank's oversight of the ASX CS facilities in 2013/14 as reflected in the recently completed Assessment reports for this period. In addition, in November 2013, the Bank published its first formal Self-assessment against the international standards for the Reserve Bank Information and Transfer System (RITS), the Australian high-value payment system. This Assessment concluded that RITS had observed all relevant standards.

The internationalisation of FMIs has remained an important theme in 2013/14. LCH.Clearnet Limited (LCH.C Ltd), the first overseas-based central counterparty to be licensed in Australia, has been extending its SwapClear OTC interest rate derivatives clearing service to Australian participants. During the period, LCH.C Ltd admitted two Australian banks as direct participants. A third has since joined and it is understood that other Australian banks plan to join in the future. LCH.C Ltd also opened a representative office in Sydney to service participants in Australia and the wider Asia-Pacific region, established an Australian Member User Group, and is working with the Reserve Bank to open an Exchange Settlement Account to manage its Australian dollar liquidity. The Board recently approved the staff's first Assessment report for LCH.C Ltd against the Bank's Financial Stability Standards.

Finally, to support overseas providers' activities in Australia, as well as Australian entities' activities in other markets, the Bank has continued to cooperate with international regulators. To govern such cooperation, memoranda of understanding have been concluded with the Commodity Futures Trading Commission and the Reserve Bank of New Zealand. Similar arrangements are being negotiated with the European Securities and Markets Authority.

John Laker AO completed a 16-year term on the Board on 30 June 2014, having been a founding member and serving initially as Deputy Chair of the Board prior to his appointment as the Chair of the Australian Prudential Regulation Authority in 2003. Dr Laker served with professionalism and dedication throughout his term. The

Board records its appreciation of his valuable contribution to payments policy in Australia, including through his contribution to the Board's deliberations from the perspective of a regulator in the financial sector.

Once again the Board joins me in thanking the staff and management of the Bank for their work in helping the Board meet its mandate for efficiency, competition and controlling risk in the Australian payments system.

A handwritten signature in blue ink, reading "Glenn Stevens". The signature is fluid and cursive, with the first name "Glenn" and the last name "Stevens" clearly distinguishable.

Glenn Stevens
Chair, Payments System Board
5 September 2014

Functions and Objectives of the Payments System Board

The responsibilities of the Payments System Board are set out in the *Reserve Bank Act 1959*, under which it is the duty of the Payments System Board to ensure, within the limits of its powers, that:

- the Reserve Bank's payments system policy is directed to the greatest advantage of the people of Australia
- the powers of the Reserve Bank 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
- the powers of the Reserve Bank that 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.

Under the *Payment Systems (Regulation) Act*, the Reserve Bank has the power to designate payment systems and set standards and access regimes for designated systems. 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.

Under Part 7.3 of the *Corporations Act*, the Reserve Bank has a formal regulatory role to ensure that the infrastructure supporting the clearing and settlement of transactions in financial markets is operated in a way that promotes financial stability. The Bank's powers under that Part include the power to determine financial stability standards for licensed clearing and settlement facilities.

This Report discusses the activities of the Board during 2013/14.

Governance

Payments System Board

The Payments System Board has responsibility for the Reserve Bank's payments system policy. The Board comprises the Governor, who is the Chair, one representative of the Reserve Bank appointed by the Governor, who is the Deputy Chair, one representative of the Australian Prudential Regulation Authority (APRA) appointed by APRA, and up to five other members appointed by the Treasurer for terms of up to five years. Members of the Board during 2013/14 are shown below and details of the qualifications and experience of members are provided on pages 11–15.

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. Four meetings were held in 2013/14, all at the Reserve Bank's Head Office in Sydney, and a resolution was passed without a meeting in March 2014. Five members form a quorum at a meeting of the Board or are required to pass a written resolution.

Conduct of Payments System Board Members

On appointment to the Payments System Board, each member is required under the Reserve Bank Act to sign a declaration to maintain confidentiality

in relation to the affairs of the Board and the Reserve Bank. Further, members must comply with the general obligations of directors of Commonwealth authorities, including, until 30 June 2014, those set out in the *Commonwealth Authorities and Companies Act 1997* (CAC Act). Under the CAC Act members were required to:

- discharge their duties with care and diligence
- act in good faith in the best interests of the Reserve Bank, and for a proper purpose
- not use their position to benefit themselves or any other person, or to cause detriment to the Reserve Bank or any other person

Board Meetings in 2013/14 Attendance by Members Number of meetings

	Attended	Eligible to attend
Glenn Stevens (Governor)	4	4
Malcolm Edey (RBA)	4	4
Gina Cass-Gottlieb	4	4
Paul Costello	4	4
John Laker (APRA) ^(a)	4	4
Robert McLean	4	4
Catherine Walter	4	4
Brian Wilson	4	4

(a) John Laker's term on the Board ended on 30 June 2014. He was succeeded by Wayne Byres, who was appointed as the APRA representative on 9 July 2014 in terms of section 25B(2) of the Reserve Bank Act.

- not use any information obtained by virtue of their position to benefit themselves or any other person, or to cause detriment to the Reserve Bank or any other person
- declare any material personal interest in a matter that relates to the affairs of the Reserve Bank.

From 1 July 2014, members must comply with very similar obligations under the *Public Governance, Performance and Accountability Act 2013*.

Over and above these statutory requirements, members recognise their responsibility for maintaining a reputation for integrity and propriety on the part of the Board and the Reserve Bank in all respects. Members have therefore adopted a Code of Conduct that provides a number of general principles as a guide for their conduct in fulfilling their duties and responsibilities as members of the Board; a copy of the Code is on the Bank's website.

Remuneration and Allowances

Remuneration and travel allowances for the non-executive members of the Payments System Board are set by the Remuneration Tribunal.

Induction of Board Members

The induction program assists newly appointed Board members in understanding their role and responsibilities, and provides them with an overview of the Bank's role in the payments system and details of relevant developments in preceding years. Separate briefing sessions are tailored to meet particular needs or interests.

Indemnities

During 2013/14, members of the Payments System Board continued to be indemnified in accordance with section 27M of the CAC Act against liabilities incurred by reason of their appointment to the Board or by virtue of holding and discharging such office.

Conflict of Interest Audit

The Reserve Bank has three distinct areas of responsibility in the Australian payments system: it owns, operates and participates in Australia's real-time gross settlement system, the Reserve Bank Information and Transfer System; it is a provider of transactional banking services to the Australian Government and its agencies; and it is the principal regulator of the payments system through the Payments System Board. This combination of functions is not uncommon internationally. The operation of the high-value payment system is a core central banking function in most major economies. In addition, central banks in advanced economies typically have regulatory responsibilities for the payments system (though the breadth of mandates varies) and most also provide banking services to government.

While the various functions are conceptually distinct, their existence may give rise to concerns about actual or perceived conflicts of interest. The Payments System Board and the senior management of the Bank take very seriously the possibility of any perception that the Bank's policy and operational roles may be conflicted, especially since this could undermine public confidence in the regulatory and policy process. Accordingly, the Bank has policies in place for avoiding conflicts and dealing with them when they do occur. The Payments

System Board has formally adopted a policy on the management of conflicts of interests, which is published on the Bank's website.¹ Details of the steps taken to achieve compliance with these arrangements, including the minutes of meetings between departments, are audited annually with the results presented to the Payments System Board. The most recent audit was conducted in July 2014 and reviewed by the Board in August 2014.

¹ Available at <<http://www.rba.gov.au/payments-system/policy-framework/conflict-of-interest.html>>.

Payments System Board

September 2014



Glenn Stevens

BEC (Hons) (Sydney), MA (Western)

Governor and Chair

Governor since 18 September 2006

Reappointed from 18 September 2013 until 17 September 2016

Glenn Stevens has held various senior positions at the Reserve Bank, including Head of Economic Analysis and International Departments and Assistant Governor (Economic), where he was responsible for overseeing economic and policy advice to the then Governor and Reserve Bank Board. He was Deputy Governor from 2001 to 2006. In June 2014, Mr Stevens was awarded a Doctor of Laws honoris causa (LLD) by Western University in Ontario, Canada.

Other Roles

Chair – Reserve Bank Board

Chair – Council of Financial Regulators

Chair – Financial Markets Foundation for Children

Member – Financial Stability Board

Director – The Anika Foundation



Malcolm Edey

BEC (Sydney), PhD (London)

Assistant Governor (Financial System) and Deputy Chair

Deputy Chair since 14 April 2009

Malcolm Edey has held various senior positions at the Reserve Bank, including in the Economic and Financial Markets Groups. Prior to his current role, Dr Edey was Assistant Governor (Economic). In his current position as Assistant Governor (Financial System), he is responsible for the Bank's work on financial stability and oversight of the payments system.

Other Roles

Chair – OECD Committee on Financial Markets

Member – Basel Committee on Banking Supervision

Member – Council of Financial Regulators



Wayne Byres

BEc (Hons) (Macquarie), **M**AppFin (Macquarie)

Ex Officio Member

Chairman, Australian Prudential Regulation Authority

Member since 9 July 2014

Present term ends 30 June 2019

Wayne Byres was appointed as a Member and Chairman of the Australian Prudential Regulation Authority from 1 July 2014 for a five-year term. His early career was in the Reserve Bank, which he joined in 1984. He transferred to APRA on its establishment in 1998 and held a number of senior executive positions in the policy and supervisory divisions. In 2004, Mr Byres was appointed Executive General Manager, Diversified Institutions Division, with responsibility for the supervision of Australia's largest and most complex financial groups. He held this role until the end of 2011, when he was appointed as Secretary General of the Basel Committee on Banking Supervision, based at the Bank for International Settlements in Basel. Mr Byres is a Fellow of the Financial Services Institute of Australia.

Other Roles

Member – Basel Committee on Banking Supervision

Director – Centre for International Finance and Regulation

Member – BIS Group of Governors and Heads of Supervision

Member – Council of Financial Regulators

Member – Trans-Tasman Council on Banking Supervision



Gina Cass-Gottlieb

BEc (Hons), **L**LB (Hons) (Sydney), **L**LM (Berkeley)

Non-Executive Member

Member since 15 July 2013

Present term ends 14 July 2018

Gina Cass-Gottlieb is a senior partner in Gilbert + Tobin's competition and regulation practice, advising and representing corporations, industry associations, government and government agencies. She has over 25 years' experience, including advising in relation to access arrangements in a range of sectors across the economy. Ms Cass-Gottlieb attended the University of California, Berkeley, as a Fulbright Scholar.

Directorships

Director – Sydney Children's Hospital Foundation



Paul Costello

BA (Canterbury), Dip. Bus Admin (Massey)

Non-Executive Member

Member since 15 July 2013

Present term ends 14 July 2018

Paul Costello has held a number of roles in the Australasian financial services sector. Most recently he served as the inaugural general manager at the Australian Government's Future Fund and also as the chief executive of the New Zealand Government's Superannuation Fund. Prior to these roles, he spent 15 years in the Australian wealth management industry. The Australian Government has previously appointed him in advisory roles to assist with the Stronger Super regulatory reforms and the Productivity Commission review of the sector. Mr Costello is a Fellow of the Financial Services Institute of Australia.

Directorships

Director – AIA Australia Limited

Director – Qantas Superannuation Limited

Member – International Advisory Council of the China Investment Corporation



Robert McLean AM

BEC (Stats) (Hons) (UNE), MBA (Columbia)

Non-Executive Member

Member since 29 November 2006

Present term ends 28 November 2016

Robert McLean is a company director and private equity investor. He had a 25-year career at McKinsey & Company, where he remains a Senior Advisor to the firm, and previously served on the boards of CSR Ltd, Pacific Dunlop Ltd and Elders Rural Services. He was Dean and Director of the Australian Graduate School of Management at the University of New South Wales from 2003 to 2006. Mr McLean attended Columbia University in New York as a Fulbright Scholar.

Directorships

Chair – Australia Program Advisory Board, The Nature Conservancy (Australia)

Director – LJ Hooker Pty Ltd

Director – The Centre for Independent Studies

Senior Advisor – McKinsey & Company



Catherine Walter AM

LLB (Hons), LLM, MBA (Melbourne)

Non-Executive Member

Member since 3 September 2007

Present term ends 2 September 2017

Catherine Walter is a solicitor and company director, who practised banking and corporate law for 20 years in major city law firms, culminating in a term as Managing Partner of Clayton Utz, Melbourne. She was a Commissioner of the City of Melbourne and for more than 20 years has been a non-executive director of a range of listed companies, government entities and not-for-profit organisations spanning the arts, education, insurance, investment, banking and financial services, consumer goods, resources, telecommunications and scientific and medical research. Mrs Walter is a Fellow of the Australian Institute of Company Directors.

Directorships

Chair – Fed Square Pty Ltd

Director – Australian Foundation Investment Company

Director – Victorian Funds Management Corporation

Director – Victorian Opera



Brian Wilson

MCom (Hons) (Auckland)

Non-Executive Member

Member since 15 November 2010

Present term ends 14 November 2015

Brian Wilson was a Managing Director of the global investment bank Lazard until 2009, after co-founding the firm in Australia in 2004, and was previously a Vice-Chairman of Citigroup Australia and its predecessor companies. Mr Wilson was a member of the Commonwealth Government Review of Australia's Superannuation System, the ATO Superannuation Reform Steering Committee and the Specialist Reference Group on the Taxation of Multinational Enterprises in Australia.

Directorships

Chairman – Foreign Investment Review Board

Deputy Chancellor – University of Technology, Sydney

Director – Bell Financial Group Ltd



Retirement from the Board

John Laker AO retired from the Board on 30 June 2014.

John Laker AO

BEc (Hons) (Sydney), **M**Sc (Econ), **P**hD (London)

Ex Officio Member

Appointed 24 July 1998

Retired 30 June 2014

John Laker was appointed as a Member and Chairman of the Australian Prudential Regulation Authority on 1 July 2003 and completed his appointment on 30 June 2014. He worked in the Commonwealth Treasury and International Monetary Fund before joining the Reserve Bank in 1982, where he held senior positions in the economic, bank supervision and international areas. From 1998 to 2003, Dr Laker was Assistant Governor (Financial System) and Deputy Chair of the Payments System Board.

Other Roles

Member – Basel Committee on Banking Supervision

Member – BIS Group of Governors and Heads of Supervision

Director – Centre for International Finance and Regulation

Member – Council of Financial Regulators

Member – Trans-Tasman Council on Banking Supervision

Resolution of the Board – 23 May 2014

Members noted that this was the final meeting for John Laker, after 16 years on the Board. Dr Laker, who was a founding member of the Board, served initially as a representative of the Bank and since 2003 as a representative of APRA. Members paid tribute to Dr Laker's professionalism and dedication and his active and probing role as a Board member throughout his term. They recorded their appreciation of Dr Laker's valuable contribution to payments policy in Australia, including as a member of the Reserve Bank staff and through his contribution to the Board's deliberations from the perspective of a regulator in the financial sector. Members wished him well in the future.

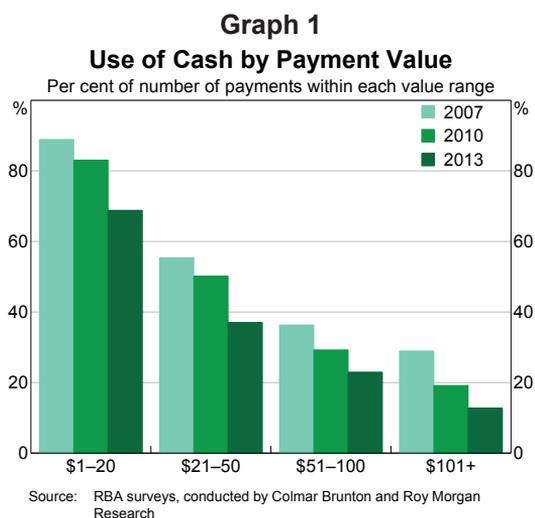
Trends in Retail Payments

The Payments System Board monitors trends in the use of retail payment methods in line with its responsibilities to promote efficiency and competition in the Australian payments system. Developments during 2013/14 were largely consistent with the trends observed in recent years. Use of electronic payment methods, including debit cards, credit cards and BPAY, continues to increase. In contrast, 'paper-based' methods such as cash and cheques are being relied on less by consumers and businesses for transactional purposes. Overall use of cheques continues to decline, though they remain important for certain large-value transactions. The results of the Bank's third survey of the use of payment methods by Australian consumers indicate that while cash use remains significant – accounting for almost half of all household payments by number – its relative importance is declining over time, with card payments and other electronic methods increasingly being used as substitutes for cash.

Cash Payments

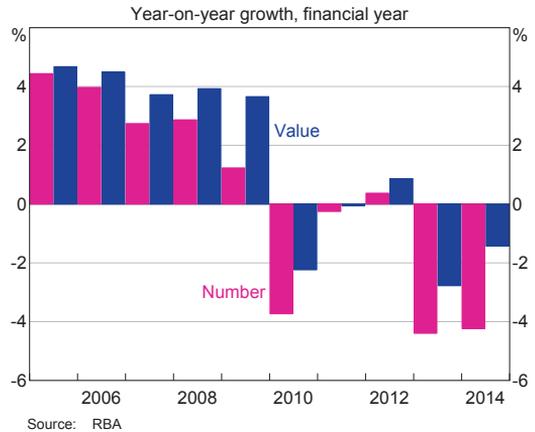
In November 2013, the Reserve Bank conducted its third major study into how individuals make payments, following similar studies in 2007 and 2010 (see 'Box A: The 2013 Survey of Consumers' Use of Payments'). Supplementing the Bank's regular collection of retail payments data from financial institutions, the study provides transaction-level data from a survey of over 1 000 consumers and enables greater insight into Australians' payments behaviour. The survey is a particularly valuable source of information on cash payments, for which little comprehensive information is otherwise available.

The study found that, while cash remained the most frequently used means of payment in 2013, its use had declined noticeably over the previous three years. It accounted for 47 per cent of the number and 18 per cent of the value of all payments in 2013, down from 62 per cent and 29 per cent respectively in 2010. Despite this fall, the use of cash as a payment method remains widespread, particularly for low-value transactions, with consumers using cash for around two-thirds of payments under \$20 (Graph 1). The study found that debit and credit cards were increasingly being used as substitutes for cash, reflecting a range of factors including a rise in the importance of remote transactions (for instance the growth of online commerce) and the adoption of contactless card technology which reduces the tender time at the point of sale.



Consistent with the results of the 2013 study, monthly data reported by financial institutions show a contraction in cash withdrawal activity over the past couple of years. For instance, after growing at around 4 per cent per annum in the mid-2000s, the value of debit card cash withdrawals from ATMs (the main method individuals use to obtain cash) has been declining since 2009/10, falling by around 2 per cent per annum for the past two financial years (Graph 2). This trend likely reflects a reduced need to obtain cash for transaction purposes because of the changes in technology and preferences described above, as well as increased use of cash-outs at the point of sale.

Graph 2
ATM Withdrawals



Non-cash Payments

The use of non-cash payment methods continues to rise strongly. The total *number* of non-cash payments increased by around 9 per cent in 2013/2014, slightly stronger than the average growth rate for past five years. Similarly, the *value* of non-cash payments grew by almost 6 per cent, more than double the recent average (Table 1). Use of all the main electronic forms of payment increased, with debit card transactions and the number of direct debits growing particularly strongly in 2013/14. In contrast, consumers and businesses continue to reduce their reliance on cheques, with the number of cheque payments falling by a further 14 per cent in 2013/14.

Overall, Australians on average made almost 380 non-cash transactions per person in 2013/14, up from 210 transactions a decade ago (Graph 3). Developments in the use of individual payment methods are discussed below.

