Financial Stability Review

SEPTEMBER 2014

Reserve Bank

Contents

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Overview

The global financial system continues to be buoyed by strong investor risk appetite. International financial markets have been remarkably stable for much of the past six months, with historically low volatility and 'search for yield' behaviour evident in many asset classes amid highly expansionary monetary policy. This environment has supported economic growth and an ongoing improvement in most banking systems. Nonetheless, a significant reassessment of risk could lead to a sharp repricing of assets, particularly if markets are less liquid than anticipated. Potential triggers for such a reappraisal include revised expectations for monetary policy in advanced economies. Up to this point, however, market prices have reacted remarkably little to credit and geopolitical events that might have been expected to affect investor risk appetite.

Risks surrounding European banks and sovereigns have lessened but not disappeared, given the slow growth environment. European banks have made some progress with balance sheet repair in the lead-up to the release of the European Asset Quality Review, though if the results are unexpectedly negative, it could impede these banks' ability to raise additional capital. Conditions in many emerging markets have stabilised since early 2014. However, credit and property prices have grown strongly in some emerging economies, including China, which may have made these economies more sensitive to adverse shocks.

Financial system stability in Australia is being underpinned by the continued strong financial performance of the banking system. Australian banks have improved their resilience to future shocks by increasing capital ratios, and their profitability remains robust, aided by further declines in bad and doubtful debt charges. They are also benefiting from improved wholesale funding conditions globally. This in turn has put downward pressure on deposit pricing and fostered an environment of stronger price competition in lending. Non-banks are also benefiting from the lower funding costs, with issuance of residential mortgage-backed securities by a wider range of entities (including mortgage originators) picking up and associated spreads narrowing.

The low interest rate environment and, more recently, strong price competition among lenders have translated into a strong pick-up in growth in lending for investor housing – noticeably more so than for owner-occupier housing or businesses. Recent housing price growth seems to have encouraged further investor activity. As a result, the composition of housing and mortgage markets is becoming unbalanced, with new lending to investors being out of proportion to rental housing's share of the housing stock. Both construction and lending activity are increasingly concentrated in Sydney and Melbourne, where prices have also risen the most.

In the first instance, the risks associated with this lending behaviour are likely to be macroeconomic in nature rather than direct risks to the stability of financial institutions. Property investors in Australia have historically been at least as creditworthy as owner-occupiers, and mortgage lending standards remain firmer than in the years leading up to the

financial crisis. Even so, a broader risk remains that additional speculative demand can amplify the property price cycle and increase the potential for prices to fall later, with associated effects on household wealth and spending. These dynamics can affect households more widely than just those that are currently taking out loans: the households most affected by the declines in wealth need not necessarily be those that contributed to heightened activity. Furthermore, the direct risks to financial institutions would increase if these high rates of lending growth persist, or increase further. In this environment, recent measures announced by the Australian Prudential Regulation Authority (APRA) should promote stronger risk management practices by lenders. The Bank is discussing with APRA, and other members of the Council of Financial Regulators, additional steps that might be taken to reinforce sound lending practices, particularly for lending to investors.

The dynamics in the housing market are also relevant in considering risks in commercial property markets. This area of Australian business activity has strengthened over the past couple of years, unlike most other parts of the business sector. Amid the global search for yield, Australian commercial property has attracted strong investor demand, both domestic and foreign. This has boosted prices and widened the disparity between movements in prices and rents for both CBD office and industrial property. Any significant reversal of this demand could expose the market to a sharp repricing. At this stage, however, the broader risks to financial stability from this source remain modest, because banks' commercial property exposures are a smaller share of banks' total assets than prior to the crisis.

Conditions in other parts of the financial sector are generally favourable. General insurers' profitability remains strong overall, with the industry currently benefiting from a benign claims environment. Buoyant conditions in the housing market have also contributed to stronger profits for lenders mortgage insurers. The part of the financial sector considered 'shadow banking' continues to decline as a share of financial system assets. It currently poses little systemic risk in Australia because of its small size and limited credit and funding links to the regular banking system.

As G20 Chair for 2014, Australian authorities – including the Reserve Bank – have continued to work with the Financial Stability Board towards substantially completing key aspects of four core areas of reform: building resilient financial institutions through the Basel III reforms; addressing the 'too big to fail' problem associated with systemically important financial institutions; responding to shadow banking risks; and making derivatives markets safer. Progress appears largely on track to achieve, by the November G20 Leaders' Summit, the key deliverables set out at the start of the year. However, achieving these high-level agreements would still leave some challenging areas of detail to be worked out, particularly on aspects of 'too big to fail' and derivatives markets reform.

The Financial System Inquiry released its wide-ranging *Interim Report* in July. While the report offered a largely favourable assessment of the current financial regulatory framework, it did highlight some areas for improvement, including potential measures to promote increased coordination among regulators. The Bank made a second submission to the Inquiry, covering areas related to financial stability and the responsibilities of the Reserve Bank, particularly for the payments system.

1. The Global Financial Environment

As advanced economy banking systems continue to recover, potential risks arising from broader financial market developments are increasingly in focus. International markets had, until recently, been remarkably stable, with historically low volatility and 'search for yield' behaviour prevalent. Financial asset prices reacted remarkably little to credit and geopolitical events that might have been expected to affect investor risk appetite. This has been somewhat unwound in recent weeks.

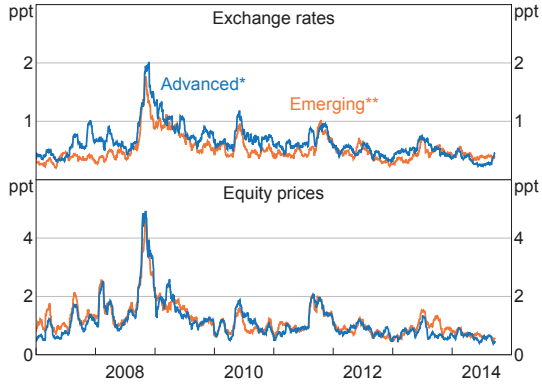
The low interest rate environment has continued to support a modest recovery in the global economy and an ongoing improvement in most banking systems. In the past six months, there has been a broad-based decline in non-performing loan (NPL) ratios for banks in the major advanced economies, with the ratio at euro area banks declining for the first time since the financial crisis. This has supported bank profits in most advanced economies, while for banks operating in emerging markets, continuing strong credit growth has underpinned profits. Search for yield behaviour has also supported an improvement in banks' capital positions.

Nonetheless, a sudden reassessment of risk could lead to a sharp repricing of assets, particularly if markets are less liquid than anticipated. In Europe, a decline in investor risk appetite could worsen banks' standalone funding profiles and increase recourse to the European Central Bank's (ECB) funding program. Similarly, while conditions in many emerging markets have largely stabilised since early 2014, past rapid growth in credit and property prices in some countries – including China – have made these economies more sensitive to adverse shocks.

Global Financial Markets

Global financial conditions remain buoyant overall and measures of market volatility remain low despite recent increases in some markets (Graph 1.1). Yields on a range of financial assets drifted down during much of the past six months. Part of the decline occurred because investors expected policy rates in major economies to remain low for a more extended period, but investors have also been willing to accept less compensation for taking on risk. Global equity prices in several advanced economies have risen strongly, and advanced economy long-term sovereign bond yields fell over the past year and remain at very low levels by historical standards (Graph 1.2). Spreads between the yields on higher- and lower-risk financial assets have generally narrowed (Graph 1.3).

Graph 1.1
Financial Market Volatility
Median rolling 22-day standard deviations; daily

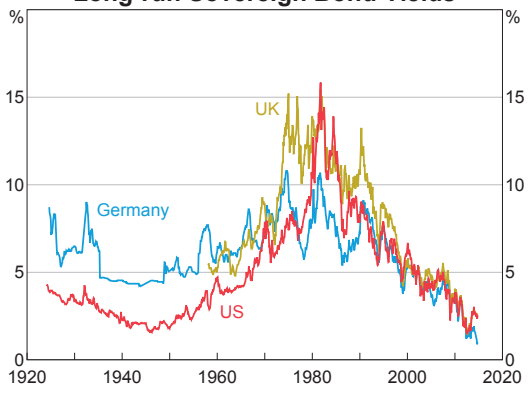


* Australia, euro area, Japan, New Zealand, United Kingdom and United States

** Brazil, Chile, Colombia, India, Indonesia, Malaysia, Mexico, Philippines, Russia, South Africa, South Korea, Taiwan, Thailand and Turkey

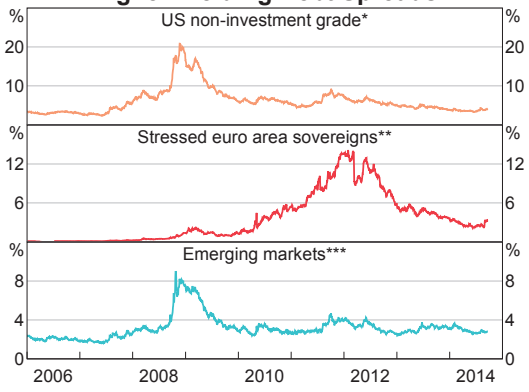
Sources: Bloomberg; RBA

Graph 1.2
Long-run Sovereign Bond Yields



Sources: Bloomberg; Global Financial Data

Graph 1.3
Higher Yielding Debt Spreads



* Non-financial corporations, B-rated bonds
** Average of Greece, Ireland, Portugal and Spain
*** Global index; includes emerging Asia, Latin America and emerging Europe

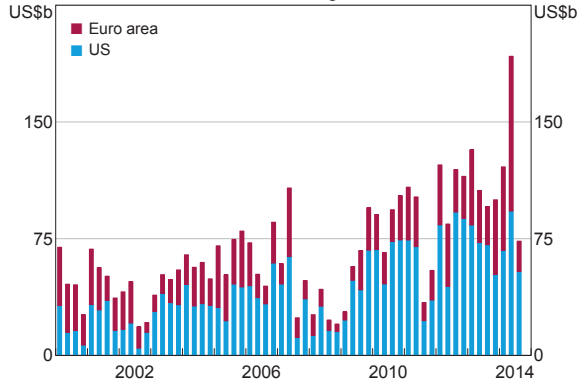
Sources: Bank of America Merrill Lynch; Bloomberg; Thomson Reuters

In an environment of elevated risk appetite, strong issuance of lower-rated debt was met with robust investor demand. Stressed-economy European sovereigns, such as Cyprus and Portugal, successfully returned to funding markets at favourable pricing relative to the recent past, often with oversubscribed issuance. Favourable financial conditions also extended to stressed-economy banks. For example, beginning in March, Greek banks returned to capital markets, with oversubscribed bond issues at comparably low yield spreads.

Similarly, issuance of both investment grade and non-investment grade corporate bonds have remained robust across the advanced economies (Graph 1.4). In the United States, issuance of 'covenant-lite' loans has increased, pointing to some relaxation in underwriting standards, and there has been rising investor demand for complex products such as collateralised loan obligations. Large global banks have also managed to issue hybrid securities (also known as contingent convertible bonds, or CoCos) that count towards the new Basel III capital requirements, although the risks associated with these relatively new securities are uncertain and difficult to price (see 'Box A: Recent Trends in the Issuance of Basel III Compliant Contingent Capital Instruments').

To an extent, increased risk taking is an intended consequence of accommodative monetary policy. Financial conditions have supported an improvement in economic activity in a number of advanced economies over the past year. Ongoing policy support has also allayed investor concerns about the probability of damaging tail-risk events. Important in this regard has been the ECB's long-term refinancing operations (LTROs), which were recently extended as 'targeted' LTROs.

Graph 1.4
Corporate Bond Issuance*
Non-investment grade**



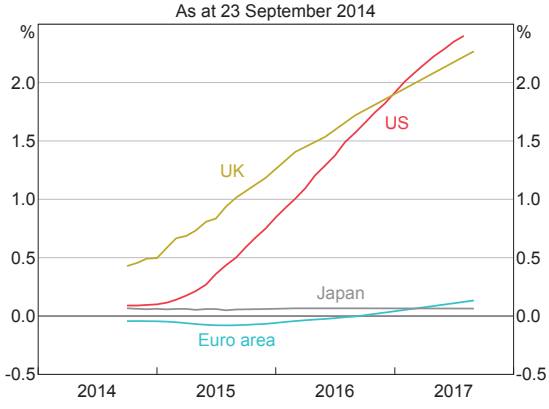
* September 2014 is quarter-to-date
** Includes unrated bonds

Source: Dealogic

Nonetheless, the buoyant financial environment also raises concerns that investors may not be adequately taking risks into account. A key consideration for policymakers is the extent to which the favourable pricing on riskier assets is justified by fundamental developments, and how resilient markets would be to changing circumstances. The concern is that a sudden reassessment of risk could lead to a sharp and damaging repricing of assets that undermines economic activity and aggravates debt burdens among sovereigns, households and businesses in a number of countries. Potential triggers for an adjustment in asset prices include revised expectations for monetary policy in advanced economies, adverse credit events, or geopolitical events, such as the tensions in Ukraine or Iraq. That said, recent events of this nature have so far had a limited impact on broader markets.

On interest rate risk, the extent of monetary accommodation in the global economy is unprecedented (Graph 1.5), so it is unclear how the process of an eventual unwinding of current monetary settings will play out. Events in mid 2013, when financial markets reacted strongly to changed expectations for the stance of monetary policy, suggest that the adjustment could be pronounced. On that occasion bond yields moved higher globally, despite differences in expectations for monetary policy across countries. There was a marked investor retreat from riskier assets, triggering sharp depreciations in the currencies of several emerging market economies that had been net recipients of portfolio inflows in the years prior. In many markets, these movements largely unwound when it became clear that an increase in the Federal Reserve's policy interest rate was not imminent and as central banks in other major advanced economies acted to loosen monetary policy.

Graph 1.5
Market Implied Policy Rate Expectations
As at 23 September 2014



Sources: Bloomberg; RBA

A broader concern about the potential for a damaging repricing of financial assets in response to a shock is that some investors might be underestimating the difficulty of exiting a position. Reduced dealer inventories of bonds, and the rising importance of investment vehicles that may be vulnerable to redemption risk in times of stress, such as exchange traded funds, have also contributed to concerns.

Search for yield behaviour has, however, been supportive of financial conditions. The stability of euro area banks' funding profiles became more robust to market shocks as they decreased their reliance on central bank liquidity. Favourable euro area funding conditions have extended to stressed-economy banks, supported by the ECB's LTRO funding.

There has also been progress with establishing arrangements for the Europe-wide banking union. The European Parliament passed banking union legislation in April that seeks to reduce the reliance of banks on public sector support in a crisis. The scheme, which begins in January 2015, establishes a common fund for resolving banks, requires the imposition of losses on shareholders and bondholders before resolution funds can be disbursed, and guarantees deposits (up to a cap of €100 000).

While European sovereign and banking risks have lessened, a decline in investor risk appetite could hamper recent improvements in euro area banks' capital and balance sheet positions. The recent failure of the third-largest Portuguese lender, Banco Espírito Santo (BES), has heightened focus on the

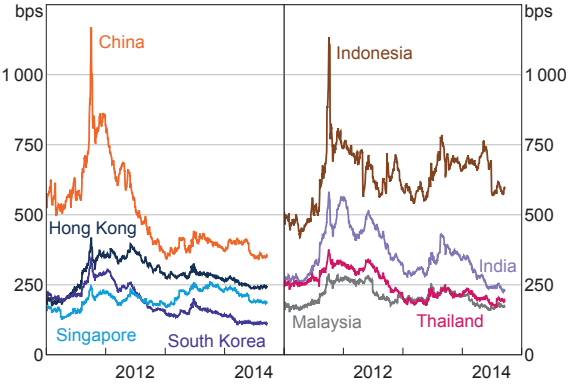
ECB's Asset Quality Review (AQR) and stress test exercise, for which results are due in the second half of October. Many banks have pre-positioned themselves by increasing capital issuance and provisioning coverage.