Graph 3
Non-cash Transactions per Capita

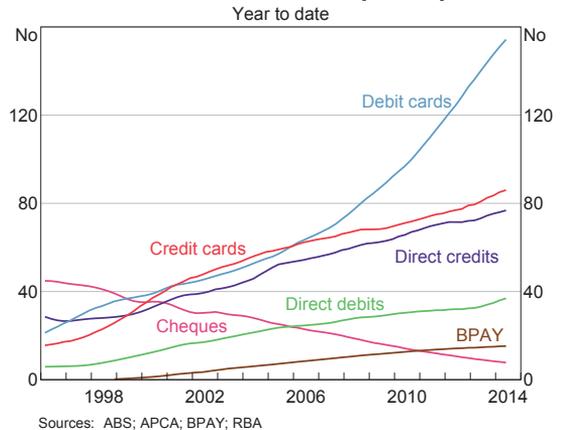


Table 1: Australian Non-cash Retail Payments

	2013/14					Average annual growth 2008/09 – 2013/14	
	Per cent of total		Average value	Growth, per cent		Per cent	
	Number	Value	\$	Number	Value	Number	Value
Debit cards	40.8	1.2	55	11.9	9.8	14.0	11.2
Credit cards	22.7	1.7	136	8.3	6.4	6.7	5.3
Cheques	2.1	7.8	6 806	-13.5	2.9	-12.4	-3.9
BPAY	4.1	1.8	824	5.5	10.6	7.2	10.3
Direct debits	9.8	37.6	6 928	13.3	4.3	6.8	3.7
Direct credits	20.5	49.9	4 417	6.7	7.4	6.0	2.9
Total	100.0	100.0	1 817	9.2	5.9	8.3	2.8

Sources: BPAY; RBA

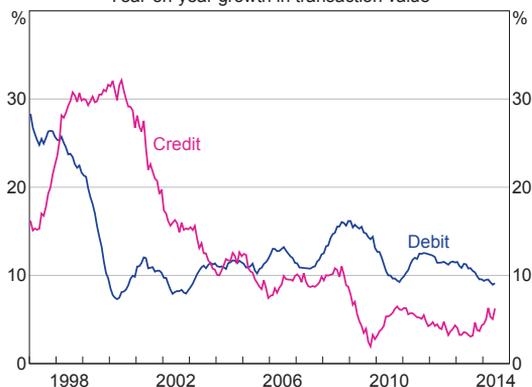
Debit and credit card payments

Debit and credit cards play an important role in the payments system. They are the most frequently used non-cash payment method, accounting for over 60 per cent of the number of non-cash payments (though only around 3 per cent of the value, given the small size of card transactions compared with some other payment methods). In 2013/14, Australian personal and business cardholders made around 5.6 billion card payments, with a total value of \$468 billion. Taken together, debit card and credit/charge card payments grew strongly, with the number of transactions increasing by 11 per cent and the value by 8 per cent, mainly reflecting sustained growth in the use of debit cards as a means of payment. The value of debit card transactions grew by 10 per cent in 2013/14, while growth in credit card transactions picked up slightly, to around 6 per cent (Graph 4).

More generally, cards, and in particular debit cards, are increasingly being used for lower-value payments, with the average value of a debit card payment falling from \$62 in 2008/09 to \$55 in 2013/14. The average value of credit/charge card transactions fell from \$145 to \$136 over the same period. The continued decline in the average value of card payments suggests a trend towards the use and acceptance of cards for a wider range of lower-value transactions. This has likely been driven in part by the growing adoption of contactless technology; the 2013 consumer use study found that growth in card use was particularly strong for point-of-sale transactions.

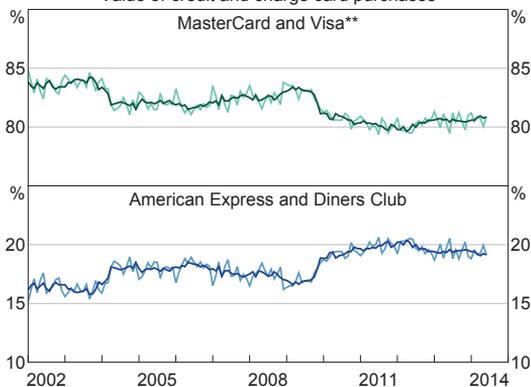
Within credit/charge cards, the combined shares of the four-party schemes (MasterCard and Visa) and three-party card schemes (American Express and Diners Club) were largely unchanged in 2013/14. The combined market share of the three-party schemes has remained around 19–20 per cent of the value of credit and charge card spending since 2010 (Graph 5). Within debit cards, the MasterCard and Visa debit systems continued to increase market share relative to eftpos.

Graph 4
Payment Card Transactions*
 Year-on-year growth in transaction value



* Includes debit card cash-outs and credit card advances; RBA credit card data prior to March 2008 adjusted to remove BPAY transactions
 Sources: BPAY; RBA

Graph 5
Market Shares of Card Schemes*
 Value of credit and charge card purchases

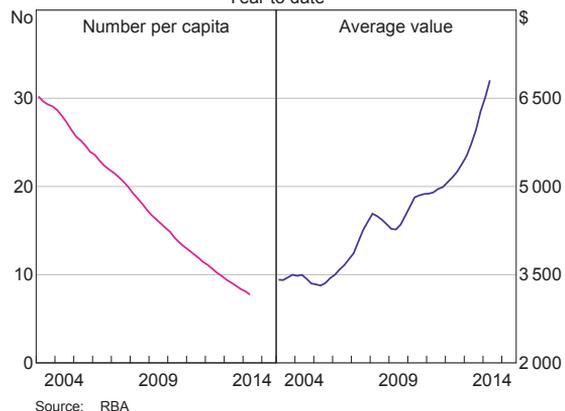


* Excludes scheme debit from March 2008; back data adjusted for break; darker lines are seasonally adjusted estimates
 ** Includes Bankcard before 2007
 Source: RBA

Cheque, BPAY and direct entry payments

The use of cheques continued to decline in 2013/14, with the number of cheque payments falling by around 14 per cent to be almost 70 per cent lower than a decade ago. In 2013/14 around eight cheques were written per person in Australia, down from 28 cheques per person 10 years earlier (Graph 6). A considerable proportion of cheque use is related to commercial payments and the value of financial institution ('bank') cheques used for certain types of transactions has continued to grow as personal cheque use has contracted. The average value of cheque payments reflects these trends, rising by 19 per cent in 2013/14, to around \$6 800. As is discussed in 'Property settlements' in the chapter

Graph 6
Cheque Payments
 Year to date



Source: RBA

on 'Oversight of High-value Payment Systems', the introduction of an electronic conveyancing platform by Property Exchange Australia Ltd scheduled for late 2014 is expected to result in a decline in the use of cheques in property-related purposes.

Consumers and businesses have continued to adopt BPAY as a method of making bill payments, with the number of BPAY transactions increasing by 5 per cent and the value by 11 per cent in 2013/14. The average value of bill payments is relatively high (around \$800), reflecting their use for payments such as utilities, education fees and investments. As a consequence, the value of payments processed through BPAY has slightly exceeded the value of credit/charge card payments in the past two financial years.

Use of the direct entry (DE) system also continued to grow in 2013/14, with the number of direct debits increasing by around 13 per cent, a substantially faster pace of growth than has occurred over the past five years. The number and value of direct credits grew by around 7 per cent, a little faster than the recent average. DE payments are an important part of the payments landscape, used extensively by consumers for internet 'pay-anyone' transactions as well as by small businesses, corporations and governments for payments such

as wages and bill collection. Because of the range of payment types facilitated, the average transaction size processed in the DE system does not correspond to levels typically associated with 'consumer' payments. For example in 2013/14, the average values of direct debit and direct credit payments were \$6 900 and \$4 400 respectively. As a consequence, DE payments continued to account for the bulk of the value of non-cash payments (87 per cent in 2013/14). With the move to same-day settlement of DE payments in November 2013, financial institutions are now in a position to make funds available to recipients on a more timely basis without the introduction of credit risk for the receiving financial institution (see 'Same-day Settlement of Direct Entry' in the chapter on 'Strategic Review of Innovation').

Online payments

The Bank's 2013 Study of Consumers' Use of Payment Methods found that the growth in remote payments (e.g. due to the rise of online commerce) was one factor influencing changes in consumers' choice of payment methods. Australian individuals and businesses have a number of payment options for making payments via the internet. Firstly, they can use credit cards and certain debit cards to purchase goods and services online by entering card details directly into merchants' websites. Secondly, through internet banking, they can initiate credit transfers (commonly referred to as 'pay-anyone transfers') to purchase goods and services (by transferring funds directly into the seller's bank account) or, in the case of some businesses, to pay their staff and suppliers.² Thirdly, the BPAY system facilitates bill payments with the customer initiating the transaction through the internet banking service provided by their financial institution. Finally, in more recent years a number of specialised online payment providers (such as PayPal) have emerged which facilitate online purchases by a variety of methods. These include membership-based systems that fund transactions either from stored value, or directly through established payment systems such as card schemes or DE, and systems that allow a DE credit transfer to be initiated from a merchant's website.

The number and value of domestic online payments made by Australians (using the various methods described above) increased by around 11 per cent and 16 per cent, respectively, in 2013/14, to account for around 18 per cent of total non-cash payments. The 2013 survey data suggest that online retail payment methods are used most frequently at certain types of merchants, including electrical and furniture retailers, leisure, sport and entertainment providers and for holiday or travel payments.

Online payments made using credit cards, debit cards and specialised payment providers have experienced faster growth than BPAY and internet banking in recent years, increasing by around 16 per cent in number and 14 per cent in value in 2013/14 (Table 2). These transactions accounted for over 30 per cent of the total number of online payments but only 2 per cent of the value, with the average value of such transactions being significantly smaller than the average value of 'pay-anyone' transactions to make purchases, pay bills and transfer funds.

² Pay-anyone transactions can also be used to transfer funds (as opposed to purchase goods and services), for instance transferring funds to another person to provide or repay a loan.

Table 2: Online Payment Methods
Australians' domestic payments

	2013/14		2013/14		Average annual growth, 2010/11–2013/14	
	Per cent of total		Growth, per cent		Per cent	
	Number	Value	Number	Value	Number	Value
Internet banking-initiated credit transfers	47.6	88.4	10.2	16.8	10.4	13.0
BPAY	21.0	9.6	6.4	11.0	7.5	11.9
Credit cards, debit cards, and specialised payments providers	31.4	2.0	16.5	13.9	21.6	15.3
Total online payments	100.0	100.0	11.3	16.2	12.8	13.0

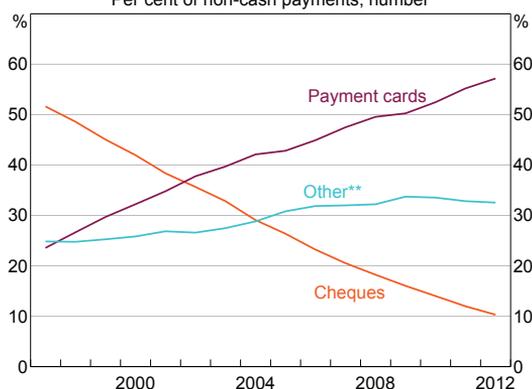
Sources: BPAY; RBA; specialised payments providers

International Payment Trends

According to data published by the Bank for International Settlements, the international payment trends observed in 2012 (the latest year for which comprehensive data are available) are largely consistent with those experienced in Australia (Table 3). The use of card payments continued to grow, most notably debit cards, while cheque use continued to decline as a proportion of the total number of non-cash payments (Graph 7). In 2012, for a subset of nations for which comprehensive data are available, card payments accounted for 57 per cent of the total number of non-cash payments (slightly less than the proportion in Australia), while cheque payments declined to account for around 10 per cent of the total number of non-cash payments (noticeably higher than their share of payments in Australia). The share of other electronic payments (direct debits and direct credits) remained at just over 30 per cent.

Despite broadly similar trends in non-cash payment use across countries, there are marked differences in the size and composition of these payments. The number of non-cash payments in higher-income countries (such as the United States, Sweden, Netherlands and Australia) is greater than countries such as India and Mexico by more than a factor of ten. Cheque use remains low in most countries, with Canada, France and the United States being notable exceptions; though use of cheques is also declining in these countries. Australia is a middle-ranking country in terms of cheque use, above some northern European countries where cheque use is very low or non-existent.

Graph 7
Non-cash Payments – International*
Per cent of non-cash payments, number



* Selected CPI countries; data prior to 2009 have been adjusted for changes in reporting and membership

** Includes direct credit and direct debit transactions

Sources: ABS; BIS; RBA

Table 3: Non-cash Retail Payments in Selected CPSS Countries
Number per capita, 2012

	Cheques	Direct debits	Direct credits	Debit card	Credit card^(a)	Total^(b)
United States	58	42	28	165	84	377
Sweden	<1	31	90	190	40	351
Netherlands	0 ^(c)	82	101	151	7	341
Australia	10	32	72^(d)	132	78	324
Korea	9	33	63	50	147	302
United Kingdom	13	54	58	129	35	289
Canada	22	20	28	126	90	286
France	43	54	47		130 ^(e)	274
Belgium	<1	26	85	98	13	222
Germany	<1	108	75	31	7	221
Switzerland	<1	6	97	57	27	187
Brazil	7	22	46	20	24	119
Italy	5	10	21	18	10	64
Saudi Arabia	<1	<1	<1	54	2	56
South Africa	1	14	13		26 ^(e)	54
Russia	<1	1	19	18	2	40
Mexico	3	1	9	8	5	26
India	1	<1	<1	5	<1	6

(a) Includes charge debit cards

(b) Excludes e-money

(c) Cheques were abolished in the Netherlands in 2001

(d) Includes BPAY

(e) Split between debit and credit cards not available

Sources: ABS; BIS; RBA

Box A

The 2013 Survey of Consumers' Use of Payments

In 2013, the Reserve Bank undertook its third survey of the use of payment methods by Australian consumers ('the 2013 survey'), following previous studies in 2007 and 2010.¹ The 2013 survey results show that the use of 'paper-based' payment methods such as cash and cheques continued to decline, while card use increased significantly (Table A1). PayPal use also increased, while the relative use of other payment types remained broadly stable.

While the use of cash is declining, it remains the most used payment method, accounting for around half the number of all payments. Cash is used extensively for lower-value payments and payments at small food retailers and bars (Table A2), where the quick tender time of cash may favour its use. It is also more commonly used by older individuals whereas younger individuals are relatively more willing to use newer technologies for payments.

Nonetheless, the 2013 survey indicates that the key trends – the declining use of cash and the increased use of cards – are widespread across demographic characteristics such as age, household income and location of residence. Further, the decline in cash use has occurred across most types of purchases, payment values and merchant categories. The only exception in the recent survey was for the payment of services (which covers a wide range of merchant types, including e.g. music tuition, plumbing and accountancy services), where cash use appears to have remained steady at above 50 per cent of the number of payments in all three surveys.

Table A1: Use of Payment Methods over Time
Per cent of all payments

Payment method	Number of payments			Value of payments ^(a)		
	2007	2010	2013	2007	2010	2013
Cash	69	62	47	38	29	18
Cards	26	31	43	43	43	53
<i>Debit cards</i>	15	22	24	21	27	22
<i>Credit and charge cards</i>	11	9	19	23	16	31
BPAY	2	3	3	10	10	11
PayPal ^(b)	na	1	3	na	1	2
Internet or phone banking ^(b)	na	2	2	na	12	10
Cheque	1	1	0	6	3	2
Other	1	1	2	3	3	5

Notes: Excludes entries with missing payment method information

(a) Payments of \$9 999 or more are excluded for comparability across surveys because payment value was truncated at \$9 999 in the 2007 survey; further, the small number of such payments that occur during any week generates significant volatility in shares over time

(b) Not collected in 2007

Sources: RBA surveys, conducted by Colmar Brunton and Roy Morgan Research

1 See Ossolinski C, T Lam and D Emery (2014), 'The Changing Way We Pay: Trends in Consumer Payments', RBA Research Discussion Paper No 2014-05.

Table A2: Use of Cash and Card Payments for Different Types of Purchases
Per cent of number of payments within each category

Broad merchant categories	2007		2010		2013	
	Cash	Card	Cash	Card	Cash	Card
Food retailers	90	10	85	14	72	27
Services	51	27	56	33	50	38
Other	68	17	61	18	46	28
Holiday/leisure	78	19	67	25	43	40
Petrol/transport	60	36	53	43	41	54
Goods retailers	62	35	56	40	40	48
Supermarket	60	39	54	46	38	59
Bills/medical	44	33	25	32	18	42

Notes: Shares for each group do not add to 100 as the shares of other payment types such as personal cheques or PayPal are not shown
Sources: RBA surveys, conducted by Colmar Brunton and Roy Morgan Research

The decline in the use of cash reflects not only the growth in online shopping, which has increased the share of payments made remotely (i.e. not at the physical point of sale), but also a change in the preferences of consumers at the point of sale, with increased use of cards replacing the use of cash. This change in consumer preference for point-of-sale transactions was the largest factor underlying the rise in the use of cards in the most recent survey; the increasing share of payments being made online, and the rise in the use of cards for such payments, contributed to a lesser degree.

The drivers of higher card use at the point of sale include the increasing number of merchants offering the option to pay by card, as indicated by the growth of card terminals over the period, and the introduction of new card technologies making it easier to pay by card. Technological innovations include the introduction of contactless cards and PIN authentication (both reduce transaction time relative to using a signature) and the introduction of card-only terminals (often self-checkout machines) in supermarkets. Comparison of the 2010 and 2013 surveys shows growth was strongest for lower-value payments where cash has been (and remains) the most widely used method.

The survey confirms the ongoing decline in the use of personal cheques; respondents reported the equivalent of three cheque payments per person per year in 2013, down from eight in 2007.² This decline is in part associated with an increasing proportion of the population that is likely to never have used cheques; only 7 per cent of personal cheques are written by those aged less than 40 years. However, personal cheque use by those aged over 65 years has also declined.

In contrast, the survey indicated growth (from a low base) in the use of PayPal, driven both by the growing share of Australians shopping online and the use of PayPal for online retailing beyond eBay (its original source of transaction growth). PayPal payments were used more frequently by those aged less than 40 years, in line with expectations that younger individuals may more readily adopt new technology. However, older age groups have also increasingly made use of PayPal for transactions.

The 2013 survey also provides some information on the effect of certain aspects of the Bank's retail payments system reforms. In 2003, contractual restrictions preventing merchants from surcharging card payments were

² Personal cheques refer to cheques written using a personal cheque book and drawing on a chequing account.

removed to allow merchants to recoup the cost of card acceptance and provide more efficient price signals to customers. The 2013 survey indicates that a surcharge was paid on around 4 per cent of card payments. This is a similar level to the 2010 survey, despite increasing card use over the intervening period; consumers appear to be typically able to switch to other payment methods if they are unwilling to pay a surcharge. The survey also indicates that consumers who are part of a reward program are more likely to pay surcharges than those who are not. The majority of surcharge levels reported appeared broadly consistent with the cost of acceptance of surcharged cards, although a wide range of surcharge levels were reported.

The 2009 ATM reforms replaced 'foreign fees' applied by a customer's own bank when a transaction was made at a foreign ATM with more transparent 'direct charges' applied by the ATM owner and disclosed before the transaction is authorised.³ This increased transparency has encouraged consumers to seek out ATMs provided free of charge by their own financial institution. The 2013 survey indicates that consumers have become more adept at avoiding ATM fees over time, with only 15 per cent of transactions attracting a direct charge, compared with 23 per cent in 2010. The relatively low proportion of transactions attracting a fee also reflects that most Australian cardholders have access to a fee-free network of at least 2 000 ATMs.

3 A 'foreign' ATM is an ATM not owned by the cardholder's financial institution.

Other Retail Payments Developments

In addition to monitoring trends in the use of the various payment methods discussed in the previous chapter, the Board monitors a range of other developments relevant to its responsibilities of promoting competition and efficiency in the payments system. This chapter outlines developments during 2013/14 in wholesale interchange fees for card payments, fees paid by merchants for accepting card transactions and fees and incentives faced by cardholders. Trends in merchant surcharging and payments fraud are also discussed, along with some recent payments innovations (see 'Box B: Recent Innovations in Retail Payments').

Interchange Fees

Interchange fees are wholesale fees paid between a merchant's financial institution and a cardholder's financial institution when a cardholder undertakes a card payment. The Reserve Bank has put in place regulations for the level of interchange fees in the MasterCard and Visa credit card systems, the Visa debit card system and the eftpos debit card system.³ As outlined in the Bank's submission to the Financial System Inquiry, the Bank's interchange reforms reflected concerns about the lack of transparency around interchange fees. The Bank also considered that the large gaps that existed between the fees charged across credit card and debit card systems were not justified by the differences in costs and sent inefficient price signals to customers and merchants.