Conditions in Asian financial markets have been comparably stable over recent months, following periods of investor retreat in both mid 2013 and early 2014. Sovereign and corporate bond spreads have generally been stable or narrowed over the past six months (Graph 1.6), in line with broader global search for yield behaviour as well as ongoing portfolio inflows. Equity prices have also increased strongly since the beginning of the year, with markets in India and Indonesia particularly buoyed following elections. Most exchange rates for emerging Asia have been relatively stable and Asian central banks have generally continued to increase their gross foreign currency reserves.

Nonetheless, financial system vulnerabilities in emerging Asia remain. Very low interest rates in the advanced economies and brighter growth prospects in emerging markets post-crisis have been supportive of rapid credit growth in many Asian economies in recent years, potentially increasing their vulnerability to adverse shocks (Graph 1.7). In China, around half of all new credit has originated outside the prudentially regulated sector. Concerns about asset quality have been rising in China, amid the slower pace of economic growth and a more recent softening of conditions in the residential property market.

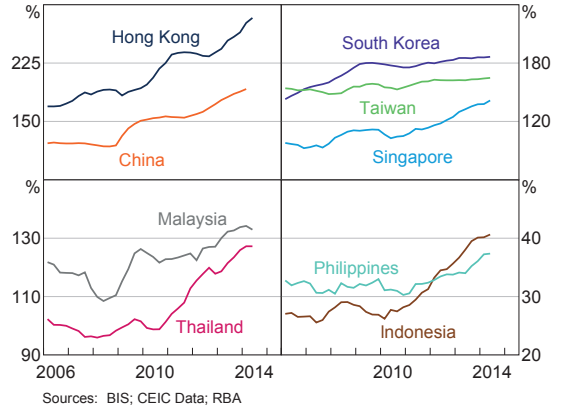
In addition to growth in bank-intermediated credit, non-financial corporate bond issuance has picked up in many economies in emerging Asia, some of which has been denominated in foreign currencies. This may be of particular concern if exchange rates depreciate further in response to revised expectations for monetary policy in advanced economies. An associated vulnerability is that liquidity in the secondary market for bonds in some emerging economies is relatively low, with subdued trading volumes despite strong issuance. Low liquidity in secondary markets could amplify asset price dynamics under stress.

Graph 1.6
Asian Corporate Bond Spreads
To equivalent US Treasury bonds



Source: JP Morgan

Graph 1.7
Asia – Total Credit
Per cent to nominal GDP



Sources: BIS; CEIC Data; RBA

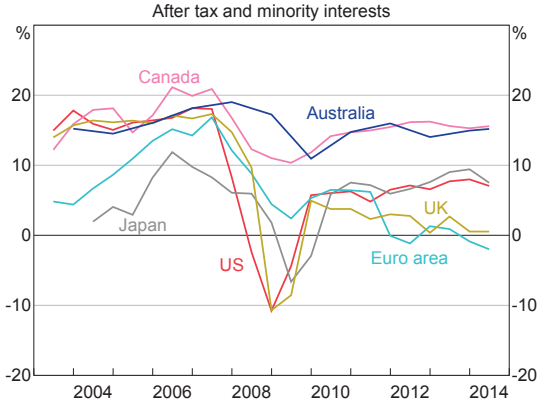
Banking Systems in Advanced Economies

Bank profitability and capital

Profitability in the major banking systems has remained mixed over the past six months (Graph 1.8). Drivers of weakness have varied. In the United States and Japan, net interest margins have narrowed further. Loan-loss provisions continue to be high for the large euro area banks, but are now around pre-crisis levels for the large US and UK

Graph 1.8
Large Banks' Return on Equity*

After tax and minority interests

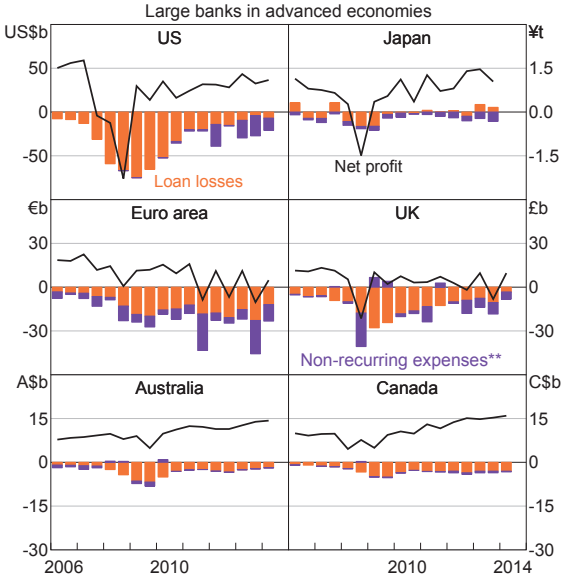


* Number of banks: Australia (4), Canada (6), euro area (8), Japan (3), UK (4) and US (6); adjusted for significant mergers and acquisitions; reporting periods vary across jurisdictions; estimates used where banks have not reported for June 2014

Sources: Banks' Annual and Interim Reports; Bloomberg; RBA; SNL Financial

Graph 1.9
Bank Profits and Impairments*

Large banks in advanced economies



* Number of banks: Australia (4), Canada (6), euro area (6), Japan (3), UK (4) and US (6); adjusted for significant mergers and acquisitions; reporting periods vary across jurisdictions

** Includes, but is not limited to, goodwill and non-loan asset adjustments and one-off legal expenses; US data include only one-off legal expenses since 2008

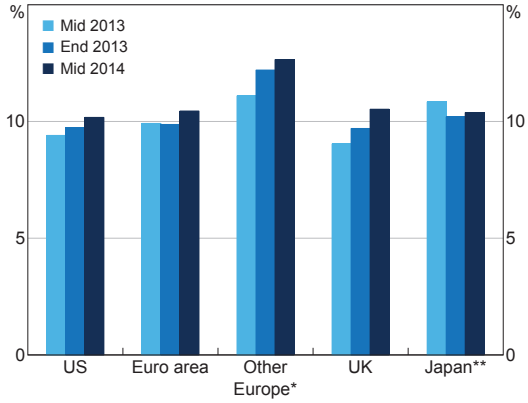
Sources: Bloomberg; RBA; SNL Financial

banks (Graph 1.9). Legal expenses, arising from past dubious practices and increased regulatory scrutiny, are detracting noticeably from profits for some banks in the United States and in Europe. Uncertainty remains over banks' ongoing exposure to litigation, with additional provisioning expected to weigh on future profits.

On average, large banks in advanced economies increased their Common Equity Tier 1 (CET1) capital ratios over the past six months, with all the global systemically important banks (G-SIBs) reporting CET1 holdings in excess of their fully phased-in Basel III regulatory minima including G-SIB surcharges (Graph 1.10). The large continental European banks improved their capital ratios mainly through issuance. In contrast, banks in the United States did so primarily through retained earnings. The increase in the United States also partly reflected responses to increased regulatory scrutiny of planned capital distributions (such as dividends), through the annual stress test and capital review. Preparations for the introduction of the supplementary US leverage ratio requirement, which is higher than the Basel III requirement, also contributed.

Graph 1.10
Advanced Economy G-SIBs' CET1 Ratios

Fully phased in Basel III; asset-weighted average



* Includes Credit Suisse, Nordea and UBS

** Japanese banks' CET1 ratios are based on transitional Basel III requirements

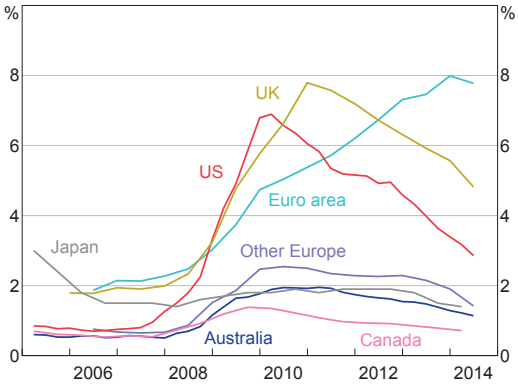
Sources: Bloomberg; RBA; SNL Financial

Asset performance

For the first time since before the global financial crisis, in the first half of 2014, all major advanced economy

banking systems have shown signs of improvement in asset quality (Graph 1.11). In the euro area, the aggregate NPL ratio fell modestly, though it remains elevated. In particular, NPL ratios fell for many stressed-economy banks, including those in Ireland, Italy and Spain, while in the rest of the euro area NPL ratios have been stable for several years. A number of euro area banks increased provisions in late 2013, especially for loans they had been forbearing on, to strengthen their balance sheets ahead of the AQR, which is based on banks' balance sheets at the end of 2013. For other euro area banks, loan-loss provisions have fallen to pre-crisis levels. In the United States, asset quality improvements have been driven by continued declines in non-performance rates for residential and commercial real estate loans.

Graph 1.11
Large Banks' Non-performing Loans*
Share of loans



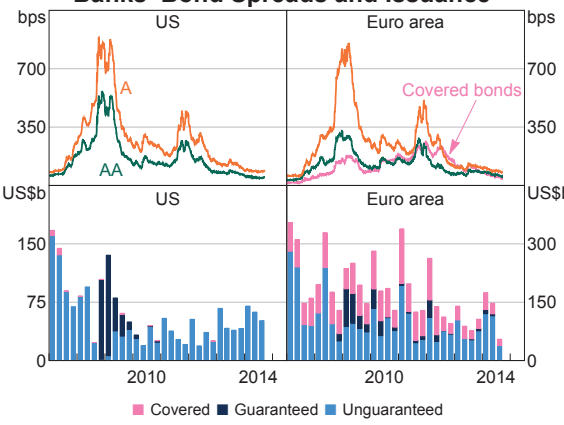
* Definitions of 'non-performing loans' differ across jurisdictions; number of banks: Australia (4), Canada (6), euro area (41), Japan (5), UK (4) and US (18)

Sources: APRA; Banks' Annual and Interim Reports; Bloomberg; FSA; RBA; SNL Financial

Bank funding conditions

Funding conditions have remained favourable for large banks in major advanced economies as wholesale borrowing costs continued to fall and spreads on bank bonds continued to narrow (Graph 1.12). Spreads on short-term interbank loans remain close to their lowest levels since 2007. Bond issuance by US and euro area banks has picked up,

Graph 1.12
Banks' Bond Spreads and Issuance*



* Spread to equivalent government bonds; September 2014 issuance is quarter-to-date

Sources: Bank of America Merrill Lynch; Bloomberg; Dealogic; RBA

though increases in banks' total assets over the first half of 2014 were largely funded by an increase in the stock of deposits. In Europe, there has been strong issuance of Basel III compliant Additional Tier 1 capital instruments, reflecting the introduction of European regulations and increased demand from investors.

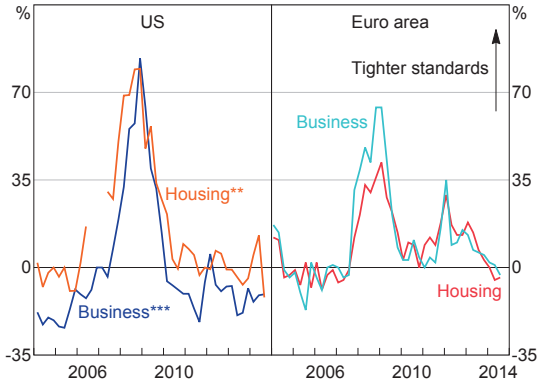
Within the euro area, large stressed-economy banks reported lower interbank borrowing costs at longer maturities. Along with favourable wholesale funding conditions, this has helped banks reduce their reliance on the ECB's LTROs.

Credit conditions

Consistent with the ongoing recovery in economic conditions and banks' balance sheets, credit conditions in the major advanced economies seem to have improved. In the June quarter 2014, bank lending standards are reported to have simultaneously eased in both the United States and in Europe, and for all types of loans, for the first time since 2007 (Graph 1.13).

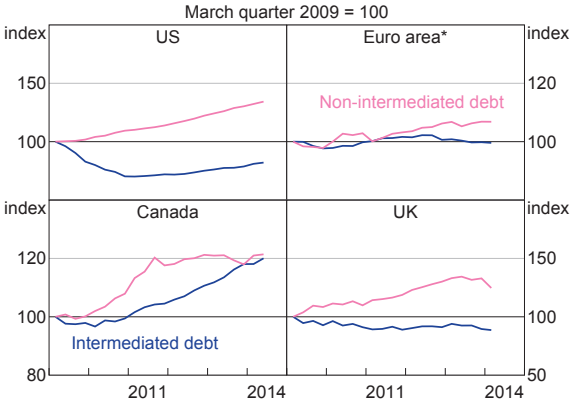
Bank lending is now growing in the United States and the United Kingdom, after prolonged periods of weakness. The pace of decline in the euro area

Graph 1.13
US and Euro Area Credit Standards*



* Net percentage of respondents reporting tighter standards
** Simple average of prime and non-traditional mortgage loans from June 2007
*** Large and medium respondents only
Sources: ECB; RBA; Thomson Reuters

Graph 1.14
Private Non-financial Corporations' Debt Funding
March quarter 2009 = 100



* Refers to public and private non-financial corporations
Sources: ECB; ONS; RBA; Statistics Canada; Thomson Reuters

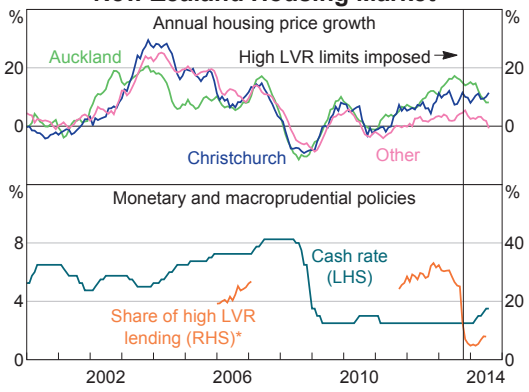
has moderated, though subdued lending to small and medium enterprises remains a concern for policymakers. Authorities have expressed concern about housing price and credit dynamics in several advanced economies, including the United Kingdom and Canada. While housing credit growth has not been unusually strong in these economies, housing leverage has remained elevated, so households could be vulnerable to an unexpected increase in mortgage rates or a fall in housing prices.

The recent period of bank deleveraging, in conjunction with the current search for yield environment, has seen a trend towards disintermediation in many advanced economies. With corporate bond yields remaining low, private non-financial corporations' use of non-intermediated debt funding has grown more quickly than intermediated debt for many advanced economies in recent years (Graph 1.14).

New Zealand

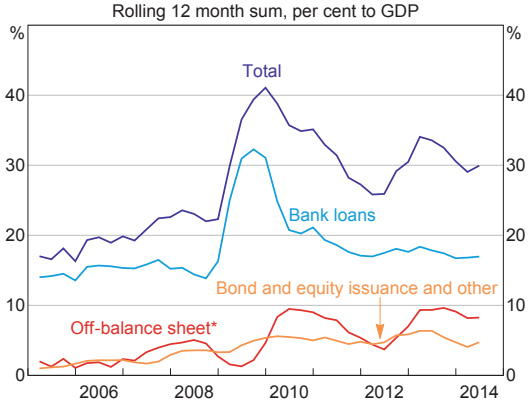
Developments in New Zealand remain an important focus given the large Australian banks' operations there. The Reserve Bank of New Zealand (RBNZ) has been concerned about high household indebtedness and banks' exposures to the housing market in an environment of rising housing prices. In response, in 2013 the RBNZ placed temporary limits on high loan-to-valuation ratio (LVR) lending and increased banks' capital and liquidity requirements; the government also moved to expedite building approvals to address supply shortages. Banks have adhered to the RBNZ's limit on high-LVR lending, with the share of new housing lending with a LVR over 80 per cent falling to below 10 per cent from over 30 per cent (Graph 1.15). Over the past six months, the RBNZ has also increased the overnight cash rate by one percentage point. Annual housing price growth has eased in some cities but remains strong overall. While the RBNZ had planned to unwind the high-LVR limits at the end of 2014, it has noted that a recent increase in housing demand from increased net migration may delay this. (For further discussion on Australian banks' exposure to New Zealand, see 'The Australian Financial System' chapter.)