Under the Bank's standards, the weighted average of multilateral interchange fees in the above systems must not exceed certain benchmarks on specified compliance dates – 1 November of every third year after 2006, or on any date the card scheme makes a change to its interchange fee schedule. The multilateral interchange fee benchmarks were unchanged in 2013/14, at 0.50 per cent of the value of transactions for the credit card systems and 12 cents per transaction for the debit card systems, with these fees paid by the acquirer (merchant's bank) to the issuer (cardholder's bank).

Under the various interchange fee standards, card schemes have the flexibility to set different multilateral interchange fees for different types of transactions, provided that the weighted average of these fees for each system does not exceed the relevant benchmark on the compliance dates. In line with developments elsewhere, both the number of interchange fee categories and the difference between the highest and lowest fee categories have grown over the years since the Bank first introduced interchange fee standards. Over time, MasterCard and Visa have progressively introduced new, higher fee categories for consumer and business cardholders, based on the type of card held (e.g. premium/platinum, super premium, 'elite'/'high net worth'). This enables issuers to pay more generous incentives to holders of these cards. The schemes have also introduced fee categories based on factors such as the type of merchant (e.g. government/utility) and type of transaction (e.g. MasterCard's rates for contactless and low-value transactions). The growth in higher

³ For debit cards, MasterCard has provided the Bank with a voluntary undertaking to comply with the interchange fee benchmark in the Visa Debit Standard. All interchange fees quoted in this section exclude GST.

interchange categories has been accompanied by a reduction in fees in some other existing categories and the introduction of lower 'strategic' rates applying to transactions at selected merchants. While the number of categories and the range of fees have grown, overall, the interchange fee reforms have significantly brought down the average interchange fees paid in the international systems and have reduced the gap between interchange fees in the credit card, scheme debit and eftpos systems.

Table 4 shows the interchange fees currently applying in the credit card and debit card systems. Neither MasterCard nor Visa made changes to credit card interchange fees during 2013/14, after last making changes in June 2013. In the debit card systems, MasterCard and Visa made a few changes to their interchange fee schedules in November 2013. These changes included:

- both MasterCard and Visa increased their 'consumer standard' fees, which apply to manually processed or card-not-present transactions, such as those made over the telephone or internet (if another type of fee does not apply). MasterCard's rate increased from 12.0 cents to 15.8 cents per transaction, while Visa's fee increased from 0.20 per cent to 0.26 per cent
- MasterCard increased its 'consumer electronic' fee from 6.0 cents to 9.1 cents per transaction
- both schemes increased their 'consumer premium' rates. MasterCard increased its rate from 0.50 per cent to 0.91 per cent of transaction value, while Visa increased its equivalent fee from 0.40 per cent to 0.50 per cent.

eftpos Payments Australia Ltd (ePAL) left interchange fees for eftpos transactions unchanged in 2013/14, after introducing lower rates for qualifying merchants in October 2012.

Interchange rates applying to prepaid card transactions are not formally regulated. However, in September 2006 the Board noted its expectation that interchange fees for transactions on these cards would be published and set broadly in conformity with the Standard on interchange fees in the Visa Debit system. The changes to debit card interchange schedules made by Visa in November 2013 (as described above) applied to prepaid card transactions. In March 2014, MasterCard made amendments to its interchange fee schedule for prepaid cards. It increased the 'consumer electronic' fee for prepaid cards from 6 cents per transaction to 12 cents, and removed eight fee categories that applied to prepaid cards. Under the amended fee schedule, prepaid cards no longer attract rates specific to certain transaction types, such as micropayment and PayPass transactions; nor are there separate categories for specific merchant types (other than charities and strategic merchants).

Merchant Service Fees

The average fee paid by merchants to their financial institution for transactions on MasterCard and Visa credit and debit cards has been largely unchanged in recent years. In 2013/14 the average fee was largely unchanged at 0.78 per cent of the value of transactions (Graph 8). The average fee is 62 basis points lower than the level prevailing in the September quarter 2003, just prior to the original interchange reforms coming into effect. Over the same period, average merchant service fees for transactions on American Express and Diners Club cards have fallen by 71 basis points and 31 basis points, respectively. In 2013/14, the average fee for

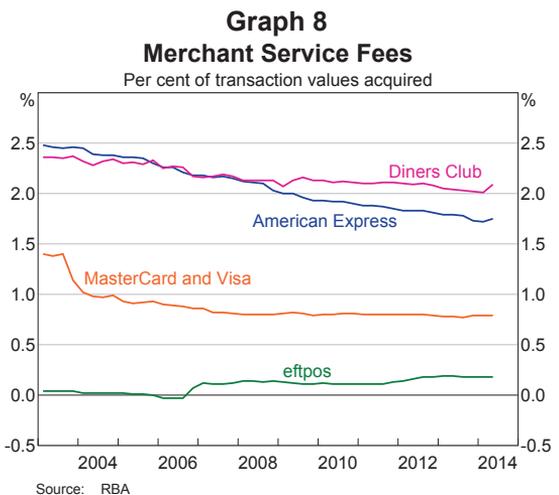


Table 4: Interchange Fees^(a)
Excluding GST; as at 30 June 2014

	Credit card Per cent		Debit card Cents unless otherwise specified		
	MasterCard	Visa	MasterCard	Visa	eftpos
Consumer electronic	0.30	0.30	9.1 ^(b)	8.0	4.5
Consumer standard	0.30	0.30	15.8 ^(b)	0.26% ^(b)	–
Consumer premium/ platinum	0.95	0.93	0.91% ^(b)	0.50% ^(b)	–
Super premium	1.59	–	–	–	–
Visa Rewards	–	1.50 or 1.70 ^(c)	–	–	–
Visa Signature	–	1.80	–	–	–
Consumer elite/ high net worth	2.00	1.80 or 2.00 ^(c)	–	–	–
Commercial	1.00	0.97 or 1.20 ^(d)	0.91%	0.85%	–
Commercial premium	1.30 or 1.35 ^(e)	1.30 or 1.80 ^(f)	–	–	–
Strategic merchant	0.23 or 0.29	0.20 to 0.40	3.2 or 3.6	2.0 to 60.0	0.0 to 4.5
Government/utility	0.29	0.30	7.0	6.0	–
Charity	0.00	0.00	0.0	0.0	0.0
Petrol/service station	0.29	0.30	7.0	6.0	–
Education	0.29	0.30	–	6.0	–
Supermarket	–	0.30	–	6.0	–
Insurance	–	0.30	–	6.0	–
Transit	–	0.30	–	6.0	–
Recurring payment	0.29	0.30	10.0	6.0	–
Contactless ^(g)	0.29	–	5.0	–	–
Quick Payment Service	0.40	–	6.0	–	–
Micropayment ^(h)	–	–	0.4	–	0.0
SecureCode merchant	0.30	–	8.0	–	–
SecureCode full	0.30	–	10.0	–	–
Medicare Easyclaim	–	–	–	–	0.0
Benchmark	0.50	0.50	12.0	12.0	12.0

(a) Fees are paid by the acquirer to the issuer, except for transactions involving a cash-out component

(b) The rate applying to this category increased in November 2013

(c) The higher rate applies if an account is deemed qualified (if spending on that account exceeds a card-specific threshold)

(d) Visa has three types of non-premium commercial rates; the 'business' category attracts a fee of 0.97% while the 'corporate' and 'purchasing' categories attract a fee of 1.20%

(e) 1.30% for the 'commercial corporate executive' category and 1.35% for the 'commercial business executive' category

(f) 1.30% for the 'commercial premium' category and 1.80% for the 'business signature' category

(g) MasterCard *PayPass* transactions equal to or less than \$60, excluding commercial credit cards

(h) Transactions with a value equal to or less than \$15

Sources: ePAL website; MasterCard website; RBA; Visa website

American Express transactions declined by 6 basis points to 1.74 per cent of the value of transactions, while the average Diners Club fee declined by 3 basis points to 2.04 per cent.

The average merchant service fee for eftpos transactions was little changed in 2013/14 at 10.4 cents per transaction. This corresponds to a rate of 0.18 per cent for the average eftpos transaction, well below the rate for a transaction over the international schemes' networks. However, as eftpos fees are generally charged on a flat basis per transaction, eftpos fees can be higher than the ad valorem rates applying to transactions over the international schemes for some low-value transactions.

Pricing and Product Offerings to Cardholders

In 2013/14, the mix of cards offered to consumers continued to evolve gradually in a manner consistent with the longer-term trend towards the introduction of new 'premium' products by issuers. Most notably, premium-branded cards were introduced into the prepaid market, focused on the travel industry.

Credit cards

As discussed in previous annual reports, card issuers offer a range of credit card products, each providing a different mix of fees, features and rewards to appeal to different customer types. At the broadest level, cardholders can choose between holding cards that offer no rewards (including 'low rate' and 'low fee') and cards with rewards programs ('standard', 'gold', 'platinum' and 'super premium'), with each successive category offering more generous rewards, but generally commanding higher annual fees. Consumers who use their credit card relatively frequently may be attracted to cards offering rewards points and other benefits such as travel insurance and enhanced warranties for goods purchased on the card.

For cardholders who carry outstanding balances from month to month ('revolvers'), *low rate* cards tend to be more attractive as the average interest rate on these cards is around 7 percentage points lower than the interest rate on rewards cards (Table 5). *Low fee* cards may be more attractive to cardholders who typically pay their credit card balance in full each month ('transactors'), but who use their credit card for transactions relatively infrequently.

In 2013/14 issuers continued to gradually expand the range of products offered at the premium end of the credit card market. This reflects the introduction of additional interchange fee categories by MasterCard and Visa in recent years. For instance, card issuers are likely to receive considerably more interchange revenue for 'elite'/'high net worth', super premium and platinum cards than for standard or gold cards.⁴

Broadly, in 2013/14 advertised annual fees for most types of credit cards appear to have fallen slightly while rewards programs generally became a little less generous. For example, the average annual fee for a non-rewards card fell from \$59 to \$52, reflecting a small fall for standard and low fee cards. Average annual fees for platinum and super premium rewards cards also fell slightly, though annual fees for standard/gold rewards cards increased a little. The fall in average annual fees partly reflects the introduction of products with lower annual fees, rather than the fees for existing products declining. The average expenditure required to earn a \$100 shopping voucher increased for standard/gold and platinum rewards cards, increasing to \$17 900 and \$15 900 respectively (as a result, the implied average return on spending fell, to 0.56 per cent and 0.63 per cent respectively). The required spending for super premium cards increased to \$11 100 (an implied average return on spending of 0.90 per cent).

⁴ A recent development in the premium segment of the market has been the introduction of elite/high net worth cards, which sit above super premium cards in terms of exclusivity and attract the highest interchange fees of up to 2.0 per cent of transaction value.

Table 5: Typical Features of Personal Credit Cards, by Type^{(a),(b)}
As at end June 2014

	Number of card products	Average annual fee \$	Average interest rate Per cent	Average spending for \$100 voucher (primary and companion card) ^(c) \$	Range of rewards benefit as per cent of spend (primary and companion card) ^(c) Per cent
No rewards					
Standard, gold and platinum	31	52	16.6	–	–
<i>of which:</i>					
Low rate	13	79	12.8	–	–
Low fee	12	12	19.2	–	–
Rewards					
Standard or gold	24	85	19.9	17 900	0.25–1.00
Platinum	24	206	20.2	15 900	0.31–1.13
Super premium	8	424	20.0	11 100	0.60–1.25

(a) Reported averages are calculated as a simple average of relevant products' features; the total sample comprises around 90 credit card products offered by the top 10 credit card issuers and selected major merchants; the top 10 issuers are based on issuing market shares calculated from the Bank's Retail Payments Statistics collection; only products which are available to all new cardholders are included in the sample

(b) For the purposes of this table, a rewards card involves the cardholder having the ability to accumulate a store of points, which may be redeemed for goods or services – other benefits such as instant cashbacks, overseas travel insurance and extended warranties are not included; only rewards programs where a \$100 shopping voucher can be redeemed are included in the calculations for rewards spending and benefits, but all rewards cards are included in the calculations for the number, annual fee and interest rate

(c) Average of the sum of the required spend for each applicable card; figures do not take into account the ability to earn additional reward points at certain merchants; the value of spending required to obtain a \$100 shopping voucher assumes cardholders with a credit card product containing a companion American Express card spend equal amounts on their MasterCard/Visa card and companion American Express card

Sources: RBA; card issuers' websites

Debit cards, transaction accounts and prepaid cards

The pricing of debit cards to consumers is less clear than credit cards because debit card services are generally bundled with a range of transaction and account services. The pricing arrangements for transaction accounts have been largely unchanged over the past few years, with the average advertised account-keeping fee for an unlimited transactions account remaining largely unchanged at around \$4.50 per month in 2013/14. This type of account entitles cardholders to an unlimited number of free transactions, including transactions made on eftpos, MasterCard or Visa debit cards, internet/telephone banking, cheque and branch transactions and ATM withdrawals made at ATMs operated by the cardholder's own institution. Some financial institutions offer these accounts for a zero monthly fee, while others offer lower fee accounts that provide free electronic, but not branch or cheque, transactions. More generally, in practice some account holders are not required to pay the advertised monthly fee, with institutions commonly waiving this if the cardholder deposits sufficient funds into the account each month or if the account is part of a broader package of banking services (e.g. if the cardholder has a home loan with the institution).

There were no significant changes in debit card product offerings in 2013/14. The premium segment of the debit card market remains small relative to both the overall debit card market and the premium credit card market. Premium debit cards usually feature some of benefits traditionally associated with credit cards, such as extended warranties and travel insurance. In at least one case, rewards points are provided, but the rate of point accrual is lower than for credit card rewards programs.

Prepaid cards represent a small proportion of the payment cards market compared with credit and debit cards, but the number of offerings and features available increased over 2013/14. In particular, prepaid cards connected to airline frequent flyer programs, namely Qantas Cash and Virgin Global Wallet, were introduced. These cards are largely promoted as enabling the cardholder to load foreign currency balances onto the card for use overseas as an alternative to cash, traveller's cheques, debit cards or credit cards. Australian dollar balances on these cards can be used domestically. In contrast to most types of prepaid card, these feature reward programs, typically focused on the accrual of frequent flyer points.

Surcharging

Since the Reserve Bank removed the card schemes' 'no-surcharge' rules as part of its payments system reforms starting in 2003, merchants have been able – should they choose – to pass on the costs of accepting credit and debit cards to cardholders choosing to use those payment methods. The removal of these no-surcharge rules appears to have had many of the desired effects, including providing better price signals to cardholders about relative card acceptance costs faced by merchants, reduced cross-subsidisation of card users by all other customers and greater scope for merchants to negotiate merchant service fees.

In 2012, the Board decided, after extensive consultation, to vary the surcharging Standards, reflecting its concerns about surcharging practices that had developed over the period since no-surcharge rules were removed. In particular, the Board was concerned about the increase in cases where surcharges appeared to be well in excess of card acceptance costs or where surcharges were 'blended' across card schemes with different acceptance costs for merchants. The revised Standards, which came into effect in March 2013, enable the international card schemes to modify their scheme rules to seek to limit surcharges to the 'reasonable cost of card acceptance' and to address cases where merchants are clearly surcharging at a higher level than is justified. Merchants are nonetheless still able to fully recover their legitimate card acceptance costs. The changes have been reflected in MasterCard and Visa scheme rules and American Express merchant agreements.

Significant developments in this area in 2013/14 included:

- The release of a study on surcharging by the Commonwealth Consumer Affairs Advisory Council which concluded that excessive or misleading surcharging practices can be detrimental to consumers when they are used as a mechanism to weaken price signals. The study noted that consumers are concerned about the surcharging practices of businesses in some industries, particularly those operating online. It encouraged businesses to improve the clarity and disclosure of their pricing practices to minimise consumer misunderstanding and considered that the Australian Competition and Consumer Commission (ACCC) would be an appropriate agency to investigate broader issues regarding excessive or misleading surcharges. It also found that 'credit card surcharges that reflect the reasonable costs of card acceptance are generally beneficial to consumers as they support wider acceptance of payment options that are convenient for Australian consumers while facilitating efficient outcomes within the payments system.' The study did not advocate for any modification of the Bank's surcharging Standards or Guidance Note.
- In June the ACCC announced that it was initiating separate proceedings in the Federal Court against two airline companies, alleging that each had engaged in misleading or deceptive conduct known

as ‘drip pricing’ in relation to the pricing of particular airfares. ‘Drip pricing’ is where a headline price is advertised at the beginning of an online purchasing process and additional fees and charges (which may be unavoidable for consumers) are then incrementally disclosed (or ‘dripped’). The ACCC alleges that both airlines have failed to adequately disclose upfront an additional booking and service fee which applies to the majority of online bookings.

Based on data from East & Partners’ semi-annual survey of the merchant acquiring market, the proportion of merchants that surcharge credit card transactions has continued to rise, with 43 per cent of merchants surveyed applying a surcharge on at least one of the credit cards they accepted in June 2014, up from 39 per cent in June 2013. Surcharging continues to be more common among ‘very large’ merchants (in the survey, those with annual turnover above \$725 million) and is significantly more common for American Express and Diners Club transactions than MasterCard and Visa transactions.

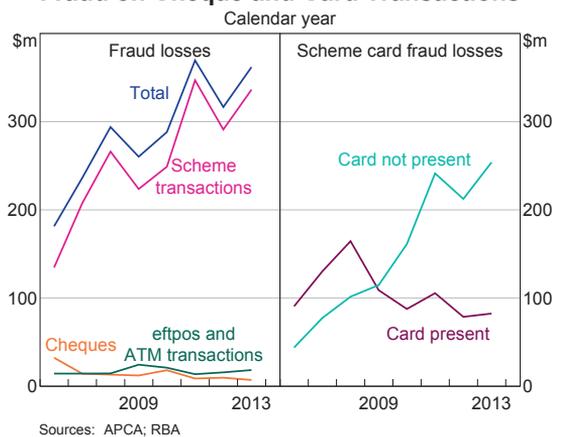
While a significant, and growing, share of merchants surveyed by East & Partners report imposing surcharges, it appears that, when faced with a surcharge, many consumers choose to use an alternative surcharge-free payment method. The results of the Bank’s November 2013 consumer payments diary survey show that consumers paid a surcharge on only around 4 per cent of all card payments – a similar level to that recorded in 2010. The median value of surcharges paid by consumers participating in the survey was 1.8 per cent of the payment value – 1.5 per cent for MasterCard and Visa transactions and 2 per cent for American Express and Diners Club transactions. Surcharges were more commonly paid in a card-not-present environment (e.g for online transactions) than in a card-present environment where consumers paid a surcharge on only 2 per cent of card transactions.

Cheque and Card Payments Fraud

According to data collected by the Australian Payments Clearing Association (APCA), total fraud losses relating to fraudulent cheque and debit, credit and charge card transactions (where the card was issued and/or acquired in Australia) increased by 14 per cent in 2013, to \$362 million.⁵ The increase mainly reflected a rise in fraud on ‘scheme’ debit, credit and charge cards,⁶ which increased by 16 per cent to \$336 million (Graph 9, Table 6).⁷

The large proportion of fraud accounted for by scheme card transactions, compared with cheque, eftpos and ATM transactions, mostly reflects the ability to use scheme cards in a card-not-present environment (for instance online, or via telephone or mail). At \$254 million in 2013, card-not-present fraud now makes up around 75 per cent of all scheme card fraud, up from 38 per cent in 2008 (Graph 9). Much of the increase in this type of fraud reflects the strong growth in online commerce; in addition, industry

Graph 9
Fraud on Cheque and Card Transactions



5 In June APCA released a new annual publication, *Australian Payments Fraud Details and Data* which provides aggregate fraud data for 2008 to 2013 and an overview of industry initiatives aimed at reducing payments fraud. For details see: <<http://apca.com.au/docs/fraud-statistics/Australian-payments-fraud-details-and-data-2014.pdf>>.

6 Fraud statistics for ‘scheme’ debit, credit and charge cards include transactions through the international card schemes – MasterCard, Visa, American Express, Diners Club and JCB.

7 While fraud rates (the value of fraudulent transactions as a share of overall transactions) are not available for detailed categories, overall for Australian-issued cards, the rate of fraud increased from \$0.44 per \$1 000 in 2012 to \$0.49 per \$1 000 in 2013 to be a little below the 2011 peak of \$0.52 per \$1 000.

developments that have reduced the opportunities for card-present fraud (see below) may have made card-not-present fraud more attractive to fraudsters.

Table 6: Fraud Losses by Transaction Type
\$ million

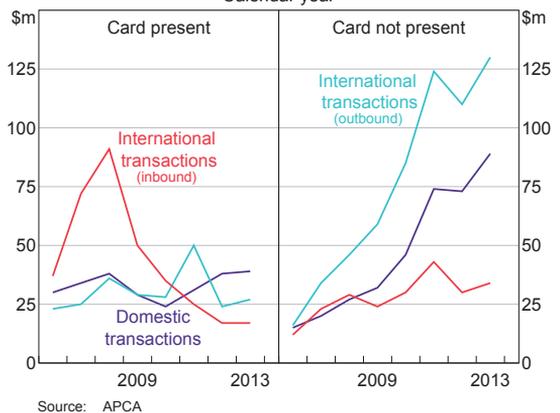
	2012	2013
All instruments	317	362
Cheques	10	7
All cards	307	355
eftpos and ATM transactions	16	18
Scheme debit, credit and charge cards	291	336
<i>Australian cards used in Australia</i>	111	128
Card present	38	39
Card not present	73	89
<i>Australian cards used overseas</i>	134	157
Card present	24	27
Card not present	110	130
<i>Foreign cards used in Australia</i>	46	51
Card present	17	17
Card not present	30	34

Source: APCA

Increased card-not-present fraud has been driven by both domestic and international transactions on Australian-issued scheme cards (Graph 10). Fraudulent card-not-present transactions overseas on Australian-issued cards ('international outbound') is the largest component and increased by 18 per cent in 2013, to \$130 million. Solely domestic card-not-present fraud increased by 23 per cent, to \$89 million. While card-not-present fraud in Australia on overseas-issued cards ('international inbound') also increased in 2013, it remains a small component of card-not-present fraud overall.

In contrast, card-present fraud on scheme cards has been generally flat or declining in recent years. Domestic card-present fraud was largely unchanged in 2013, reflecting a continued decline in counterfeiting/skimming fraud, offset by increases in 'lost/stolen' and 'never received' card fraud (Graph 11). The increase in these 'low-tech' types of fraud is likely due to fraudsters turning to more traditional methods of card theft (by obtaining cards through theft or intercepting newly-issued cards through the mail) as the adoption of EMV chip technology makes counterfeiting more difficult. The phasing out of signature authorisation starting from 1 August this year (see 'Box C: Card Industry Security Initiative: PIN@POS') is also likely to reduce

Graph 10
Domestic and International Card-present and Card-not-present Scheme Fraud
Calendar year

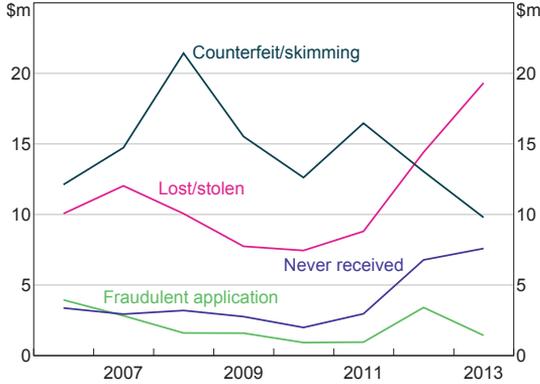


Source: APCA

Graph 11

Domestic Card-present Scheme Fraud

Australian-issued cards acquired in Australia, calendar year

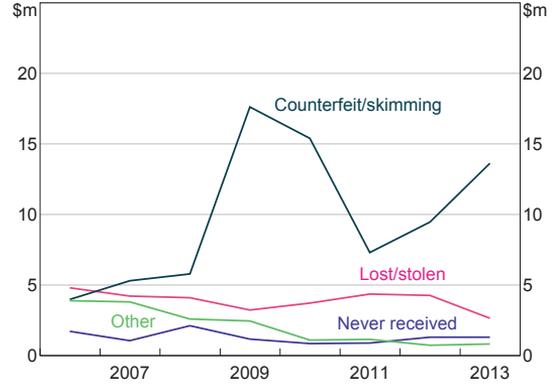


Source: APCA

Graph 12

Fraud on eftpos and ATM Cards

Calendar year



Source: APCA

the incidence of card-present fraud. Despite recent media reports suggesting that growth in contactless payments is contributing to the increase in lost/stolen fraud, the \$100 limit imposed on the transaction value would likely limit the attractiveness of committing card fraud on contactless cards compared with card-not-present fraud.

Fraud related to eftpos and ATM transactions is relatively small, accounting for only 5 per cent of the fraud covered by APCA's collection. However, in 2013 fraud losses associated with eftpos and ATM transactions increased by 17 per cent, to \$18 million, reflecting an increase in card skimming at ATMs (Graph 12). The ongoing roll-out of the EMV chip standard at ATMs and plans for EMV chip eftpos cards should help reduce the remaining counterfeiting activity over the coming years.

Cheque fraud declined by 27 per cent in 2013, from \$10 million to \$7 million, to represent just 2 per cent of the fraud covered by APCA's collection. Taking into account the large value of payments made by cheque, the rate of cheque fraud is low, falling from 0.8 cents per \$1 000 transacted in 2012 to 0.6 cents per \$1 000 transacted in 2013.

Box B

Recent Innovations in Retail Payments

Over the past decade the use of electronic means of payment has grown significantly, while consumers' use of paper-based methods, such as cash and cheque, for transactional purposes has declined. New technologies and innovations in the way traditional payment instruments can be used have facilitated this growth and continue to affect payments behaviour.

While debit and credit cards remain a popular and widely accepted alternative to cash, there are an increasing number of ways to initiate and accept a card-based transaction. At the point of sale, there has been a transition from the traditional swipe-and-sign arrangement to authenticating transactions made on 'chip' cards with PINs or contactless payment technology. Indeed, contactless functionality has become a standard feature under many credit and debit card schemes (e.g. MasterCard's PayPass or Visa's payWave), and eftpos is expected to begin implementing this functionality on its debit cards by the end of the year. Some banks have also introduced mobile phone applications that allow their customers to make contactless transactions from accounts linked to their payment cards, using near field communication (NFC) technology embedded in the phone handset or in a sticker. More generally, results of the 2013 Survey of Consumers' Use of Payment Methods indicate some growth in the use of mobile devices to initiate payments. However, this has mainly reflected consumers using mobile devices to conduct online banking tasks or to make purchases at online retailers, rather than to undertake point-of-sale payments.

Other innovations have also allowed consumers to interact in more ways with existing payment infrastructure. For instance, ATMs with features beyond basic withdrawal and balance enquiries are being introduced in Australia. Services currently being rolled out through various ATM networks include the ability to make transfers between linked accounts, depositing cash and/or cheques, purchasing mobile phone recharge vouchers, and initiating a cash withdrawal via a code transmitted to a mobile phone instead of using a physical card. Although not currently available in Australia, in the US and more recently in the UK, the payments industry has also introduced a form of cheque imaging which allows users to capture images of cheques on their mobile devices and remotely deposit these (instead of the physical cheques) with financial institutions for processing.

On the merchant side, there are also innovations to allow merchants to accept card payments in a number of ways. A number of these efforts have centred on augmenting existing devices such as mobile phones or tablets with physical attachments and software to allow merchants to accept card payments at potentially a lower cost than more traditional payment terminals. Others involve plans to introduce tablet-like card terminals that would allow additional functionality to be implemented easily – for instance, by downloading apps to allow for tipping and splitting bills, or to perform accounting functions. The portability of card terminals (e.g. to allow payment at the table for the hospitality sector) has also been a focus of these innovations, in part driven by the transition from signature to PIN-only authentication currently being implemented.

Outside of the traditional payments system, the development of 'cryptocurrencies', such as Bitcoin, Litecoin and Dogecoin, has gained some attention. Unlike other electronic payment systems, these 'peer-to-peer' systems rely on networks of end-users to process and verify transfers, typically denominated in each system's own unit of account – that is, they are decentralised systems that do not need a network operator to process transactions. Although, end-users can, by design, interact directly with such systems, third-party service

providers such as virtual currency ‘exchanges’ have also been established to help facilitate users’ interaction with cryptocurrencies. To date, the use and acceptance of these systems for payment purposes has been limited, despite some of the features advocated by proponents (e.g. pseudo-anonymity and faster cross-border transfers). This is partly due to the network effects inherent in payment systems: merchants are unlikely to accept payment methods that are not widely used, and users are slower to adopt payment methods not widely accepted by merchants. In addition, end-users may also have concerns over security and stability of cryptocurrencies, and many of their purported benefits may already be offered by more established payment methods.

Box C

Card Industry Security Initiative: PIN@POS

A joint industry initiative involving a group of card schemes and Australian financial institutions has been working on a program to phase out signature authorisation for credit card and debit card payments. In January, the group announced that the implementation date for this initiative would be 1 August 2014. Over a short transition period currently underway, and starting at some larger merchants, cardholders will be prompted to enter a PIN when completing a purchase at a point-of-sale terminal rather than using a signature.

Under the initiative, domestic transactions on Australian-issued American Express, Diners Club, MasterCard and Visa chip cards will require a PIN to be entered (PIN use is already mandatory for transactions over the eftpos network and for ATM withdrawals). However, arrangements for certain types of transactions will not change; for instance contactless transactions under \$100 will not require a PIN; international and magnetic-stripe transactions will also be exempt. The industry is working to establish arrangements for the limited number of cardholders who, due to individual circumstances, are unable to use PIN authentication. These cardholders will be able to use ‘signature preferred’ cards offered by some Australian banks.

The initiative is intended to improve the security of card payments made in-person. In particular, mandating PIN authorisation is expected to help protect against fraud arising from lost or stolen cards as it is much more difficult to obtain a PIN than it is to forge a signature. Over recent months the industry has run national advertising campaigns to inform the public of the upcoming changes and financial institutions have also been sending information to their customers. Further information about the initiative can be found at www.pinwise.com.au.

Retail Payments Policy and Research

Review of Card System Access Regimes

In May 2013, the Reserve Bank released a consultation paper reviewing the Access Regimes applying to the MasterCard credit, Visa credit and Visa Debit systems in Australia. The decision to consult was largely prompted by concerns that the Access Regimes were no longer as effective in fulfilling their original objective and instead may have been preventing some prospective scheme participants from entry. After consulting with interested parties, the Bank initiated a further round of consultation in December 2013 seeking feedback on draft variations to the Access Regimes, which would allow MasterCard and Visa greater discretion over membership of their respective systems, potentially widening eligibility.

The original access framework was implemented in 2004 and 2005 to expand access to the MasterCard and Visa systems while minimising any risks to the payments system as a whole. In addition to Access Regimes imposed by the Reserve Bank, the framework involved creating a new class of authorised deposit-taking institution, known as specialist credit card institutions (SCCIs), and supporting amendments to the *Banking Regulations 1966*. Since the framework was implemented, two entities have been authorised by the Australian Prudential Regulation Authority (APRA) as SCCIs. More recently, the Bank had become aware of a number of other entities with an interest in undertaking credit card issuing or acquiring activities (but not other banking business) in Australia. However, prospective participants may be discouraged from entry because the access framework imposes a regulatory burden that may be more onerous than necessary given the nature of their operations.

In March, the Board announced a decision in principle to vary the Access Regimes. This will also require the removal of the current SCCI framework, administered by APRA. The Bank's assessment is that the revised arrangements are in the public interest; they will promote competition and efficiency, while not materially increasing risk in those systems.

The revised Access Regimes will require each scheme to have in place transparent eligibility and assessment criteria and to certify annually to the Bank its compliance with the Regime. The certification will also include a list of entities that applied to participate in the Scheme in Australia over the reporting period, as well as a list of entities that ceased to participate in that Scheme.

The Board's decision to vary the Access Regimes is contingent on associated changes in other regulatory and self-regulatory frameworks. The proposed Access Regimes will be effective only if Regulation 4 of the Banking Regulations – which determines credit card issuing and acquiring in the MasterCard and Visa systems to be banking business – is repealed. The Bank has also indicated that the changes to the rules of the Bulk Electronic Clearing System would need to be amended to satisfactorily accommodate the effect of

the changed regulatory framework on its membership. The Bank expects that the variations should become effective around the end of 2014.⁸

Operational Incidents in Retail Payments Systems

To strengthen its oversight of operational disruptions in retail payments and contribute to the ongoing integrity of retail payment systems, in 2012 the Bank implemented reporting arrangements for significant retail payment incidents. To supplement this, in late 2013 the Bank implemented a framework for routine statistical reporting on retail payments incidents. The Bank has also collected additional information on the system architecture supporting retail payments activities to assist in its review of participant incident reports.

The Board has been kept informed of this work, and preliminary analysis of the data has been presented to the Board. Over time, these data are expected to provide a clearer picture of retail operational incidents and inform the Bank as to whether further policy action is necessary, either by individual institutions or across the industry more broadly. The Bank has also engaged with the Australian Payments Clearing Association (APCA) on how aggregate data might be provided to payment system participants to allow them to benchmark their operational performance.

Research: Cost and Consumer Use Studies

The Bank has been undertaking two significant studies to gather more information on the Australian payments system.

As discussed in the chapter 'Trends in Retail Payments', the Bank undertook its third survey of consumers' use and attitudes toward different payment methods in November 2013. As with the previous studies in 2007 and 2010, an important goal of the survey was to measure the use of cash in the economy, given that there is little other reliable information on this segment of the payments system. In addition, the survey provides a rich and valuable dataset for analysing payment choice by consumers. Two papers on this topic were published in June 2014: a Research Discussion Paper on trends in the use of retail payment methods by consumers⁹ and a *Bulletin* article focusing on the use and holdings of cash.¹⁰

The fieldwork for the survey was undertaken by Colmar Brunton following a competitive tender process. The survey consisted of three elements: a pre-diary questionnaire capturing demographic characteristics; a seven-day diary recording individual transactions; and an end-of-survey questionnaire asking about payment preferences and attitudes. For the first time, the survey was available online and was answered by most participants via this channel (including an option to respond using a smartphone-optimised webpage). However, a paper-based survey was also used for a smaller number of respondents who did not have access to the internet.

In addition to the study of consumers' use of payments, the Bank has also sought to improve its understanding of other aspects of the payments landscape. In particular, over the course of 2014 the Bank has been undertaking a large-scale review of the costs of different payment instruments for financial institutions and merchants. This study will update and extend the analysis undertaken as part of the 2007/08 review of the Bank's payment system reforms – when the costs associated with a variety of commonly used payment methods were last

8 See RBA (2014), *Payment Card Access Regimes: Conclusions*, March, available at <<http://www.rba.gov.au/payments-system/reforms/cc-schemes/201403-impact-stmt/conclusions/index.html>>.

9 See Ossolinski C, T Lam and D Emery (2014), 'The Changing Way We Pay: Trends in Consumer Payments', RBA Research Discussion Paper No 2014-05.

10 See Meredith J, R Kenney and E Hatzvi (2014), 'Cash Use in Australia', *RBA Bulletin*, June, pp 43–54.

considered. It will provide estimates of the costs to financial institutions of processing various payments and of the costs to merchants and other participants in the payments system. It will shed light on how changes in technology, payment functionality, issuing arrangements, pricing and patterns of payment use have altered the costs of different payment methods since 2007. The current study also involves a survey of small- and medium-sized merchants to provide information about how the costs borne by smaller merchants differ from those borne by larger merchants. Together, this information will enhance the Bank's understanding and analysis of retail payments issues, provide benchmarks against which financial institutions and merchants can compare their own cost structures, and help promote the public's understanding of the costs associated with different payment instruments.

The Bank is currently analysing the data received to date, seeking further information where necessary, and preparing a report that will be published towards the end of the year. It is grateful for the close cooperation of the financial institutions, merchants and business associations participating in this important project.

International Developments

Regulatory reform abroad continues to focus on improving competition and efficiency in card payment systems. Regulators in a number of jurisdictions have also undertaken a variety of consultations and reviews aimed at improving governance and examining the efficacy of existing payment systems. In this context, moves towards real-time retail payments and the introduction of new payment technologies have both received significant attention.

Regulatory frameworks, governance and innovation

In November 2013, the Reserve Bank of New Zealand (RBNZ) announced that it would review the payment and settlement systems that it owns and operates – the Exchange Settlement Account System and the NZClear Securities Settlement System. A consultation paper was released in May 2014 focusing on the likely future needs of both the RBNZ and the industry, with a view to significant upgrades necessary in the near term. The paper refers to the New Payments Platform project underway in Australia to provide real-time retail payments and seeks feedback from users as to their needs in relation to payment speed, innovation and system capabilities. Submissions were sought by July 2014.

In September 2013, the Financial Services Policy Committee of the US Federal Reserve System released a consultation paper on strategic initiatives to address impediments to innovation and efficiency in the US retail payments system. The paper emphasised the 'end-to-end' efficiency of payments rather than interbank issues. Similar to the approach taken by the Board in its Strategic Review of Innovation, the Federal Reserve sought views on some identified 'gaps' in the US payments system, the proposed outcomes that would address these gaps and the Federal Reserve's role in this process.

To address the gaps identified, the Federal Reserve proposed five outcomes to be achieved within ten years, one of which was 'ubiquitous electronic solution(s)' that would allow near-real-time retail payments to be made without knowing the bank account number of the recipient. The submission window closed in December 2013 and a new discussion paper is expected to be released in the second half of 2014. However, some progress has already been made with NACHA – the Electronic Payments Association (formerly the National Automated Clearing House Association) – announcing in March 2014 that it was reviving efforts to introduce same-day Automated Clearing House settlement capability.

In the United Kingdom, legislative changes have been made following the conclusion of the Government's 2013 consultation on improving the governance of the payments system. A new regulator – the Payments System Regulator (PSR) – has been established as a separate body under the Financial Conduct Authority. Similar to the Board's role and responsibilities, the new regulator will have a mandate to promote 'competition, innovation and the interests of end-users', while having regard to the stability of the UK financial system. To address the latter, the Bank of England (which retains responsibility for oversight and regulation of key financial market infrastructure, including recognised payment systems) and the Prudential Regulation Authority will have powers of veto over the PSR's decisions.

The PSR's powers will come into effect in 2015 and extend to any payment system operating in the UK that has been brought into scope by being designated by HM Treasury. Similar to the regime in Australia, once a payment system is designated the PSR will have a range of powers over its participants (operators, infrastructure providers and payment service providers).

The European Central Bank announced in December 2013 that the Single Euro Payments Area (SEPA) Council would be replaced by the Euro Retail Payments Board (ERPB); an entity with a broader membership and mandate. The ERPB is composed of seven representatives from the demand side (e.g. consumers, retailers and corporations) and seven from the supply side (e.g. banks and payment and e-money institutions), compared with five each on the SEPA Council. There are also five representatives from the euro area national central banks and one from the non-euro area European Union (EU) national central banks, all on a rotating basis.

The mandate of the ERPB is to 'help foster the development of an integrated, innovative and competitive market for retail payments' in the EU, but it has no power to impose binding measures. Instead, the ERPB is responsible for formulating common positions and issue guidance and statements on the direction of the development of the EU retail payments market while taking into account the views of end-users. It is expected to pay particular attention to cross-border integration of the payments card market and address aspects of the retail payments market (including business practices, requirements and standards) it deems necessary to achieving its objectives.

Card regulation

In December 2013, a US federal court judge granted final approval to a settlement negotiated in the long-running litigation between 17 merchants and merchant associations, and MasterCard, Visa and a number of card-issuing banks. The merchants and their associations had alleged that the respondents had colluded in setting credit card interchange fees and placed undue restrictions on merchants. The final settlement of US\$5.7 billion was reduced from US\$7.3 billion after 8 000 merchants opted out of the agreement. Most of the merchants opting out cited the settlement condition that would have prevented them from bringing similar action against the schemes in the future. A group of large merchants who opted out subsequently filed an appeal against the settlement agreement.

Separately, merchants in California, Florida and Texas filed challenges in March 2014 to respective state laws prohibiting merchants from imposing surcharges on credit card payments. Specifically, the merchants are contesting the prohibition on calling the price differential between a cash and credit purchase a 'surcharge', even though the economically equivalent concept of a cash 'discount' is permitted to be communicated. This follows a ruling by a New York federal court judge in October 2013 striking down the state's prohibition on surcharging and filing a preliminary injunction against its enforcement on the grounds that it violated the First Amendment right to free speech.