Graph 1.15
New Zealand Housing Market



* Share of mortgages with a loan-to-valuation ratio above 80 per cent
Sources: RBNZ; REINZ

Graph 1.16
China – Total Social Financing
Rolling 12 month sum, per cent to GDP



* Includes entrusted loans, trust loans and bank accepted bills
Sources: CEIC Data; RBA

Banking Systems in Emerging East Asia

China

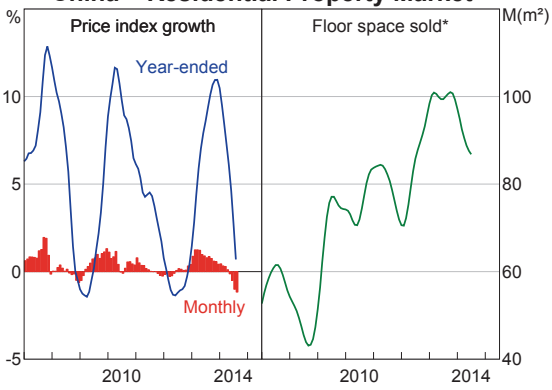
Chinese banks remain highly profitable, and continue to report high capital ratios and low NPL ratios. Nonetheless, risks posed by the ongoing build-up of debt could be rising given the slower pace of economic growth compared to a few years ago. Part of this build-up in debt has been in the non-prudentially regulated 'shadow banking' sector, due, in part, to limits placed on bank lending and deposit interest rates (Graph 1.16). Borrowers in certain sectors, such as property developers and local governments, are restricted from accessing bank loans, so they access non-bank finance instead. Much of this lending is funded in ways that create off-balance sheet exposures for the banking system. For example, banks sell wealth management products on behalf of trust companies, which then invest in a variety of assets, including loans to developers and local governments. Often these channels involve the risks of long-term lending funded by short-term borrowing and high leverage, yet their regulatory supervision and internal risk assessment tend to be weaker than for the formal banking sector.

Concerns about asset quality in China have been heightened by softening conditions in the residential property market. After rising strongly in recent years, property prices and sales volumes have declined in recent months amid reports of excess supply in some cities (Graph 1.17). This has prompted several local governments to review policies that had been aimed at restricting property activity.

Weakness in the property market could also have implications for the performance of Chinese banks' loans to property developers and local governments, many of which generate a significant portion of their revenue from land sales. Though lending to these sectors accounts for a relatively small share of banks' on-balance sheet lending, banks could also be exposed through shadow banking activities. More broadly, land is an important source of collateral for financing in China and housing is an important store of wealth. While China has been able to manage a small number of defaults in trust funds and corporate bonds, a more widespread series of private-sector defaults – potentially associated with a sharp correction in property prices – could be more damaging.

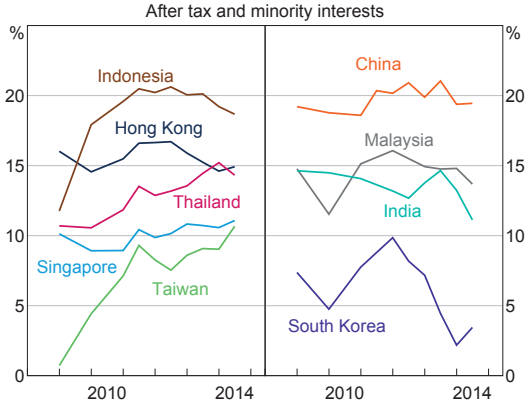
The focus on risks to China partly reflect China's large contribution to global growth. Foreign banking systems' exposures to China are generally small compared to their total assets, although they are

Graph 1.17
China – Residential Property Market



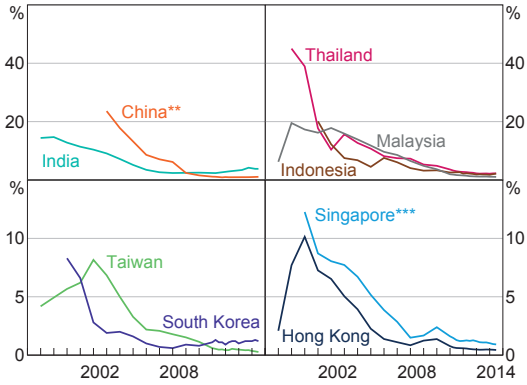
* Trend
Sources: CEIC Data; RBA

Graph 1.18
Asian Banks' Return on Equity*
After tax and minority interests



* Number of banks: China (23), Hong Kong (32), India (39), Indonesia (47), Malaysia (36), Singapore (4), Taiwan (44) and Thailand (19); adjusted for significant mergers and acquisitions; estimates used where banks have not reported for June 2014
Sources: RBA; SNL Financial

Graph 1.19
Asian Banks' Non-performing Loans*
Share of loans



* Definitions of 'non-performing loans' differ across jurisdictions
** Data for 2002–04 are for major commercial banks only
*** Singaporean-owned banks only
Sources: Banks' Annual Reports; CEIC Data; National Banking Regulators; RBA; SNL Financial

growing quickly in a number of countries, including Australia, and are sizeable for some individual foreign institutions. Banking linkages with China are particularly large for Hong Kong, where such exposures make up around 20 per cent of system assets; this reflects the close ties between the two economies, as well as Hong Kong's role as a major financial centre. For Australia, the links would instead be largely macroeconomic, including through the commodity sector.

Other East Asia

Conditions in Asian banking systems have remained generally favourable in the past six months. Most banks in Asia continue to report high rates of return on equity compared to advanced economies (Graph 1.18). The level of profits has been supported by strong growth in bank lending and non-interest income. NPL ratios are generally very low, although they are typically a lagging indicator and there have been signs of deteriorating asset performance in certain economies and sectors (Graph 1.19). Banks' aggregate capital ratios continued to be well above Basel III minimum requirements. The notable exception to the otherwise strong profitability in Asian banking systems is South Korea, where banks' return on equity remains low relative to its peers in the region. This partly reflects the impact of corporate failures in the construction, shipbuilding and shipping sectors on a number of banks.

While reported NPL ratios remain low, higher indebtedness in many Asian economies raises concerns about borrowers' ability to repay if interest rates rise or economic conditions deteriorate. Property price growth has recently moderated in several economies. This has followed a moderation in economic growth in some economies. However, some local authorities, particularly in Hong Kong and Malaysia, remain concerned about price levels.

Box A

Recent Trends in the Issuance of Basel III Compliant Contingent Capital Instruments

Changes to the Basel framework for bank capital and liquidity requirements, collectively referred to as Basel III, have encouraged banks to issue capital instruments that are classified as debt, but which can be written down or converted to equity. These instruments are a subset of both the wider class of securities called contingent convertible capital instruments, and non-common equity (NCE) regulatory capital.

The increased supply of Basel III compliant NCE capital instruments with contingent convertible features has coincided with a period of strong investor demand for high-yielding debt, creating buoyant market conditions in recent years. This box describes recent trends and drivers of issuance of these capital instruments, their potential benefits and some risks surrounding them.

Definitions

Bank capital, in its simplest form, is equal to the portion of the value of a bank's assets that is not matched by liabilities owing to other parties, such as deposits or debt. It represents a bank's ability to absorb losses on its assets. The Basel III capital framework, which was finalised in June 2011, introduced a minimum level of common equity – called Common Equity Tier 1 (CET1) capital – which is the most loss-absorbing form of bank capital. Banks are not obliged to repay the principal of common equity outside of liquidation or make distributions such as dividend payments. In liquidation, common equity represents the most subordinated type of claim.

Non-common equity regulatory capital instruments are sometimes called hybrid securities because they have characteristics of both equity and debt – some are also referred to as CoCos given their contingent convertible nature. Hybrid capital instruments with characteristics that are most similar to common equity are classified as Additional Tier 1 (AT1) capital under Basel III and are designed to absorb losses while the bank is still a going concern. Like common equity, AT1 capital instruments do not have a maturity date and distributions such as dividends and coupon payments are fully discretionary; in liquidation, AT1 capital instruments are senior only to common equity. AT1 capital includes preferred shares and debt instruments that have loss-absorption triggers which allow the principal to be written down or converted to common equity during times of stress.[1] This has the effect of strengthening the banks' capital position at a time when raising additional equity would otherwise be difficult. Allowing the issuer to miss coupon payments can also reduce pressure on liquidity.

Tier 2 (T2) capital is a lower-quality form of regulatory capital that is designed to absorb losses when a bank fails (that is, becomes a 'gone concern'). T2 capital instruments must have an original maturity of at least five years and, like AT1 capital instruments, have no 'step-up' clauses or other incentives to redeem;[2] in liquidation, T2 capital is senior only to CET1 and AT1.

1 The Basel III framework only requires AT1 to contain a numerical trigger when considered a liability for accounting purposes. A numerical loss-absorption trigger is activated when the CET1 capital ratio of the bank falls below a certain level (e.g. below 5.125 per cent of risk-weighted assets). This is in addition to the non-viability trigger.

2 Basel III no longer recognises hybrid instruments which provide an incentive for the issuer to redeem through features such as 'step-up' clauses, where coupon payments can increase ('step-up') from one period to another.

To facilitate loss absorption on a gone-concern basis, both AT1 and T2 capital instruments must, where not enforced by legislation, incorporate a contractual feature allowing the principal to be written down or converted to common equity if the relevant regulator determines that the bank is no longer able to support itself in the private market. This feature, which is often called the point of non-viability trigger, is designed to ensure losses can be imposed on all capital holders before other resolution actions are taken, including those that may involve taxpayers being exposed through government intervention.

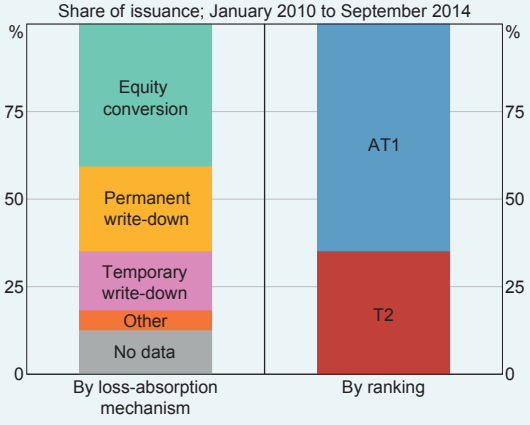
Issuance

Within the class of Basel III compliant NCE, losses can be attributed to capital holders in different ways when a trigger event occurs (Graph A1). For example, full principal write-down yields an absolute loss for the individual investor. In contrast, equity conversion may allow investors to recoup losses should share prices recover, while diluting the stake of existing shareholders. Temporary write-down/write-up mechanisms would write down principal by the amount necessary to return the bank's capital ratio to the trigger level; these mechanisms also allow the issuer to write up principal should the bank return to profitability.

The designs of triggers also vary. Most AT1 triggers are tied to a CET1 ratio of 5.125 per cent of risk-weighted assets, consistent with the Basel III requirement for instruments intended as going-concern capital, though some are higher. Numerical triggers are typically not required for T2 instruments, which tend to rely only on the point of non-viability trigger (triggered at the discretion of the national authority), though Swiss gone-concern capital instruments require numerical triggers at 5 per cent of risk-weighted assets (Table A1). At least one recent issue has included multiple triggers (based on the capital ratios of either the bank or its holding company) and some issuance in Asia can be triggered by either the home or host regulators. Regulatory call options (allowing the issuer to buy back the instrument if regulatory requirements change) are a very common feature across different issuers.

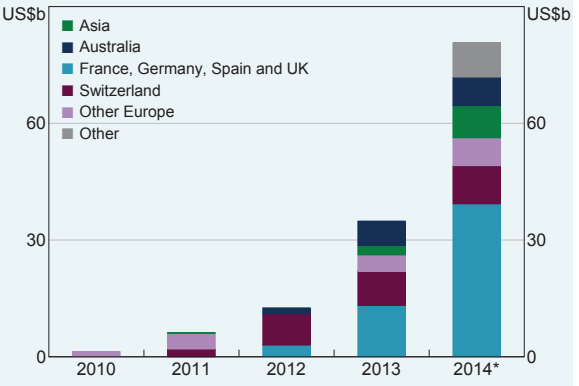
Issuance has increased strongly in recent years (Graph A2), as banks have moved to raise capital to meet the stricter Basel III capital requirements and to replace maturing instruments issued under the Basel II framework. Meanwhile, the low interest rate environment has supported investor demand; these securities offer higher yields than senior debt or term deposits, reflecting their higher risk.

Graph A1
Global Banks' Basel III NCE Features
Share of issuance; January 2010 to September 2014



Sources: Bloomberg; Dealogic; RBA

Graph A2
Global Banks' Basel III NCE Issuance



* Year to 19 September 2014
Sources: Bloomberg; Dealogic; RBA

Table A1: Recent Examples of Basel III Compliant Contingent Convertible Bond Issuance

Issuing Bank	Issue Date	Coupon Per cent	Amount Billions	Country	Ranking[b]	CET1[c] trigger	Loss-absorption Mechanism
Banco Popular Español	Oct 13	11.5	EUR 0.5	Spain	AT1	5.125%	Principal write-down
Barclays	Nov 13	8.25	USD 2.0	UK	AT1	7%	Equity conversion
Crédit Agricole	Apr 14	6.5	EUR 1.0	France	AT1	5.125% and 7%[d]	Temp write-down/ write-up
Deutsche Bank	May 14	7.125	GBP 0.65	Germany	AT1	5.125%	Temp write-down/ write-up
UBS	May 14	5.125	USD 2.5	Switzerland	T2	5%	Principal write-down (full)
Shengjing Bank	May 14	6.18	CNY 2.2	China	T2	No (PoNV)	Principal write-down (full)

(a) Sample selected to emphasise the variety of unique features across and within regions
(b) AT1 or T2 capital ranking as identified by the issuer
(c) CET1 ratio to risk-weighted assets trigger specified where applicable; discretionary point of non-viability (PoNV) trigger identified where CET1 triggers are not required
(d) CET1 trigger tied to both the parent (7 per cent) and the issuing bank level (5.125 per cent) CET1 ratio
Sources: Bloomberg; Dealogic; RBA

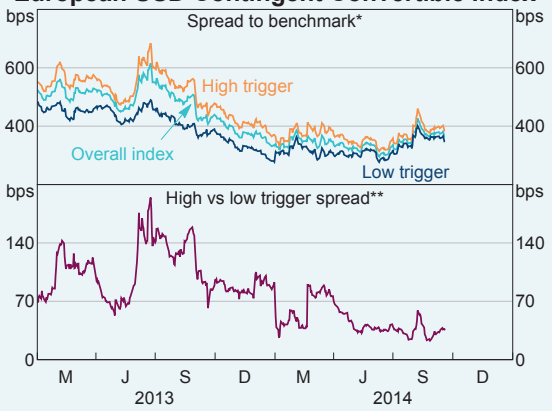
Issuance has been strong in Europe where regulators require all AT1 capital instruments to contain a trigger tied to regulatory capital ratios. For some countries within Europe, issuance has been attractive because coupon payments are tax deductible for the issuer. European issuers of Basel III compliant NCE have tended to offer loss-absorption mechanisms with the potential to recoup losses after a trigger event.

Issuance by Swiss banks has been encouraged by regulations requiring systemically important banks to hold up to 9 per cent of risk-weighted assets as NCE with both numerical and discretionary regulatory triggers. In contrast, regulators in the United States have opted to rely entirely on statute at resolution to comply with Basel III loss-absorption requirements, and have indicated they will continue to study the advantages and disadvantages of banks issuing instruments with contingent convertible triggers as regulatory capital. Issuance of these instruments in the United States has therefore been negligible.