The challenges to state 'no-surcharge' laws are motivated by settlements reached with Visa, MasterCard and American Express last year, which permit merchants to impose surcharges under certain conditions, provided this is not prohibited by state law. No-surcharge laws are currently in effect across nine states, including California, Florida and Texas; the results of these challenges may have implications for the remaining six states with surcharging bans.

The European Parliament approved an amended package of reforms to retail payment regulations in April, but postponed voting on a draft legislative resolution until after the European Parliament elections. The reform package proposed by the European Commission has two components: a Regulation applying to card-based transactions and an update to the Payment Services Directive. The package is aimed at harmonising regulations across the European Economic Area, recognising new types of services available, and addressing competition concerns in the cards market. If approved, the package would significantly affect European retail payments, with proposed reforms including:

- a cap on interchange fees for domestic and cross-border debit and credit card transactions
- the separation of card schemes and processing entities
- non-discriminatory access for third party payment service providers to payment systems and account information.

Strategic Review of Innovation

In June 2012 the Board released the *Strategic Review of Innovation in the Payments System: Conclusions* (Conclusions Document).¹¹ The Review, conducted over a two year period, sought to identify areas in which innovation in the Australian payments system might be improved through more effective cooperation between stakeholders and regulators and to identify possible gaps in the Australian payments system that might need to be filled over the medium term.

The Review concluded that removing some of the barriers to cooperative innovation had the potential to deliver significant public benefits over time. Two broad approaches aimed at improving cooperative outcomes were proposed – the creation of a new industry coordination body and the establishment of strategic objectives for the payments system by the Board. To this end, the Conclusions Document put forward an initial set of strategic objectives (see 'Box D: Initial Strategic Objectives').

The Board has welcomed the industry's responses to the Strategic Review, with the first of the strategic objectives being achieved in late 2013, and substantial progress being made on the others through a project to build a new real-time retail payment system – the New Payments Platform (NPP). In addition, the new industry coordination body sought by the Board has reached the final stages of formation and is expected to have its first meeting in October 2014.

Same-day Settlement of Direct Entry

The direct entry (DE) system is used for the exchange of bulk electronic payment files between authorised deposit-taking institutions (ADIs). Payments occurring through DE include salary, welfare and dividend payments, as well as internet ('pay anyone') banking transfers and direct debits for bill payments. DE payments by households, business and governments average around \$56 billion per business day.

The first of the initial strategic objectives established by the Board was for same-day settlement of all DE payments by the end of 2013. This was achieved on 25 November 2013 when DE obligations between payments system participants began to be settled on a same-day rather than next-day basis. Previously, the settlement of DE obligations in ADIs' accounts with the Reserve Bank took place at 9.00 am on the business day following the exchange of payment instructions between ADIs. With the introduction of same-day settlement for DE, settlement now takes place in six scheduled batches throughout the day, consisting of the 9.00 am batch (which settles payments exchanged at 10.30 pm the previous business day) and five additional batches through the day which settle around 45 minutes after scheduled exchanges of payment instructions between ADIs.

¹¹ RBA (2012), *Strategic Review of Innovation in the Payments System: Conclusions*, June, available at <<http://www.rba.gov.au/payments-system/reforms/strategic-review-innovation/conclusions/index.html>>.

Box D

Initial Strategic Objectives

Based on its consultations over the course of the Strategic Review, in June 2012 the Board proposed the following as the initial strategic objectives for the payments system:

- All direct entry payments should be settled on the day payment instructions are exchanged by the end of 2013.
- There should be the capacity for businesses and consumers to make payments in real time, with close-to-immediate funds availability to the recipient, by the end of 2016.
- There should be the ability to make and receive low-value payments outside normal banking hours by the end of 2016.
- Businesses and consumers should have the capacity to send more complete remittance information with payments by the end of 2016.
- A system for more easily addressing retail payments to any recipient should be available. To the extent that this is provided by a new real-time system, it should be available by the end of 2017.

A benefit of this change is that financial institutions are in a position to make funds available to recipients on a more timely basis without the introduction of credit risk for the receiving financial institution. Under previous arrangements, if a financial institution wanted to make within-day funds available to its customers, it needed to provide credit to the funds recipient before interbank settlement occurred. This introduced a risk that the paying institution might not settle, or settle on time, even though the funds had already been credited to the receiving institution's customer.

In addition to the changes required to ADIs' systems, achieving same-day settlement of DE payments required significant changes to the operational and liquidity arrangements for the Reserve Bank Information and Transfer System (RITS), the Reserve Bank's real-time gross settlement system. This included changes to ensure ADIs' access to liquidity into the evening, after the close of the interbank cash market (see 'Open repos and same-day settlement of direct entry' under 'Oversight of High-value Payment Systems').

The Board congratulates the industry on achieving this significant step in the modernisation of the Australian payments system.

New Payments Platform

The industry-coordinated response to the Conclusions Document proposed that the remaining Strategic Objectives should be delivered via a purpose-built payments infrastructure, the NPP. Consistent with the Strategic Objectives, the NPP will enable businesses and consumers to make payments in real time, with close to immediate funds availability to the recipient. In delivering on the objectives, the NPP will need to facilitate payments which can carry more complete remittance information and offer users more convenient addressing options.

The NPP will encompass three components: a basic infrastructure; overlay services; and a fast settlement service. The core of the NPP will be the Basic Infrastructure (BI), a central underlying hub which will connect

participating financial institutions and other approved entities, allowing payment and settlement messages to flow between participants.

The BI will be capable of supporting various 'overlay' services – tailored commercial payment services which participants can choose to make available to their customers. It is expected that overlays will offer features and services aimed at specific market segments, encouraging volume through the NPP. Work towards development of the first overlay service, the Initial Convenience Service (ICS), is underway. Over time, it is envisaged that multiple overlays will emerge, with the real-time and data-rich functionality of the NPP promoting competition and innovation in payment services.

The final component of the NPP is the Fast Settlement Service. The Fast Settlement Service will be a 24/7 RITS service, owned by, and located at, the Reserve Bank. It will provide a relatively simple model for the final and irrevocable settlement of each individual payment sent from the BI to the Reserve Bank.

The NPP project is being overseen by the NPP Steering Committee. The Steering Committee has an independent Chair and includes representatives from the major banks, smaller banks, the mutual sector, an alternative payments provider, the RBA and the Australian Payments Clearing Association (APCA). Progress is well underway to develop the business and technical requirements for the BI, the ICS and the Fast Settlement Service, and to select vendors to provide the BI and ICS. Many challenges remain ahead of the planned late 2016 launch, both in terms of developing the central infrastructure and the work needed to enable individual participants to connect to the NPP and process real-time payments.

The Board welcomes the industry's progress to date and looks forward to continuing a constructive relationship in delivering this new payments infrastructure.

Australian Payments Council

The Strategic Review of Innovation called for the formation of an enhanced industry coordination body that is capable of dealing with the full range of cooperative issues that arise in the payments system, as well as being the principal voice of the industry in liaison with the Reserve Bank and the Payments System Board, including in respect of strategic objectives. The Bank and APCA, on behalf of the industry, have subsequently been working on establishing a framework for a new Australian Payments Council. A joint APCA-Reserve Bank consultation on a proposed framework was initiated in October 2013. This demonstrated strong industry support for the proposal. A participation agreement, in line with the framework presented for consultation, was developed and provided to potential participants for review in April 2014. Finally, potential members were given the opportunity to subscribe and appoint or nominate members in June and July.

The framework that has now been agreed involves a relatively broad Payments Community, consisting of all subscribers to the framework. Organisations with a significant interest in the Australian payments system are eligible to subscribe. This includes direct and indirect participants in and operators of payment systems; processors of payments; suppliers of devices for accessing payment systems; and network and technology providers to payment system participants and operators.

The Australian Payments Council will consist of 13 members drawn from the subscribing organisations, plus an independent chair. Members may be appointed by their institution, elected from a group of institutions, or appointed by the Reserve Bank, depending on the type of organisation. The intention is for the Council to reflect a broad cross-section of the payments industry, with the mix of members changing over time. Members are expected to be very senior within their respective organisations.

The organisations initially represented on the Council are outlined in Table 7.

The Board is grateful to these organisations – along with the others that will participate in the framework but will not hold a seat on the Council in the initial period – for their willingness to contribute to improved industry governance.

The first meeting of the Council is expected to occur in October 2014.

With the Council soon to be operational, attention will now turn to establishing a User Consultation Group, which will allow the Bank and the Board to gather views and insights on the operation of the Australian payments system from its users, including consumers, businesses and government agencies. Along with the Council, the User Consultation Group will provide valuable input when the Board next determines strategic objectives for the payments system.

Table 7: Organisations Represented on Australian Payments Council

Organisation	Appointment Method for Member
APCA	APCA CEO
Reserve Bank of Australia	appointed by Reserve Bank from an operational payments area
ANZ	appointed by institution
Commonwealth Bank	appointed by institution
National Australia Bank	appointed by institution
Westpac	appointed by institution
Cuscal	elected from 'other financial institutions' group
Suncorp	elected from 'other financial institutions' group
eftpos Payments Australia	appointed by the Reserve Bank from 'payment schemes' group
Visa	appointed by the Reserve Bank from 'payment schemes' group
Woolworths	appointed by the Reserve Bank from 'retail acquirers' group
First Data	appointed by the Reserve Bank from 'other' group
PayPal	appointed by the Reserve Bank from 'other' group

Oversight of High-value Payment Systems

A key element of the Payments System Board's responsibility for the safety and stability of payment systems in Australia is the oversight of systemically important payment systems.

In November 2013, this role was described in detail in the *Self-assessment of the Reserve Bank of Australia – Systemically Important Payment Systems*.¹² This report assesses how the Bank meets international expectations for regulatory authorities set by the Committee on Payment and Settlement Systems (CPSS; recently renamed the Committee on Payments and Market Infrastructures (CPMI))¹³ and the International Organization of Securities Commissions (IOSCO) as part of the *Principles for Financial Market Infrastructures* (PFMIs).¹⁴

To date, the Reserve Bank Information and Transfer System (RITS) and CLS Bank International (CLS) are the only payment systems identified by the Bank as warranting oversight as systemically important systems. This reflects the fact that the majority of Australian dollar-denominated (AUD) payments, by value, are settled in these two systems and that both systems primarily settle high-value or time-critical payments (Table 8). RITS is also used to effect interbank AUD settlements arising in retail payment systems and other financial market infrastructures (FMIs), including AUD payments to CLS. The Bank has also identified SWIFT as a provider of critical services to both RITS and CLS, since both systems depend on SWIFT's communications platform and other services to process payments and exchange information with their participants. SWIFT also provides critical services to other FMIs and many other market participants.

In the report, the Bank concluded that it observed all relevant responsibilities. However, in the spirit of continuous improvement, the Bank identified some specific actions to further enhance its oversight. In particular, the Bank committed to: continuing to monitor developments in the payments landscape periodically to consider whether any other payment systems should also be subject to ongoing oversight and assessments against the international standards; and considering additional mechanisms to enhance coordination and consistency in its oversight of FMIs, which have since been implemented (see 'FMI Oversight Committee' under 'Oversight of Clearing and Settlement Facilities').

12 RBA (2013) *Self-assessment of the Reserve Bank of Australia – Systemically Important Payment Systems*, available at <<http://www.rba.gov.au/payments-system/policy-framework/principles-fmi/assessments/systemically-important/2013/pdf/2013-self-assess-sys-imp-pay-sys.pdf>>.

13 The change in name, which took effect on 1 September, reflects the evolution of the Committee's work since it was established in 1990. It reflects, in particular, the gradual shift in emphasis from payments issues towards clearing and settlement issues. The CPMI has issued a refreshed Mandate and Charter which highlight its role in promoting the safety and efficiency of payment, clearing and settlement arrangements, fostering central bank cooperation in related matters, and setting standards.

14 The international expectations are set out in the Responsibilities of Central Banks, Market Regulators, and other Relevant Authorities for Financial Market Infrastructures that form part of the PFMIs, available at <<http://www.bis.org/publ/cpss101a.pdf>>.

Table 8: Payments in Australia
2013/14, daily averages^(a)

	Number ^(b) '000s	Value ^(b) \$ billion	Growth since 2012/13 Per cent	Interbank settlement value in RITS \$ billion
Domestic				
RITS	42	162.7	3.1	162.7
<i>SWIFT payments (HVCS)</i>	38.7	100.5	3.5	100.5
<i>Debt securities (Austraclear)^(c)</i>	3.1	50.3	3.8	50.3
<i>RITS cash transfers</i>	0.2	11.9	-3.6	11.9
Retail payment systems	34 816.3	62.9	5.5	2.9 ^(d)
Equity settlements	718.8	4.0 ^(e)	-3.9	0.5
International				
CLS	56.8	246.2	-2.2	2.2

(a) Business days

(b) Includes payments between customers of the same financial institution

(c) Excludes intraday and open RBA repurchase agreements, and multilaterally netted interbank settlements arising from the retail payment systems and the equity market

(d) Average prior to (post) the implementation same-day settlement of direct entry payments was \$1.9 billion (\$3.6 billion)

(e) Gross value of equity trades

Sources: ASX; CLS; RBA

Reserve Bank Information and Transfer System

RITS is primarily a real-time gross settlement system, which settles transactions on an individual basis in real time across Exchange Settlement Accounts (ESAs) held at the Bank.¹⁵ RITS is owned and operated by the Reserve Bank.

Self-assessment against international standards

As part of its oversight of RITS, the Bank periodically conducts self-assessments of RITS against relevant international standards. These self-assessments are reviewed by the Payments System Board and published on the Bank's website. Following the finalisation of the PFMs in April 2012, the Bank announced that from 2013 it would conduct self-assessments of RITS against the principles within the PFMs (the Principles) on an annual basis.

In the first of these self-assessments, published in December 2013, the Bank concluded that RITS observed all of the relevant Principles.¹⁶ Nevertheless, the Bank noted a number of existing plans, the completion of which would further enhance RITS's compliance with the Principles. Two of these actions have since been completed. In June 2014, the Bank successfully upgraded RITS's core infrastructure and, in December 2013, enhancements to network monitoring were implemented.

In the self-assessment, the Bank also reiterated its commitment to monitor RITS participants' compliance with new business continuity standards, which set minimum standards for participants in the area of business continuity planning, system resilience, incident management, testing and recovery time frames. These standards, introduced in May 2013, acknowledge that, while the Bank devotes significant operational and financial resources to ensuring the resilience of RITS, the efficient operation of RITS is also dependent on the operational reliability of RITS participants. All participants are expected to fully comply with the new standards by September 2015.

¹⁵ The Board has responsibility for the Bank's policy on access to ESAs. This policy is available at <<http://www.rba.gov.au/payments-system/esa/>>.

¹⁶ The 2013 *Self-assessment of the Reserve Bank Information and Transfer System* is available at <<http://www.rba.gov.au/payments-system/rits/self-assessments/2013/index.html>>.

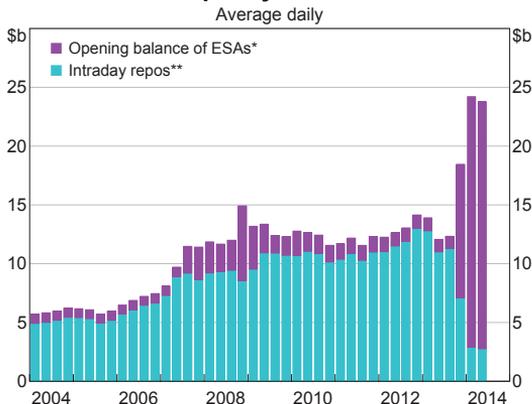
Additionally, the Bank has committed to conducting a comprehensive review of the regulations that govern participation in RITS, with the aim of identifying any areas in which the clarity of these regulations could usefully be improved. Finally, the Bank will review any supplementary guidance that may be issued in the future by the CPMI and IOSCO on quantitative disclosure requirements for payment systems.

Open repos and same-day settlement of direct entry

The Board maintains a keen interest in material changes to the operational arrangements for RITS. One such recent change was the change to liquidity arrangements required to accommodate the settlement of direct entry (DE) obligations exchanged after the interbank cash market has closed. As discussed in the ‘Strategic Review of Innovation’ chapter, the same-day settlement of obligations arising from DE payments – the largest component, by value, of retail payments – commenced in November 2013.¹⁷ Since participants do not know the size of their net DE obligations (which can be quite large relative to end-of-day ESA balances) prior to the close of the interbank cash market, the Bank has increased the amount of overnight liquidity provided to participants, from around \$1 billion to around \$21 billion to ensure that after-hours DE obligations are able to settle without active liquidity management by participants. The new liquidity arrangements were introduced in November 2013, ahead of the introduction of same-day settlement of DE. The Bank provides this additional liquidity through repurchase agreements with no specified maturity (open repos). These are capped at a predetermined amount for each DE participant.

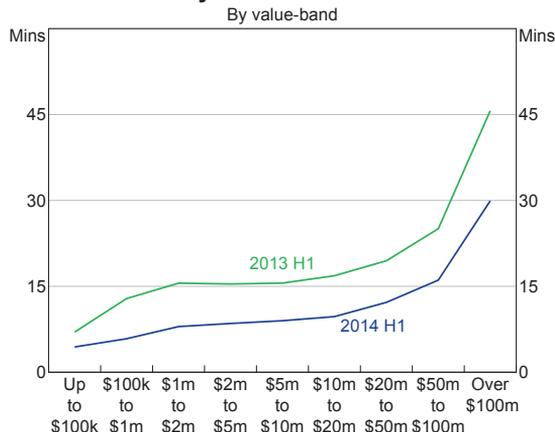
The introduction of open repos has resulted in a significant increase in the average intraday liquidity available in RITS, from \$13 billion in the first half of 2013 to \$24 billion in the first half of 2014 (Graph 13). As well as facilitating the settlement of evening DE payments, the additional liquidity has resulted in earlier settlement of payment instructions submitted to RITS. Since the introduction of the new arrangements, the average length of time a payment instruction has been held on the queue awaiting settlement has declined from 46 minutes to 30 minutes (for submitted payments over \$100 million) (Graph 14).

Graph 13
Liquidity in RITS



* Includes open repos
** Average value of intraday repos during the daily settlement session
Source: RBA

Graph 14
RITS Payments Time to Settle*



* Average time payments eligible for settlement spend on the queue; does not include interbank settlements arising from retail payment systems or the equity market
Source: RBA

17 For more detail on the implementation of same-day settlement of DE payments, see Fraser S and A Gatty (2014), ‘The Introduction of Same-day Settlement of Direct Entry Obligations in Australia’, RBA Bulletin, June, pp 55–64.

Property settlements

Another material operational change to RITS will be required to facilitate the settlement of the cash leg of property transactions settled through the national electronic conveyancing system being developed by Property Exchange Australia Ltd (PEXA). PEXA aims to remove the manual processes and paperwork associated with the exchange of property by allowing land registries, financial institutions, solicitors and conveyancers, and other industry participants to transact on an electronic platform. In parallel with this, the Bank is developing functionality in RITS to receive and settle payment instructions originating from PEXA. Settling the cash leg of property transactions in RITS reduces reliance on less efficient payment methods such as bank cheques. The functionality is expected to be available by November 2014, to coincide with the deployment of PEXA transfer and settlement functionality in New South Wales and Victoria.¹⁸

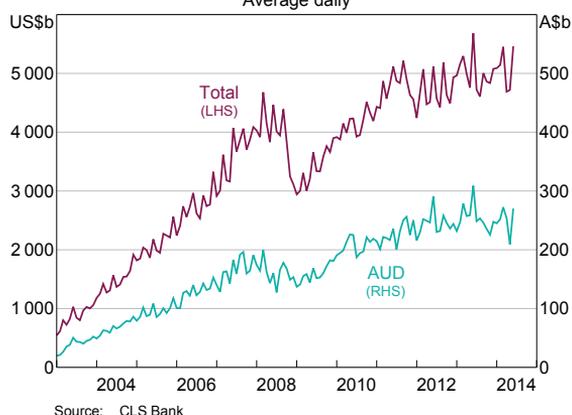
CLS Bank

CLS is an international payment system for settling foreign exchange trades in 17 currencies, including the Australian dollar. By operating a payment-versus-payment settlement mechanism, CLS allows participants to mitigate foreign exchange settlement risk (the risk that one party settles its obligation in one currency, but its counterparty subsequently does not settle its obligation in the other currency). As Graph 15 demonstrates, CLS settles a significant value of Australian dollar-denominated foreign exchange-related payments. Consequently, the Bank has identified CLS as a systemically important international payment system. In CLS, settlement members either receive or pay a net amount vis-à-vis CLS in each currency. These net amounts are settled in RITS and are typically around 1 per cent of the gross value of Australian dollar trades settled in CLS.