Australian banks have issued some AT1 and T2 instruments consistent with APRA's implementation of the Basel III framework (see 'The Australian Financial System' chapter); while in Asia, some T2 instruments with the required discretionary triggers have been issued.

In line with buoyant market conditions, the spread to benchmark for contingent convertible instruments, as well as the spread between high trigger and low trigger instruments narrowed over 2013 and early 2014, before ticking up in July (Graph A3). One particular deal was postponed when the scale of problems at the failed Portuguese lender Banco Espírito Santo first became evident as the market demanded a higher yield than the issuer was prepared to offer. In early September, another issuer reported under-subscription. These incidents suggest that growth in demand for this class of instrument might be significantly reduced if the price of risk was to increase.

Graph A3
European USD Contingent Convertible Index



* The benchmark security, representing the risk-free rate, is matched to the term of each individual security

** High CET1 ratio triggers are at or above 7 per cent; low CET1 ratio triggers are at or below 5.125 per cent

Sources: Bloomberg; Credit Suisse

Potential Risks

As a general proposition, if banks have more loss-absorbing capital on their balance sheets, the resilience of the banking sector improves; this is a positive development for financial stability. That said, some regulators have raised concerns that some investors could be underestimating the probability of a trigger event, implying that some NCE issues may be mispriced. A significant reassessment of the risks could impose heavy losses on investors and substantially increase banks' funding costs, especially as this could coincide with increased stress in the banking system.

In addition, contingent convertible instruments may distort incentives in stressful situations. Bank share prices could come under pressure if holders of these instruments, anticipating losses, short-sell bank shares, aiming to close their positions with the shares generated at conversion. Shareholders may also sell before the conversion of these instruments if they anticipate losses due to the subsequent dilution of their holdings.

Regulators' incentive to trigger conversion, and therefore the capacity of these instruments to absorb losses, might also be affected by the type of investor facing those losses. Ideally, NCE regulatory capital should not be held by systemically important institutions, lest they provide another mechanism for contagion to spread.[3]

A sample of European AT1 issuance indicates that asset managers and hedge funds in continental Europe and the United Kingdom have purchased the majority of NCE (Table A2). Some purchases by asset managers are likely to be on behalf of retail clients. Several regulators globally, including the Australian Securities and Investments Commission, the European Securities and Market Authority, and the United Kingdom's Financial Conduct Authority (FCA) have expressed concerns that some retail investors may not fully understand the risk associated with these highly complex capital instruments, particularly given the market's early stage of development and the lack of experience with contingent triggers. The FCA has also imposed a temporary restriction on the distribution of contingent convertible instruments to certain types of retail investors, effective from 1 October 2014.

Table A2: European AT1 Investors[(a)]
Share of issuance, per cent

Investor Type	2013	2014
Asset managers	63	59
Hedge funds	12	21
Insurance/pension funds	6	9
Banks/private banks	16	10
Other	3	1

(a) From a sample of 11 AT1 European contingent convertible instruments with data available on investor distribution

Sources: Dealogic; RBA

3 For this reason, Basel III requires that cross-holdings of any capital instruments are deducted from regulatory capital of the same kind.

2. The Australian Financial System

A number of the key trends evident in the Australian banking system over recent years have continued since the previous *Review*: banks' capital ratios edged up again; their asset performance continued to steadily improve; and their profitability remained robust. In addition to their current low bad and doubtful debt charges, the major banks' higher profitability relative to international peers appears to partly reflect operational efficiencies – the cost-to-income ratios of the major banks are featured in 'Box B: Australian Major Banks' Cost-to-income Ratios' of this *Review*.

Australian banks are benefiting from improved wholesale funding conditions globally and, in turn, an easing in overall deposit market competition. Lower funding costs are facilitating strong price competition in housing and commercial property lending. Fast growth in property prices and investor activity has increased property-related risks to the macroeconomy. It is important for macroeconomic and financial stability that banks set their risk appetite and lending standards at least in line with current best practice, and take into account system-wide risks in property markets in their lending decisions. Over the past year APRA has increased the intensity of its supervision around housing market risks facing banks, and is currently consulting on new guidance for sound risk management practices in housing lending.

Shadow banking is an area of focus in international regulatory reforms, and this *Review* contains an update on the size and composition of the shadow banking sector in Australia. Shadow banking activity in Australia has declined noticeably since 2007 and the sector accounts for only a small share of financial system assets. This, along with limited credit and funding links to the regular banking system, means that the shadow banking sector currently poses little systemic risk in Australia.

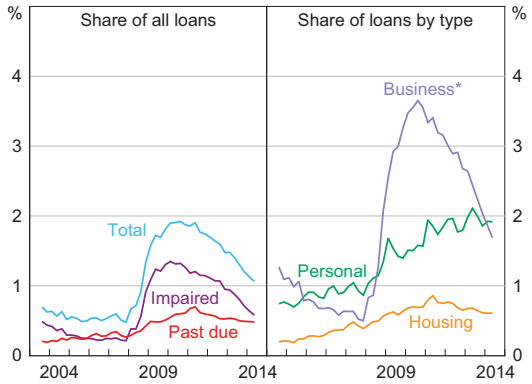
Profitability remains strong overall in the general insurance industry, supported by a benign claims environment. Buoyant conditions in the housing market have also contributed to better profit performance by lenders mortgage insurers. Conditions in the life insurance industry remain more challenging, partly reflecting previous under-pricing of risk on some policies.

Asset Performance

Asset performance is a key indicator of Australian banks' soundness and therefore a focus of financial stability analysis. Over the first half of 2014, the asset performance of Australian banks continued its steady improvement of recent years. In the banks' domestic portfolio, the ratio of non-performing assets to total loans was 1.1 per cent at June 2014, compared with a peak of 1.9 per cent in mid 2010 (Graph 2.1). This decline mostly reflects a reduction in the share of loans classified as impaired (those not well secured and with repayments doubtful), while the share of loans classified as past due (in arrears but well secured) has fallen modestly since its peak in 2011.

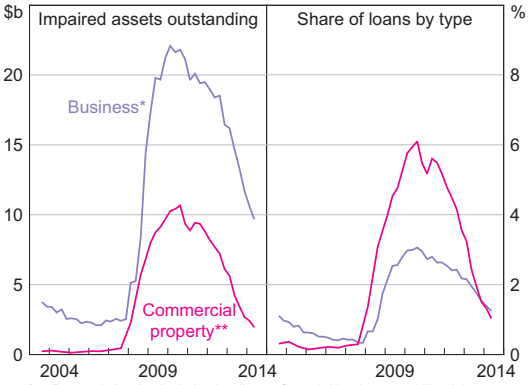
The reduction in banks' domestic impaired assets since 2008–09 has been concentrated in business loans, in particular commercial property loans (Graph 2.2). The strong recovery in commercial

Graph 2.1
Banks' Non-performing Assets
Domestic books



* Includes lending to financial businesses, bills, debt securities and other non-household loans
Source: APRA

Graph 2.2
Banks' Impaired Assets

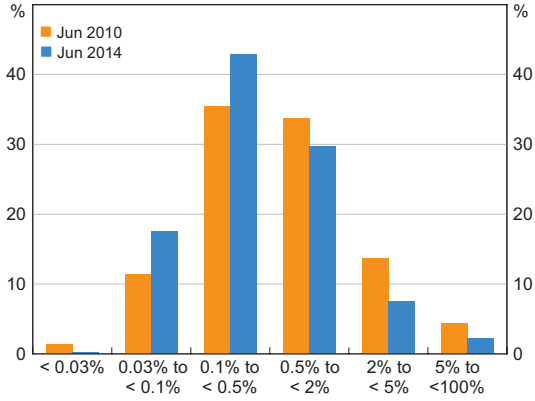


* Domestic books; includes lending to financial businesses, bills, debt securities and other non-household loans
** Consolidated Australian operations
Source: APRA

property prices induced another sharp fall in the level of impaired commercial property loans over the first half of 2014; the corresponding impairment ratio fell a little below that for other business exposures. Further improvement in business loan performance will likely depend more on how other industries perform; notably, the impairment ratio remains elevated in the agriculture, fishery, forestry & mining category, which accounts for 15 per cent of the major banks' business lending.