CLS is regulated, supervised and overseen by the Federal Reserve, in cooperation with an Oversight Committee that includes the Reserve Bank and the other issuing central banks of CLS-settled currencies. Through this forum, the Bank is involved in overseeing how well CLS meets relevant international standards.

The Oversight Committee has monitored closely a number of developments in CLS during 2013/14. CLS is currently finalising a self-assessment of its practices against the Principles. In part to meet new capital requirements in the Principles, CLS raised an additional £160 million in equity capital in late 2013. CLS is also examining options to further enhance its liquidity risk management. At the same time, CLS continues to develop its service offering. In September 2013 CLS launched a same-day settlement service to facilitate the settlement of certain payments that are required to be settled on a same-day basis. Previously, these payments were unable to be settled by CLS due to restrictions in the hours it accepts settlement instructions. Currently the service is available in the United States and Canada for the USD/CAD currency pair. CLS is working with its participants to explore the feasibility of establishing similar arrangements in other geographical regions.

Graph 15
CLS Settlement Value
Average daily



¹⁸ This is the second stage of the PEXA release schedule. In the first stage, PEXA has facilitated certain transactions, such as mortgage discharges and refinancing transactions, to be conducted on its system. This stage has been in operation since June 2013.

Finally, CLS is progressing ongoing projects to develop a settlement solution for centrally-cleared foreign exchange products and to expand the range of currencies it settles.

SWIFT

The Bank also participates in the international cooperative oversight of SWIFT, a member-owned cooperative company registered in Belgium that, amongst other services, provides communications services to facilitate the transfer of payment and other information between participants in the financial system. While SWIFT is not a payment system, it provides critical services to both RITS and CLS, as well as other FMIs and market participants.

SWIFT is primarily overseen by the SWIFT Oversight Group (OG), a cooperative body comprising the G10 central banks and chaired by the National Bank of Belgium (NBB). In 2012, the NBB set up the SWIFT Oversight Forum to provide information on SWIFT to a broader group of central banks, including the Bank, and to give these central banks an opportunity to provide input into the setting of the OG's oversight priorities. Oversight of SWIFT is supported by a set of standards – the High-level Expectations – which are consistent with standards for critical service providers in the PFMLs. One of the focuses of the OG in 2013 was a major review of the functioning of SWIFT's governance arrangements. The OG has also increased its monitoring of cyber security initiatives at SWIFT.

SWIFT's recent activities include two substantial multi-year projects. Its 'distributed architecture' project aims to further enhance the security, resilience and reliability of SWIFT's services, including through the implementation of regional processing zones, a new European operating centre, and additional disaster recovery arrangements. A separate 'FIN-renewal' project aims to refresh the technology underpinning SWIFT's main messaging service, FIN. The distributed architecture project was successfully completed in 2014 and the FIN renewal project will extend into 2016.

Oversight of Clearing and Settlement Facilities

Overview

The *Corporations Act 2001* assigns to the Reserve Bank a number of powers and functions related to the oversight of clearing and settlement (CS) facilities. Under the *Reserve Bank Act 1959*, it is the responsibility of the Payments System Board to ensure that these are exercised in a way that ‘will best contribute to the overall stability of the financial system’.

Under the Corporations Act, CS facility licensees that operate in Australia are required to comply with the Financial Stability Standards (FSS) set by the Bank and to do all other things necessary to reduce systemic risk.

Four domestic CS facility licensees, all part of the (Australian Securities Exchange) ASX Group, and one offshore licensee, are currently required to meet the FSS:¹⁹

- ASX Clear Pty Limited (ASX Clear) provides central counterparty (CCP) services for cash equities, debt products and warrants traded on the Australian Securities Exchange (ASX) and Chi-X Australia markets, and equity-related derivatives traded on the ASX market.
- ASX Clear (Futures) Pty Limited (ASX Clear (Futures)) provides securities settlement facility (SSF) CCP services for futures and options on interest rate, equity, energy and commodity products, as well as Australian dollar-denominated over-the-counter (OTC) interest rate derivatives (IRD).
- ASX Settlement Pty Limited (ASX Settlement) provides SSF services for cash equities, debt products and warrants traded on the ASX and Chi-X markets; ASX Settlement also provides SSF services for non-ASX listed securities.
- Austraclear Limited (Austraclear) provides SSF services for trades in debt securities, including government bonds and repurchase agreements.
- LCH.Clearnet Limited (LCH.C Ltd) provides CCP services for OTC interest rate derivatives and is licensed to clear trades executed on a soon-to-launch derivatives market, the Financial and Energy Exchange (FEX).

While oversight is ongoing throughout the year, the Board has committed to formal annual assessments of each of these CS facilities. Typically, assessments for the year ending 30 June are published in September. This chapter summarises the ASX facilities’ progress towards meeting recommendations in the Bank’s 2012/13 Assessment and LCH.C Ltd’s progress towards meeting the Bank’s initial regulatory priorities. The chapter also summarises activity during the 2013/14 Assessment period for all five facilities, as well as other material developments. These are further elaborated in assessment reports for 2013/14 for both the ASX facilities and LCH.C Ltd.²⁰

¹⁹ In addition, IMB Limited, a building society, operates a market for trading in its own shares by its members, and an associated securities settlement facility to settle these trades. IMB Limited’s SSF is currently exempt from the FSS due to its small size.

²⁰ These assessment reports are available at <<http://www.rba.gov.au/payments-system/index.html>>.

FMI Oversight Committee

With the licensing of the first overseas CS facility in 2013 (and the prospect of additional overseas licensees), the scope of the Bank's oversight of financial market infrastructures (FMIs) has expanded. At the same time, the Bank's oversight role has deepened following the introduction of new more detailed FSS in March 2013. The Bank is also subject to increasing international scrutiny, including through peer reviews of the implementation of the Principles for Financial Market Infrastructures (PFMIs).

In light of these developments, the Bank's Executive Committee recently established a new internal governance body, the FMI Oversight Committee. The Committee's core objective is to ensure that the FMI oversight activities of Payments Policy Department are carried out in a manner that is consistent with policies established by the Board. In addition to providing a forum for challenge to routine FMI oversight decisions, the FMI Oversight Committee also formalises the process for carrying out interim progress checks on oversight priorities for each overseen FMI, and discussing new priorities to be considered by the Board. The Committee is chaired by the Assistant Governor (Financial System) and includes among its membership the Heads of Department of Payments Policy, Payments Settlements and Domestic Markets, as well as two other senior staff members with relevant expertise.

Domestic Clearing and Settlement Facilities

Activity in the domestic CS facilities

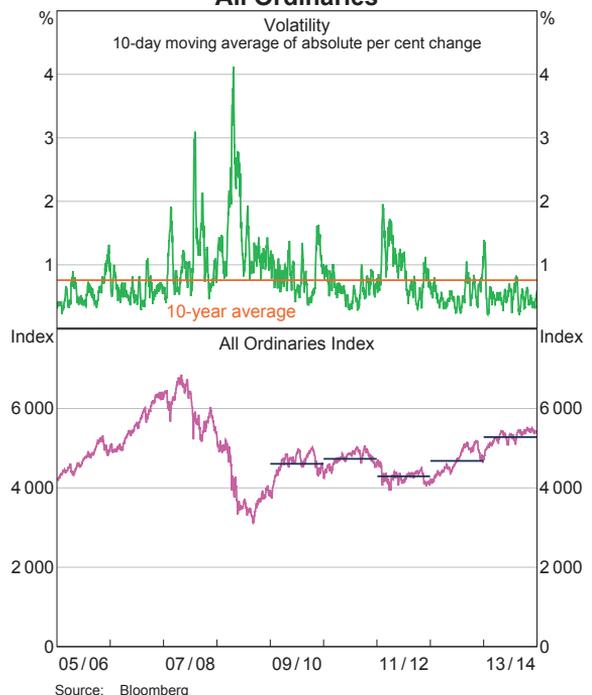
As in 2012/13, price volatility in the markets cleared and settled by the ASX CS facilities remained low in 2013/14 relative to the crisis and immediate post-crisis periods. Trends in daily average trading values and volumes were also broadly similar to those observed in the previous year. Daily average values for cash equity trades cleared by ASX Clear declined, as did the volume of trades in equity options. The volume of trading in the main

futures contracts cleared by ASX Clear (Futures) continued to increase, however. An increase in the daily average value of debt securities settled in Austraclear reversed the decline of the previous year.

The average volatility in equity prices in 2013/14, as measured by the average of absolute daily percentage changes in the S&P ASX All Ordinaries Index, was unchanged from the previous year, remaining at 0.5 per cent (Graph 16). After easing from the elevated levels recorded in the first half of 2013, volatility remained below the 10 year average for much of 2013/14. These developments are broadly in line with trends in major international equity markets.

The daily average number of cash equity trades increased by 4 per cent in 2013/14, while the daily average value fell by 4 per cent (Graph 17). These diverging trends reflected a decline in average transaction size of 7 per cent in 2013/14, a fifth consecutive year-on-year decline. This at least in

Graph 16
All Ordinaries



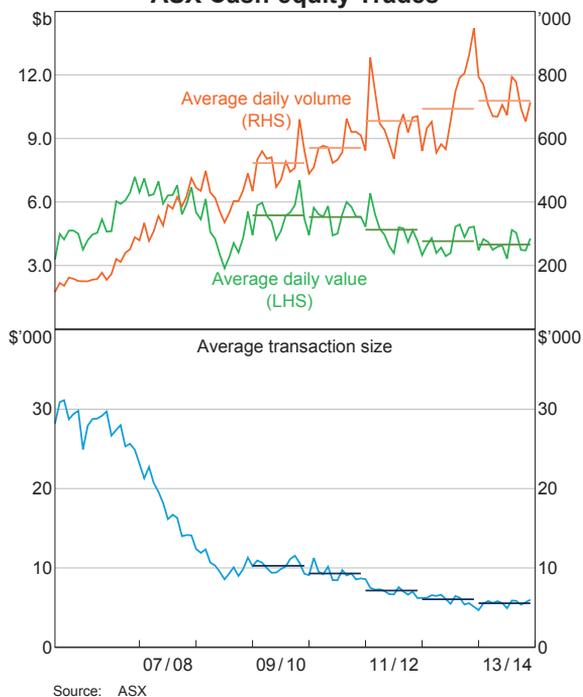
part reflects the continuation of a long-term trend associated with the growth in algorithmic trading.

2013/14 was the first full year in which ASX Clear collected initial and variation margin on cash equity positions. Initial margin held by ASX Clear against unsettled cash equity transactions declined by 7 per cent relative to the margin notionally calculated on these transactions in 2012/13 prior to implementation of the margining regime (Graph 18, top panel). This decline was largely due to more volatile price data from 2011/12 dropping out of the sample period used for margin calculations.

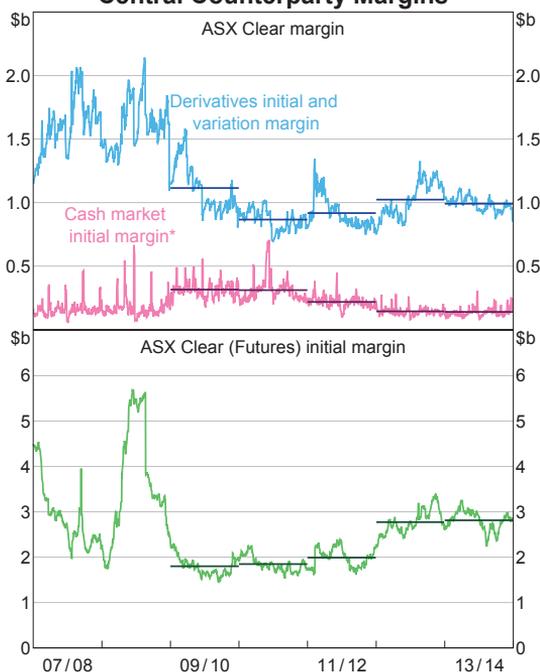
The daily average value of cash equity transactions settled by ASX Settlement decreased by 3 per cent in 2013/14 to \$17.1 billion. Settlement values differ from trade values because they reflect both market traded and non-market transactions. Also taking into account multilateral netting of participants' obligations, average daily settlements between participants associated with these trades increased marginally in 2013/14 to \$8.3 billion. The average daily value of debt securities settled in Austraclear increased by around 7 per cent, to \$40.5 billion. This includes the value of securities under repurchase agreements (other than intraday repurchase agreements with the Bank).

The average daily number of equity options contracts traded on the ASX market also declined in 2013/14, by some 21 per cent. In response to these declining volumes, ASX established an exchange-traded options advisory panel, representing participants and clients, and has implemented a number of changes proposed by that panel. These include enhanced quotation obligations for market makers to promote greater liquidity, and changes to crossing rules designed to encourage users of OTC options to instead execute these on market. Margins held by ASX Clear against equity derivatives decreased by 3 per cent in 2013/14, in part reflecting lower open interest (Graph 18, top panel).

Graph 17
ASX Cash-equity Trades



Graph 18
Central Counterparty Margins

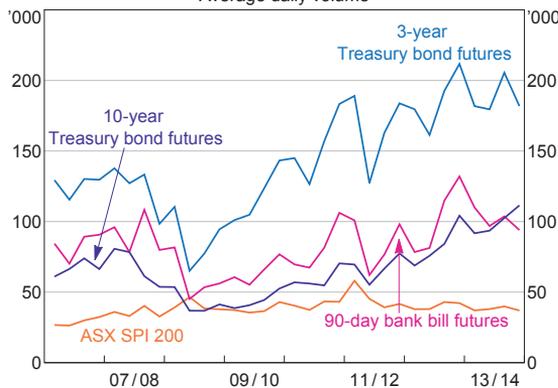


* Notional amount until 7 June 2013; Real Risk methodology used until 18 July 2012, Cash Market Margining used thereafter

The average daily trading volume on the ASX 24 market, by contrast, increased in 2013/14, by 2 per cent to around 460 000 trades per day (Graph 19). A sharp increase in turnover of 10-year Treasury bond futures (up 20 per cent) was slightly offset by a decline in trading activity in ASX SPI 200 futures (down 6 per cent). Daily average volumes of the other two most actively traded contracts, 90-day bank bill futures and 3-year Treasury bond futures, were broadly similar to 2012/13.

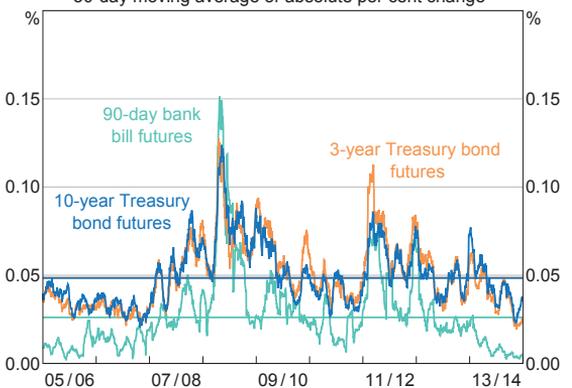
Initial margin held by ASX Clear (Futures) rose by 1 per cent in 2013/14 (Graph 18, bottom panel). This is consistent with the slightly higher trading volumes and participant exposures, which were broadly offset by reductions in margin rates associated with a decline in volatility in the ASX 24 market (Graph 20).

Graph 19
ASX 24 Derivatives Trades
Average daily volume



Source: ASX

Graph 20
ASX 24 Market Volatility
30-day moving average of absolute per cent change*



* Horizontal lines indicate the 10-year average for each series
Source: Bloomberg

2012/13 Assessment of ASX CS Facilities

In August 2013, the Board approved the publication of the Reserve Bank's 2012/13 Assessment of the four licensed ASX CS facilities. This Assessment, published in September, was the first against the Bank's new FSS, which came into effect at the end of March 2013. The Bank concluded that all four ASX facilities either observed or broadly observed the relevant standards in the Assessment period.

The 2012/13 Assessment focused on the ASX CS facilities' observance of new or strengthened requirements introduced in the new FSS, as well as major new services launched by ASX. The Assessment made a number of recommendations for the ASX CS facilities. In most cases, these related to the completion of work already underway to attain full observance of those standards where ASX had been rated 'broadly observed', and actions to ensure that ASX would meet the requirements of those standards for which transitional relief had been granted until 31 March 2014. Other recommendations identified areas in which ASX could make further enhancements in the spirit of continuous improvement, even where the minimum requirements of the relevant standard were met. In addition, the Bank noted several matters that it would follow up with ASX.

These recommendations and other matters formed the Bank's regulatory priorities for the 2013/14 Assessment period. Progress against these regulatory priorities was assessed in the Bank's 2013/14 Assessment of the ASX CS facilities. Key priorities and steps taken by ASX to address these recommendations are set out below.

Risk management and model validation

In its 2012/13 Assessment, the Bank made a number of recommendations for enhancements to the ASX CCPs' model validation approach. During 2013/14, ASX further developed its approach, including by:

- implementing substantial enhancements to the backtesting and sensitivity analysis of its margin models
- introducing reverse stress testing
- engaging external experts for a three-year period to undertake a comprehensive validation of all key risk models.

During the 2013/14 period, the Bank has examined in detail ASX's progress in this area.

Default management

Further to the introduction of clearing for OTC interest rate derivatives in July 2013, ASX carried out a review of its Default Management Framework. Default rules and procedures specific to the OTC clearing service were introduced to the Framework. Reflecting the lower liquidity of OTC derivatives products, ASX's default management approach envisages the use of an auction to surviving participants to close out its exposure to the defaulted participant. The Bank recommended that ASX Clear (Futures) develop an appropriate mechanism to encourage competitive bidding in any auction of a defaulted participant's positions, and also that it make arrangements to involve participants in the testing of OTC derivatives default arrangements. During the 2013/14 Assessment period, ASX Clear (Futures) enhanced its default management rules and procedures for OTC derivatives, including by articulating its auction design and introducing a 'juniorisation' mechanism to encourage competitive bidding. ASX Clear (Futures) also established a Default Management Group for its OTC derivatives participants, which held its first OTC derivatives default management 'fire drill' in June 2014.

Business and investment risks

In previous assessments, the Bank has expressed the concern that the ASX CCPs' treasury investment policy allows relatively large and concentrated unsecured exposures to a small number of domestic banks. In response, ASX has lowered the limits on its unsecured exposures to the large domestic banks, and taken steps to improve its capacity both to make secured investments and to invest with a broader range of high-quality counterparties. The Bank has opened a dialogue with ASX on its expectations for further reduction in the concentration of unsecured exposures to the large domestic banks and the timeframe over which this should be achieved.

Also in the 2013/14 Assessment period, having explicitly set aside capital at the group level to cover its general business risks, ASX amended its intragroup legal agreements to clarify the allocation and availability of business risk capital to each of the CS facilities.

Transitional relief

The 2012/13 Assessment made a number of recommendations relating to a small number of sub-standards that were subject to transitional relief.

- *Recovery and resolution.* In order to meet requirements related to recovery and resolution, the Bank recommended that ASX prepare recovery plans for each CS facility and that the CCPs develop tools to address any unfunded credit loss or liquidity shortfall, consistent with anticipated CPSS-IOSCO guidance on recovery ('Regulatory Framework for Financial Market Infrastructures' under 'Regulatory Developments

in Financial Market Infrastructures’).²¹ While the final CPSS-IOSCO guidance has still not yet been published, in early 2014, ASX developed a basic recovery plan based on the facilities’ existing powers under their Operating Rules. ASX has also formulated a plan to enhance those rules in order to be able to fully address any uncovered credit losses and liquidity shortfalls and replenish financial resources following a participant default. It plans to consult on its proposed recovery approach in the second half of 2014. Legislation to establish a special resolution regime for FMIs has not yet been introduced.

- *Segregation and portability.* In response to the Bank’s recommendations, and in accordance with the new CCP Standards, ASX Clear (Futures) introduced individual client segregation within its account structures for both OTC derivatives and exchange-traded futures. Sitting alongside the pre-existing omnibus client account structure for exchange-traded products, the new arrangements give clients a choice in the level of protection they receive and the likelihood that positions and associated collateral could be transferred to an alternative participant in the event of a clearing participant default. In July 2014, ASX released a consultation paper seeking stakeholder feedback on proposals to provide additional protection for client collateral, including collateral posted in excess of margin requirements. Also during 2013/14, ASX Clear implemented the first of two phases of enhancements to its arrangements to provide clients with equivalent protection to house/client omnibus segregation.
- *Liquidity risk.* Both CCPs’ prefunded liquid resources are currently considered to be sufficient to meet the required level of cover for liquidity exposures arising from derivatives transactions. However, ASX Clear’s prefunded liquid resources may not be sufficient to cover extreme but plausible payment obligations arising from the settlement of cash equity transactions. In April 2014, ASX introduced changes to its Operating Rules whereby participants commit to provide liquidity to ASX Clear to address any funding shortfall.

Other material developments in 2013/14

The 2013/14 period saw other important developments in the ASX CS facilities’ business and service offerings.

Code of Practice

ASX released its Code of Practice for Clearing and Settlement of Cash Equities in Australia (the Code) on 9 August 2013. The Code was developed in response to the conclusions of the Council of Financial Regulators’ (CFR’s) review of competition in the clearing of cash equities, released by the government in February 2013. The review concluded that a decision on any licence application from a CCP seeking to compete in the Australian cash equity market should be deferred for two years, and recommended that ASX establish a code of practice in the meantime. The Code commits ASX to maintain transparent and non-discriminatory pricing of, and terms of access to, cash equity clearing and settlement services, and to enhance user engagement through the establishment of a senior-level advisory Forum and a supporting Business Committee. The CFR will review the performance of the Code in early 2015.

- *User engagement.* The Forum, which met for the first time in October 2013, has identified two strategic initiatives: a move to a two-day (T+2) settlement cycle for cash equities from the current three-day cycle; and adoption of global messaging standards. Having consulted on the shortening of the settlement cycle and received broad-based industry support, ASX is targeting implementation in early 2016. The transition to global messaging standards will be pursued as part of a broader project to replace the CHES clearing and settlement system; this is expected to be implemented within the next three to four years.

²¹ Recovery refers to steps taken by an FMI to respond to a threat to its continued viability; resolution refers to steps taken by public authorities to restore an FMI in distress to viability or wind it down.

- *Pricing.* Under the Code, ASX has committed to a number of initiatives regarding transparent and non-discriminatory pricing. ASX released a cost allocation and transfer pricing policy ahead of the release of its 2012/13 financial statements. At the same time it introduced the practice of publishing management accounts for its cash market clearing and settlement businesses alongside its financial statements. Also, in the first half of 2014, ASX commissioned the economic consultancy, Oxera, to conduct a detailed international cost benchmarking study, with the Forum providing input on the scope and methodology of the review. Oxera's final report was presented to the Forum in June 2014, concluding that ASX's cash equity clearing and settlement costs were broadly in line with international exchanges of comparable size.
- *Access.* In accordance with commitments under the Code relating to transparent and non-discriminatory access for alternative execution venues, ASX released a consultation paper in January 2014 seeking feedback on enhancements to its service-level and information-handling standards. ASX has since made a number of amendments.

RMB settlement

During the first half of 2014, ASX worked with Bank of China's Sydney branch to develop a settlement service in Austraclear for Chinese renminbi payments. Interest in the offshore use of renminbi for both trade and financial market transactions has grown following Chinese reforms, including a gradual move towards a more market-determined exchange rate and incremental liberalisation of the capital account. The service, launched on 28 July 2014, is also able to support payments in other approved foreign currencies and at any designated settlement bank. Since the service was initially developed as a joint venture with Bank of China, at the time of launch the service supported only renminbi payments settling at Bank of China.

Overseas Licensed Clearing and Settlement Facilities

LCH.Clearnet Limited

Activity in LCH.Clearnet Limited

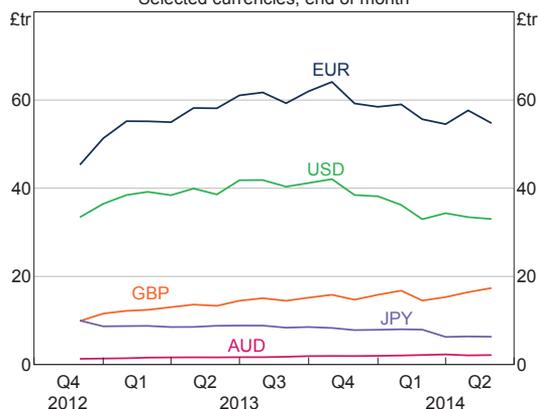
Globally, an estimated 65 per cent of the US\$354 trillion notional value outstanding of OTC IRD is centrally cleared.²² LCH.C Ltd's SwapClear is the world's largest CCP for these products, clearing just over US\$200 trillion, or around 91 per cent of the notional value outstanding of centrally cleared OTC IRD. SwapClear clears six types of IRD product: interest rate swaps, zero-coupon swaps, basis swaps, forward rate agreements, overnight index swaps and variable notional swaps. SwapClear clears products denominated in 17 different currencies, and has participants from the UK, many other Western European countries, the US, Canada, Australia and Hong Kong.

A few major currencies comprise the vast majority of activity in SwapClear (Graph 21). Of the notional value outstanding in SwapClear at end June 2014, around 45 per cent was denominated in euros, 27 per cent in US dollars, 14 per cent in British pounds, and 14 per cent in other currencies. Around 2 per cent was in Australian dollars.

Since early 2012, the major Australian banks have centrally cleared a significant proportion of their OTC IRD trades indirectly, as clients of other clearing participants. In July 2013, the Minister varied LCH.C Ltd's CS facility licence to allow SwapClear to admit Australian entities as direct clearing participants. Since then, three Australian banks have joined SwapClear as clearing participants: ANZ joined in September 2013; National Australia Bank joined in October 2013; and the Commonwealth Bank joined in August 2014.

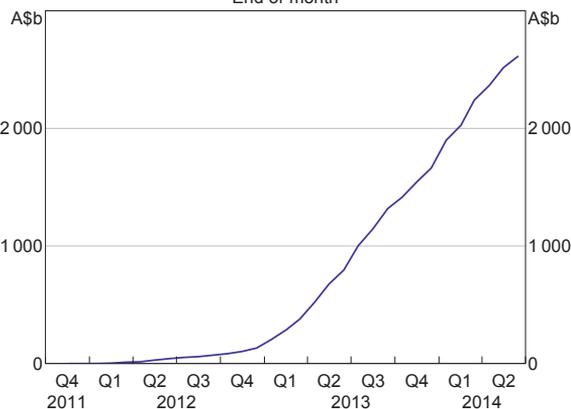
²² The data are sourced from the Bank for International Settlements as at the end of 2013, adjusted for the double counting that occurs when a trade is novated to a CCP. The data do not include cross-currency interest rate swaps. The gross market value of OTC IRDs was US\$14 trillion at the end of 2013.

Graph 21
SwapClear: Notional Value Outstanding, by Currency (Stock)*
 Selected currencies, end of month



* Data counts one side of each trade
 Source: LCH.C Ltd

Graph 22
SwapClear: Notional Value Outstanding of Australian Banks (Stock)*
 End of month

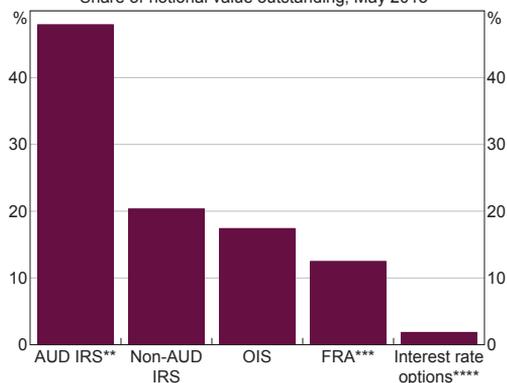


* Data is aggregate of Australian banks' trade sides; trades between two Australian banks will be counted twice
 Source: LCH.C Ltd

An estimated 98 per cent of the notional value outstanding of all centrally cleared Australian-dollar-denominated OTC IRD trades is cleared via SwapClear. Australian banks' clearing activity has been part of a broader upward trend in notional value outstanding of Australian dollar-denominated OTC IRD cleared via SwapClear. The total notional value outstanding of Australian dollar-denominated OTC IRD cleared via SwapClear has doubled from A\$2 trillion in December 2012 to A\$4 trillion in June 2014.²³ The total notional value outstanding of Australian banks, whether clearing as clients or as clearing participants, has increased strongly since late 2012 (Graph 22). According to a survey conducted by Australian regulators in early 2014, Australian dealers now centrally clear almost all new interdealer trades that are eligible for clearing.²⁴ However, since not all existing trades are eligible for clearing and Australian entities have not yet 'backloaded' previously non-centrally cleared trades, only around 22 per cent of Australian entities' notional value outstanding of Australian dollar-denominated OTC IRD is centrally cleared.

OTC IRD comprise the majority of OTC derivatives activity in Australia. Single-currency OTC IRD comprise about 65 per cent of the notional value of Australian dealers' outstanding OTC derivatives (Graph 23).

Graph 23
Australian OTC Interest Rate Derivatives Market
 Share of notional value outstanding, May 2013*



* Of all interest rate derivatives; excludes in-house transactions except for FRA
 ** Includes single- and cross-currency IRS with an AUD-denominated leg
 *** Includes AUD and non-AUD denominated FRAs
 **** Includes swaptions, bond options and caps/floors
 Source: AFMA

23 These data adjust for the double counting that occurs when a trade is novated to the CCP.

24 The *Report on the Australian OTC Derivatives Market – April 2014* is available at <<http://www.cfr.gov.au/publications/cfr-publications/2014/report-on-the-australian-otc-derivatives-market-april/pdf/report.pdf>>.

Regulatory priorities

In assessing LCH.C Ltd's application to vary its CS facility licence to offer its SwapClear service, the Bank took the view that the service could rapidly become systemically important in Australia. Upon the licence variation being granted in July 2013, the Bank determined a set of regulatory priorities for LCH.C Ltd to ensure that its operational and governance arrangements promoted stability in the Australian financial system. These priorities reflect expectations set out by the CFR in July 2012 in its policy *Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities* and implemented in the FSS. LCH.C Ltd's progress towards these priorities was the principal focus of the Bank's 2013/14 Assessment of LCH.C Ltd.

The Bank's regulatory priorities for LCH.C Ltd for 2013/14 were:

- *To extend operating hours and operational support to the Australian time zone:* LCH.C Ltd intends to increase SwapClear's operating hours in a number of phases, beginning later in 2014. To support its extended hours operations, LCH.C Ltd intends to have additional operational and management staff in its Australian office from the third quarter of 2014. In the interim, Australian participants are able to seek operational support from LCH.C Ltd's current Sydney-based staff or via LCH.C Ltd staff in London or New York.
- *To open an ESA:* LCH.C Ltd has submitted a preliminary application to the Bank to open an ESA and is currently engaging with the relevant areas of the Bank. Subject to LCH.C Ltd finalising its operational arrangements and the Bank approving the application, LCH.C Ltd is aiming to have its account operational by the end of 2014. The Bank expects LCH.C Ltd to use its ESA to facilitate management of its Australian dollar settlement obligations and Australian dollar liquidity risk.
- *To consider accepting Australian dollar cash as initial margin:* The Bank expected LCH.C Ltd to review its collateral acceptance policy and consider the inclusion of Australian dollar cash for initial margin payments. LCH.C Ltd is considering accepting Australian dollar cash as initial margin by early 2015. This proposal will still need to be formally approved through LCH.C Ltd's internal risk governance processes and is subject to non-objection from the Bank of England (BoE).
- *To ensure appropriate representation of Australian participants in governance:* LCH.C Ltd formed the Australian Member User Group for Australian direct participants in March 2014. This group provides a formal structure for LCH.C Ltd and Australian participants to discuss policy and risk management issues.
- *Appropriate representation of Australian membership and regulators in default management:* The Bank will continue to engage with LCH.C Ltd to discuss how it is envisaged that the default of an Australian-based participant, or any participant with a large Australian dollar-denominated portfolio, would be managed. The Bank will also continue to liaise with the BoE on this topic in the BoE's capacity as LCH.C Ltd's primary regulator and as the UK resolution authority. It is expected that discussions with the BoE and other regulators to further consider LCH.C Ltd's crisis management arrangements will begin over the coming months.

Material developments in 2013/14

In addition to assessing LCH.C Ltd's progress against the Bank's regulatory priorities, the Bank considered LCH.C Ltd's observance of the sub-standards of the FSS that were initially subject to transitional relief and became effective at the end of March 2014. The Bank also monitored other material developments during the 2013/14 period.

Regulatory framework

Since LCH.C Ltd is incorporated in England, it is primarily regulated under UK and EU legislation. In June 2014, LCH.C Ltd was authorised under, and became formally subject to, the harmonised European regulatory

framework for CCPs, *Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories* (commonly known as EMIR). EMIR and its associated technical standards largely implement the principles (the Principles) within the PFMLs in the EU. At the same time, LCH.C Ltd was also recognised by the BoE as a 'recognised central counterparty' under UK legislation. In advising the Minister regarding LCH.C Ltd's application for a variation to its CS facility licence, the Bank assessed that the stability-related requirements in the EU regulatory regime, alongside the additional UK requirements that were in place at the time, were sufficiently equivalent to the CCP Standards.

Governance

LCH.C Ltd introduced a number of changes to its governance arrangements during 2013/14. In the first half of 2014, LCH.C Ltd appointed two new independent non-executive directors to the LCH.C Ltd Board. With these appointments, the LCH.C Ltd Board now contains five independent non-executive directors.

LCH.C Ltd has arrangements with a group of SwapClear's largest participants, who have provided expertise, financial resources and strategic direction for SwapClear. During the period, the role of this group was changed from a directive to a consultative function. LCH.C Ltd also removed the requirement that it obtain the consent of at least 50 per cent of SwapClear's participants to make material changes to SwapClear's rules on default management.

Risk management enhancements

LCH.C Ltd made a number of enhancements to its model testing and validation practices over the period, including implementing a reverse stress testing framework, and a framework for conducting sensitivity analysis on its margin models.

LCH.C Ltd also made two material changes to its management of liquidity risk. In particular, LCH.C Ltd introduced intraday liquidity stress testing, and introduced a concentration framework to ensure sufficient liquidity is available within each clearing service.

Additionally, LCH.C Ltd completed a review of operational risks within SwapClear, and a number of reviews and exercises to increase its resilience against cyber-attacks. LCH.C Group's new liquidity and collateral management system went live in May 2014, with no major operational incidents.

Recovery and Wind-down

During 2013/14, LCH.C Ltd introduced Recovery and Wind-down Plans. The Recovery Plan describes how LCH.C Ltd would continue its operations if it suffered extreme losses, while the Wind-down Plan considers how it could cease its operations in an orderly manner. Both plans were approved by the LCH.C Ltd Board, and will be subject to regular review.

Segregation and portability

LCH.C Ltd introduced new account structures in order to comply with EU regulations. EU regulations require CCPs to offer customers the option of both individual segregation and omnibus segregation. LCH.C Ltd also has rules and procedures to enable a clearing participant's customer's positions and collateral to be ported to another clearing participant if its original clearing participants defaulted or was insolvent.

Regulatory Developments in Financial Market Infrastructures

Regulatory Framework for Financial Market Infrastructures (FMIs)

The Reserve Bank continues to work with other Council of Financial Regulator (CFR) agencies on the development of proposals arising from a 2011 review of the regulatory framework for FMIs. During 2013/14, work continued in two areas in which the CFR had made recommendations:²⁵

- streamlining and clarifying the application of 'location requirements' for FMIs operating across borders
- providing regulators with powers to deal with a distressed FMI and ensure the continuity of critical services.

In its submission to the Financial System Inquiry, the Bank encouraged the government to progress legislative proposals in these areas.

Location requirements and regulatory influence

The CFR published a paper in July 2012 setting out additional safeguards to ensure that the Australian Securities and Investments Commission (ASIC) and the Bank retain sufficient regulatory influence over cross-border clearing and settlement (CS) facilities operating in Australia. The paper develops a graduated framework (the regulatory influence framework) for imposing additional requirements on cross-border CS facilities proportional to the materiality of domestic participation, their systemic importance to Australia, and the strength of their connection to the domestic financial system or real economy. This framework was, in part, implemented via the new Financial Stability Standards (FSS) that came into effect in March 2013.

In response to requests for further clarity from existing and prospective CS facility licensees, in March 2014 the CFR released a further paper setting out how the Bank and ASIC would expect to apply the framework in various alternative scenarios.²⁶ In particular, stakeholders had sought clarity as to the circumstances in which a cross-border central counterparty (CCP) would be expected to incorporate domestically and apply for a domestic CS facility licence. The CFR's March 2014 paper clarifies the intention to implement measures under the regulatory influence framework in such a way as to 'support efficiency and innovation in the provision of financial market infrastructure services and accommodate competition where consistent with financial stability'.

On the basis of the analysis in the paper, it is expected that domestic incorporation and licensing requirements would be imposed at a relatively low market share threshold in each of the following product classes: ASX-listed cash equities; ASX-listed equity options; Australian dollar-denominated (AUD) interest rate futures; and AUD equity index futures.

²⁵ The February 2012 letter to the then Deputy Prime Minister and Treasurer setting out the CFR's recommendations is available at <<http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2012/CFR-Financial-Market-Infrastructure-Regulation>>.

²⁶ The paper is available at <<http://www.cfr.gov.au/publications/cfr-publications/2014/pdf/app-reg-influence-framework-cross-border-central-counterparties.pdf>>.

Importantly, there is at present no specific legal provision for imposing a requirement that a CS facility licensee incorporate locally and transition from an overseas licence to a domestic licence. Further to the CFR's recommendations from its 2011 review, a working group of the CFR has developed legislative proposals to remove this impediment.

Dealing with FMI distress

During the period, the Bank participated in a Treasury-led working group of the CFR that is developing proposals for a special resolution regime for FMIs consistent with international standards. Resolution (and the related concept of recovery) addresses situations in which an FMI is in financial distress (and may become insolvent). If an FMI is unable to restore itself to financial soundness through implementation of an effective recovery plan, a resolution authority may need to intervene with the aim of maintaining continuity of critical services. In conjunction with this work, proposals for enhanced directions and enforcement powers for regulators are also being developed.

Implementation of the CFR's recommendations is being considered in the context of broader international work on the recovery and resolution of financial institutions. The Financial Stability Board's (FSB) *Key Attributes of Effective Resolution Regimes for Financial Institutions* (Key Attributes) set out a number of potential tools to be applied as part of a broad resolution plan, including the power to appoint a statutory manager. The FSB has consulted on an extension of its work to FMIs, and is expected to publish a final report later in 2014.²⁷ Working to a similar timetable, the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) are expected to finalise guidance on recovery planning for FMIs. This expands upon a high level requirement in the Principles that FMIs have recovery plans. The Bank has contributed to this work.

The Bank's submission to the Financial System Inquiry (FSI) noted the importance of a clear articulation to market participants of what actions would be taken in the case of a threat to the continued viability of FMI services. It suggested that this work should be progressed as a matter of priority. The FSI's interim report, released in July 2014, further noted the importance of progressing this work.

CPSS-IOSCO Principles for Financial Market Infrastructures (PFMIs)

The Bank continues to contribute to a CPSS-IOSCO task force monitoring the implementation of the PFMIs internationally. The task force is examining implementation at three increasing levels: implementation of the PFMIs within the regulatory framework; consistency of implementation measures with the PFMIs; and finally, consistency of outcomes both with the PFMIs and across jurisdictions.

An initial assessment report, published in August 2013, provided a preliminary view of the steps taken by 27 jurisdictions to implement the PFMIs within their respective regulatory frameworks. The task force published an updated assessment in late May. This report revealed that implementation was well advanced for CCPs, trade repositories (TRs) and payment systems. Several jurisdictions (including Australia) had completed their implementation measures.

The task force has also commenced its first assessments of the consistency of implementation measures with the Principles. This work has focused initially on CCPs and TRs in the three largest jurisdictions: the US, Europe and Japan. The Bank has led the subgroup assessing implementation measures in the US. The task force aims to publish the assessments of all three jurisdictions ahead of the G20 Summit in November 2014.

²⁷ See FSB (2013), 'Application of the Key Attributes of Effective Resolution Regimes to Non-bank Financial Institutions: Consultative Document', August. Available at <https://www.financialstabilityboard.org/publications/r_130812a.pdf>.

Consistent with the implementation of the PFMLs in Australia, the Bank has undertaken annually to assess the Reserve Bank Information and Transfer System against the Principles, and periodically to carry out self-assessments of its oversight of systemically important payment systems against the associated Responsibilities of Central Banks, Market Regulators, and other Relevant Authorities for Financial Market Infrastructures (the Responsibilities). The first of each of these assessments was published in December 2013 (see 'Oversight of High-value Payment Systems').

Similarly, the Bank has undertaken to carry out and publish, jointly with ASIC, assessments of domestic CS facility licensees against the Principles, and self-assessments of ASIC's and the Bank's regulation and oversight of CS facilities against the Responsibilities. The first of each of these reports was published alongside the Bank's 2013/14 Assessment of the ASX CS facilities. These are principally targeted at an international audience, in anticipation of future peer reviews, either by the CPSS-IOSCO task force or international organisations such as the International Monetary Fund. Since the FSS are aligned with all stability-related Principles, the joint assessment against the Principles is similar to the 2013/14 Assessment of the ASX CS facilities, but with the addition of material relevant to ASIC's responsibilities.²⁸

OTC Derivatives

Since the global financial crisis, international policymakers have also sought to strengthen practices in over-the-counter (OTC) derivatives markets. To this end, in 2009, the G20 leaders committed that all OTC derivatives transactions would be reported to TRs, that all standardised OTC derivatives would be executed on electronic trading platforms, as appropriate, and cleared through CCPs, and that higher capital requirements would apply to non-centrally cleared OTC derivatives. In November 2011, G20 leaders added to these, agreeing that international standards on margining of non-centrally cleared OTC derivatives should be developed.

Consistent with these commitments, in January 2013 amendments to the *Corporations Act 2001* took effect that provide for the imposition of mandatory requirements in respect of trade reporting, central clearing and platform trading of OTC derivatives. Under the framework, the responsible Minister, after considering the advice of the Australian Prudential Regulation Authority (APRA), ASIC and the Bank (jointly 'the regulators'), may issue a determination that mandatory obligations should apply to a specified class of derivatives. A determination gives ASIC the power to set Derivative Transaction Rules (DTRs). These set out the details of any requirements. In writing DTRs, ASIC must consult with APRA and the Bank. While providing advice on OTC derivatives reform is a broader responsibility of the Bank, the Board's views have been sought, particularly with respect to mandatory clearing, given the potential implications for the Bank's FMI oversight role.

In order to inform their advice, the regulators actively monitor developments in the Australian and overseas OTC derivatives markets. As part of this process, the regulators carry out periodic surveys and produce assessment reports based on the results of these surveys. In 2013/14, the regulators produced two such reports; one in July 2013 and the other April 2014.²⁹ The main focus of the two reports was the incremental costs and benefits of imposing mandatory clearing requirements.

²⁸ These assessment reports are available at <<http://www.rba.gov.au/payments-system/index.html>>.

²⁹ APRA, ASIC and RBA (2013), *Report on the Australian OTC Derivatives Market*, July, available at <<http://www.cfr.gov.au/publications/cfr-publications/2013/report-on-the-australian-otc-derivatives-market-july/pdf/report.pdf>>; and APRA, ASIC and RBA (2014), *Report on the Australian OTC Derivatives Market*, April, available at <<http://www.cfr.gov.au/publications/cfr-publications/2014/report-on-the-australian-otc-derivatives-market-april/index.html>>.

Mandatory clearing requirements

To date, Australia's regulators have favoured allowing private incentives to set the pace of the transition to central clearing. However, given that other jurisdictions are relying on mandatory requirements, the regulators have acknowledged that there could be international consistency benefits to taking a similar approach – especially for products that are subject to mandatory clearing requirements overseas.

- In their July 2013 report, the regulators recommended introducing mandatory central clearing requirements for US dollar-, euro-, British pound- and Japanese yen-denominated interest rate derivatives trades between internationally active dealers. These products are already subject to US Commodity Futures Trading Commission (CFTC) – and in some cases Japanese – mandatory clearing requirements, and it is anticipated that mandatory clearing requirements for these products will also be introduced in the European Union (EU). While the regulators have also considered the case for mandatory clearing requirements for credit derivatives that are subject to overseas clearing mandates, to date they have concluded that they do not see the case for such a recommendation given the low levels of activity involving Australian-headquartered dealers.
- In the April 2014 report, the regulators recommended introducing similar mandatory clearing requirements for AUD interest rate derivatives. AUD interest rate derivatives comprise the largest and most systemically important component of the OTC derivatives market in Australia and could also be subject to mandatory clearing requirements in other jurisdictions in the future. Consequently, the regulators prioritised their assessment of the case for introducing mandatory clearing requirements for this product class. At the time of the July 2013 Report, ASX Clear (Futures) Pty Ltd (ASX Clear (Futures)) and LCH.Clearnet Limited (LCH.C Ltd) had only recently received regulatory approval to provide clearing of OTC interest rate derivatives directly to Australian participants. The regulators were of the view that it was important to give Australian banks time to establish direct clearing arrangements based on private commercial incentives, before recommending introducing mandatory clearing requirements for AUD interest rate derivatives. By April 2014, Australian banks had made substantial progress in implementing appropriate clearing arrangements. Accordingly, the regulators were satisfied that the incremental cost of mandatory central clearing of Australian dollar-denominated interest rate derivatives would be very low for trades between internationally active dealers in the Australian market.

Consistent with these recommendations, the government has released two consultation papers, in February and July 2014, proposing to impose a clearing mandate for interest rate derivatives denominated in the five currencies mentioned above.

Another focus of the April 2014 report was the incremental costs and benefits of extending any central clearing mandate to smaller non-dealer participants in the Australian OTC derivatives market. Based on insights from the survey, the regulators recommended that there was no public policy case for introducing mandatory central clearing of OTC derivatives for non-dealers. Instead, the regulators proposed to keep under review the case for extending mandatory central clearing to non-dealers in light of ongoing market and international regulatory developments.

Equivalence of Australian Regulation

International consistency benefits were a key reason for the regulators' recommendation that mandatory clearing requirements be introduced in Australia. One such benefit is a lower cost of compliance arising from duplicative and potentially conflicting regulations imposed on the same trade or participant by regulators

in different jurisdictions. If other jurisdictions assess that a particular aspect of Australia's regulation of OTC derivatives markets or related infrastructure is equivalent, they may, under certain conditions, place reliance on Australian regulation and regulators. This could materially lower compliance costs for Australian participants because they would not need to also monitor or demonstrate their compliance with the relevant overseas rules.

During 2013/14, the Board was kept updated on the regulators' ongoing dialogue with the relevant EU authorities and the CFTC on their assessments of the equivalence of certain aspects of Australia's regulation of FMs and OTC derivatives markets. In late 2013, the European Securities and Markets Authority (ESMA) published its advice on the equivalence of Australia's regime with respect to all aspects of the European Market Infrastructure Regulation.

- ESMA concluded that Australia was equivalent with respect to the regulation of CCPs, TRs and mandatory trade reporting.
- Since neither Australia nor the EU had mandatory clearing obligations in place at the time of ESMA's advice, ESMA provided only conditional advice on this aspect of the Australian regime. ESMA advised that Australian mandatory clearing obligations should be considered equivalent only if the product and institutional scope of such requirements aligned with those in the EU's prospective regime.
- ESMA concluded that Australia's regime was not equivalent in relation to risk mitigation requirements for non-centrally cleared trades. This reflected the absence of international standards covering such requirements, which are currently being developed by IOSCO.

In December 2013, the CFTC announced that 'substituted compliance' for a range of entity-level requirements would be available to Australian market participants that had provisionally registered with the CFTC as swap dealers. The CFTC did not grant substituted compliance for transaction-level requirements, such as mandatory clearing. This decision could be revisited once Australian mandatory clearing requirements are in force. The CFTC is continuing to review the comparability of transaction reporting requirements, and has therefore extended existing time-limited no-action relief for Australian swap dealers.

Cross-border Regulation of Australian CCPs

ASX Clear (Futures), and more recently ASX Clear Pty Ltd (ASX Clear), have submitted applications for recognition by ESMA. This recognition is required for ASX Clear (Futures) to be permitted to admit or retain EU entities as direct participants. Recognition by ESMA is also linked to a CCP's status as a Qualifying CCP in the EU. Under the European implementation of the Basel III bank capital reforms, from December 2014 EU banks will have to hold more capital against exposures to a CCP that is not deemed to be Qualifying. If ASX Clear chooses to pursue its application and achieves EU recognition, then participants that are subsidiaries of EU banks would be able to apply lower capital charges for exposures to ASX Clear.

One of the preconditions for recognition in the EU is that the Australian regime for regulation of CCPs is assessed as equivalent to EU regulation. The Bank's FSS are designed to deliver outcomes equivalent to EU standards, since both are based on the Principles. However, since the EU standards are drafted at a more detailed level, the Bank issued supplementary interpretation of a subset of standards to provide additional clarity in some areas. Currently, the supplementary interpretation applies only to domestically licensed derivatives CCPs in Australia that provide services to clearing participants established in the EU. The Bank has applied this interpretation of the relevant standards in its assessment of ASX Clear (Futures) for 2013/14.

As noted above, ESMA published its conclusions on the equivalence of the Australian regime for CCPs in late 2013. On the basis of ESMA's conclusion that the Australian regulatory framework for CCPs was equivalent to that in the EU, the European Commission is proposing to adopt an Implementing Act that will give legal effect to this decision. Prior to any recognition decision, ASIC and the Bank will also need to execute an MoU with ESMA.

In the case of the US, the CFTC currently requires non-US derivatives CCPs that offer swap clearing services to US persons to register as Derivatives Clearing Organisations (DCOs) with the CFTC. However, on 6 February 2014 the CFTC granted ASX Clear (Futures) time-limited relief from the requirement to register as a DCO. This allows US participants of ASX Clear (Futures) to clear proprietary trades in Australian and New Zealand dollar-denominated interest rate swaps using its service. The relief will expire at the end of 2014, or earlier if ASX Clear (Futures) registers as a DCO or is granted an exemption from DCO registration. The CFTC has indicated that it is considering an exemption regime that will place reliance on a CCP's home regulatory regime.

Separately, the Bank has entered into an MoU with the Reserve Bank of New Zealand governing cooperation and information sharing in the oversight of certain CCPs in which both jurisdictions have an interest.

Liaison Activity

Liaison with Industry

The Reserve Bank engaged extensively with stakeholders in the Australian payments system during 2013/14. A major focus of the Bank's engagement related to the New Payments Platform (NPP; see 'New Payments Platform' in the chapter 'Strategic Review of Innovation'). Two senior staff from the Bank are members of the NPP Steering Committee; a number of other staff represented the Bank at meetings of the design authorities and working groups contributing to the implementation of the NPP. In collaboration with the Australian Payments Clearing Association (APCA), the Bank also continued its discussions with industry about the formation of the Australian Payments Council.

The Bank consulted with industry on its proposed reforms to the Access Regimes for the MasterCard and Visa systems. Having published an initial consultation document in May 2013, the Bank received submissions from a range of interested parties in July 2013, and met with most of these to discuss the scope for reform and the issues raised. Following this process, the Bank published a set of proposals for reform in December 2013 and conducted a further consultation in January and February 2014.

Meetings were also held with stakeholders in financial markets to discuss clearing and settlement issues. These included discussions related to the oversight of the licensed clearing and settlement facilities, and reforms to the over-the-counter (OTC) derivatives market.

The Bank continued to work closely with other regulatory and government agencies. Examples include work undertaken by the member agencies of the Council of Financial Regulators, continuing work on recovery and resolution of financial market infrastructures (FMIs), and OTC derivatives reform. The Bank also engaged with the Australian Prudential Regulation Authority regarding its proposed reforms of the Access Regimes applying to the MasterCard and Visa card systems, and with the Commonwealth Treasury in relation to the Government's deregulation agenda. Officials from the Bank also met with counterparts at the Australian Competition and Consumer Commission on a periodic basis to discuss areas of common interest in retail payments.

Members of the Financial System Inquiry Committee met with Bank executives in April in relation to the Inquiry, while Bank staff hosted a number of discussions with the Inquiry's Secretariat and provided a range of additional data and information to the Inquiry.

In line with its liaison agreement with APCA, the Bank met with APCA management following each APCA Board meeting in 2013/14; Bank staff also attended meetings with APCA on a range of payments topics, including fraud statistics publication and industry efforts to ensure a smooth transition to the National Broadband Network for ATM and eftpos terminals.

The Bank participated in a number of public forums on payments system and FMI issues. The Head of Payments Policy delivered two speeches in 2013/14, focusing on the NPP and the Bank's study on the use of

payment methods by consumers. Other staff attended various payments and clearing and settlement industry events, including conferences and forums organised by APCA and the Australian Securities and Investments Commission.

International Engagement

The Reserve Bank was represented on a number of international groups in 2013/14: the Committee on Payment and Settlement Systems (CPSS; now the Committee on Payments and Market Infrastructures); the CLS Oversight Committee; the SWIFT Oversight Forum; the multilateral cooperative oversight arrangement for LCH.Clearnet Limited's SwapClear service; the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) Working Group on Payment and Settlement Systems; and the OTC Derivatives Regulators' Forum. Involvement in the CPSS included contributing to ongoing joint work with the International Organization of Securities Commissions (IOSCO) via a seat on the CPSS-IOSCO Steering Group. The Bank also participated in a number of CPSS working groups encompassing: work to establish guidance on recovery and resolution of FMI; a task force monitoring the implementation of the CPSS-IOSCO *Principles for Financial Market Infrastructures*; a working group developing a public disclosure framework for FMI; a report on the range of collateral management services currently being offered; and a report on non-bank involvement in retail payments systems and the implications of their role for risk, efficiency and competition.

The Bank also engaged with overseas central banks and regulatory agencies on a less formal basis. Over the past year, this engagement included: discussing various issues in retail payments with relevant authorities; assisting overseas regulators with their equivalence assessments of the Australian regulatory regime; and keeping abreast of developments in OTC derivatives regulation around the world via discussions in various forums with other central banks and securities regulators. Engagement with global financial market stakeholders, such as the International Swaps and Derivatives Association, also provided useful information about developments in OTC derivatives markets and industry views on recovery and resolution of FMI.

The Board's Announcements and Reserve Bank Reports

This section lists developments since mid 2013. The Payments System Board's 2006 Annual Report contained a list of the Board's announcements and related Reserve Bank reports up to that time. Subsequent annual reports have contained an annual update.

2013

Report on the Australian OTC Derivatives Market, Council of Financial Regulators, July 2013.

Media Release 2013-04, 'Introduction of the ASX Code of Practice for Clearing and Settlement of Cash Equities in Australia', Council of Financial Regulators, Canberra, July 2013.

Supplementary Interpretation of the Financial Stability Standards for Central Counterparties, Reserve Bank of Australia, Sydney, August 2013.

Frequency of Regulatory Assessments of Licensed Clearing and Settlement Facilities, Reserve Bank of Australia, Sydney, August 2013.

Media Release 2013-16, 'Dual-network Debit Cards', 21 August 2013.

2012/13 Assessment of ASX Clearing and Settlement Facilities, Reserve Bank of Australia, Sydney, September 2013.

Media Release 2013-22, 'Proposed Establishment of an Australian Payments Council and User Consultation Group', 21 October 2013.

Media Release 2013-24, 'Same-day Settlement of Direct Entry Payments', 25 November 2013.

Media Release 2013-26, 'Consultation on Variations to the MasterCard and Visa Access Regimes', 6 December 2013.

Proposed Variations to the MasterCard and Visa Access Regimes: Consultation Document, Reserve Bank of Australia, Sydney, December 2013.

2013 Self-assessment of the Reserve Bank of Australia – Systemically Important Payment Systems, Reserve Bank of Australia, Sydney, December 2013.

2013 Self-assessment of the Reserve Bank Information and Transfer System, Reserve Bank of Australia, Sydney, December 2013.

'Recovery and Resolution of Central Counterparties', *RBA Bulletin*, December 2013.

2014

Media Release 2014-04, 'Payment Card Access Regimes', 7 March 2014.

Payment Card Access Regimes: Conclusions, Reserve Bank of Australia, Sydney, March 2014.

Variation to the MasterCard and Visa Access Regimes: Details-stage Regulation Impact Statement, Reserve Bank of Australia, Sydney, March 2014.

'Non-dealer Clearing of Over-the-counter Derivatives', *RBA Bulletin*, March 2014.

'Developments and Innovation in the Payments System', Submission to the Financial System Inquiry as part of the Bank's overall submission, March 2014.

Application of the Regulatory Influence Framework for Cross-border Central Counterparties, Council of Financial Regulators, Canberra, March 2014.

Report on the Australian OTC Derivatives Market, Council of Financial Regulators, Canberra, April 2014.

'The Changing Way We Pay: Trends in Consumer Payments', RBA Research Discussion Paper No 2014-05, June 2014.

Memorandum of Understanding, Reserve Bank of Australia, Australian Securities and Investments Commission and United States Commodity Futures Trading Commission, *Cooperation and the Exchange of Information Related to the Supervision of Cross-border Clearing Organizations*, June 2014.

Memorandum of Understanding, Reserve Bank of Australia and Reserve Bank of New Zealand, *Cooperation and the Exchange of Information Related to the Supervision of Cross-border Clearing Organisations*, August 2014.

Abbreviations

ABS	Australian Bureau of Statistics	ePAL	eftpos Payments Australia Ltd
ACCC	Australian Competition and Consumer Commission	ERPB	Euro Retail Payments Board
ADI	Authorised Deposit-taking Institution	ESA	Exchange Settlement Account
APCA	Australian Payments Clearing Association	ESMA	European Securities and Markets Authority
APRA	Australian Prudential Regulation Authority	EU	European Union
ASIC	Australian Securities and Investments Commission	FEX	Financial and Energy Exchange
ASX	Australian Securities Exchange	FMI	Financial Market Infrastructures
ATM	Automated Teller Machine	FSB	Financial Stability Board
AUD	Australian Dollar	FSI	Financial System Inquiry
BI	Basic Infrastructure	FSS	Financial Stability Standards
BIS	Bank for International Settlements	ICS	Initial Convenience Service
BoE	Bank of England	IOSCO	International Organization of Securities Commissions
CAC Act	Commonwealth Authorities and Companies Act 1997	IRD	Interest Rate Derivatives
CCP	Central Counterparty	LCH.C Ltd	LCH.Clearnet Limited
CFR	Council of Financial Regulators	NBB	National Bank of Belgium
CFTC	Commodity Futures Trading Commission	NFC	Near Field Communication
CHES	Clearing House Electronic Subregister System	NPP	New Payments Platform
CLS	Continuous Linked Settlement	OG	SWIFT Oversight Group
CPMI	Committee on Payments and Market Infrastructures (formerly CPSS)	OTC	Over-the-counter
CPSS	Committee on Payment and Settlement Systems (recently renamed CPMI)	PEXA	Property Exchange Australia Ltd
CS	Clearing and Settlement	PFMI	Principles for Financial Market Infrastructures
DCO	Derivatives Clearing Organisations	PIN	Personal Identification Number
DE	Direct Entry	PSR	Payments System Regulator
DTR	Derivatives Transaction Rules	RBA	Reserve Bank of Australia
EC	European Commission	RBNZ	Reserve Bank of New Zealand
eftpos	electronic funds transfer at point of sale	RITS	Reserve Bank Information and Transfer System
EMEAP	Executives' Meeting of East Asia-Pacific Central Banks	SCCI	Specialist Credit Card Institution
EMIR	European Market Infrastructure Regulation	SEPA	Single Euro Payments Area
EMV	Europay, MasterCard & Visa chip card standard	SSF	Securities Settlement Facility
		SWIFT	Society for Worldwide Interbank Financial Telecommunication
		TR	Trade Repository



RESERVE BANK OF AUSTRALIA