The decline in banks' impaired business assets over recent years suggests that the risk profile of their business loan portfolios has improved. One indicator of this is the share of corporate exposures that are assessed to have a relatively high probability of defaulting in the following year. (Probabilities of default (PDs) are derived from the internal credit risk models of those banks authorised by APRA to use these models to calculate their minimum regulatory capital requirement.) The share of the major banks' corporate exposures assigned a PD of 0.5 per cent or greater declined noticeably over the four years to June 2014 (Graph 2.3). Some of this decline would have resulted from better macroeconomic and property market conditions. The underlying quality of banks' business loan portfolios should also have strengthened given the tightening in business lending standards around 2008–09, thus increasing the resiliency of these portfolios to possible future adverse macroeconomic circumstances. However, as discussed below, it will be important for banks' future loan performance that these gains are not compromised by an imprudent loosening of business lending standards from their current configuration, especially given that the bulk of bank credit losses in Australia have historically occurred in business lending.

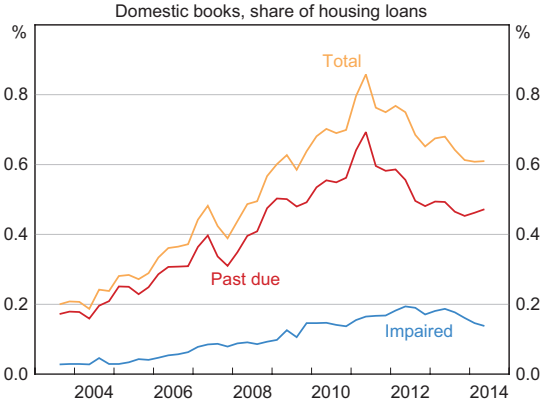
Graph 2.3
Corporate Default Probabilities*
Share of corporate exposures, major banks' estimates**



* On- and off-balance sheet portfolios assessed under the internal ratings-based approach only; excludes defaulted exposures
** Domestic books
Source: APRA

In contrast to banks' business lending, the performance of banks' domestic household loan portfolios has been broadly steady over recent quarters. The non-performing share of banks' housing loans was unchanged over the six months to June 2014 (Graph 2.4). Recent housing price inflation appears to have reduced the likelihood that past due housing loans will become impaired; they are also helping banks to dispose of their existing stock of troubled housing assets, with a number of banks reporting reductions in mortgagees-in-possession. While the non-performing ratio for banks' personal loans is higher than banks' other loan portfolios, personal lending is typically riskier than other types of lending and it represents only a small share of banks' total domestic loans.

Graph 2.4
Banks' Non-performing Housing Loans
Domestic books, share of housing loans

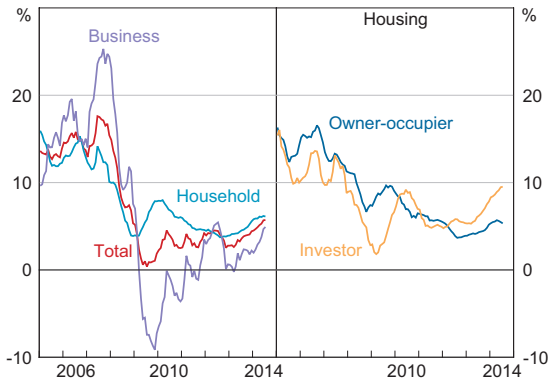


Source: APRA

Credit Conditions and Lending Standards

Growth in banks' domestic lending has lifted over the past six months, after a few years of modest growth (Graph 2.5). Housing credit expanded at an annualised rate of around 7 per cent over the six months to July 2014; growth in investor credit continued to strengthen and at nearly 10 per cent reached its fastest pace since 2007, well above the rate for owner-occupiers. Business credit growth also picked up, although it continues to be weighed upon by subdued non-mining business investment.

Graph 2.5
Credit Growth
Six-month-ended, annualised



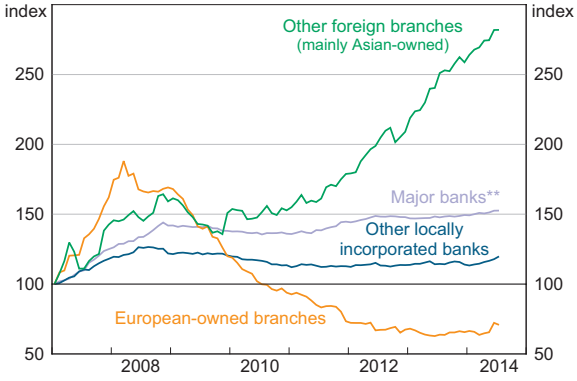
Sources: APRA; RBA

The pick-up in credit growth has been accompanied by stronger price competition in some loan markets. The ongoing improvement in bank funding conditions, including for smaller banks, has aided price competition. It will be important for banks' own risk management and, in turn, financial stability that they do not respond to revenue pressures by loosening lending standards, or making ill-considered moves into new markets or products. Banks need to ensure that loans originated in the current environment can still be serviced by borrowers in less favourable circumstances – for instance, at higher interest rates or during a period of weaker economic conditions. Furthermore, banks should be cautious in their property valuations, and conscious that extending loans at constant loan-to-valuation ratios (LVRs) can be riskier when property prices are rising strongly, as is currently the case in some commercial property and housing markets.

Lending conditions have eased in parts of the business loan market. According to industry liaison, strong competition among lenders has further narrowed margins on corporate loans, particularly in the 'wholesale' market (i.e. large value loans) and for commercial property. Nonetheless, while some borrowers continue to secure more favourable non-price loan terms, there does not appear to have been a widespread relaxation in corporate loan standards. Lending conditions appear little changed in the small business loan market.

Business lending by foreign-owned banks has increased at a relatively fast pace, driven by Asian-owned banks (Graph 2.6). APRA data and bank liaison suggest that some of these banks have been offering very competitive prices and terms in the syndicated loan market; they have also recently been active in commercial property lending. Foreign bank lending accounts for only 15 per cent of total business credit, but it can still contribute to overall systemic risk. Over the past decade foreign bank branches' lending in Australia has been quite procyclical and may have influenced some asset prices, including commercial property prices.

Graph 2.6
Banks' Business Lending*
Domestic books, January 2007 = 100



* Data are not break adjusted
** Includes St. George and Bankwest
Source: APRA

In the residential mortgage market, price competition for new borrowers has intensified. Fixed rates have been lowered in recent months. According to industry liaison, a number of lenders have also extended larger discounts on their advertised variable rates and broadened the range of borrowers that receive these discounts. Banks are offering other incentives to attract new borrowers, including fee waivers, upfront cash bonuses or vouchers. In addition, some banks recently raised their commission rates paid to mortgage brokers. However, reports from banks and other mortgage market participants suggest that, in aggregate, banks' non-price lending standards, such as loan serviceability and deposit criteria, have remained broadly steady over recent quarters. This seems to be supported by APRA data on the composition of banks' housing loan approvals, which suggest that the overall risk profile of new housing lending has not increased. It is noteworthy that the industry-wide share of 'low-doc' lending continues to represent less than 1 per cent of loan approvals, while the share of loans approved with an LVR greater than 90 per cent has fallen over the past year (see 'Household and Business Finances' chapter). That said, strong investor activity in the housing market has meant that the share of investor loans approved with LVRs between 80 per cent and 90 per cent has risen. The shares of interest-only loans for both investors and owner-occupiers have also drifted higher, and average loan sizes (relative to average income) have increased.

Although, in aggregate, bank housing lending standards do not appear to have eased lately, a crucial question for both macroeconomic and financial stability is whether lending practices across the banking industry are conservative enough for the current combination of low interest rates, strong housing price growth and higher household indebtedness than in past decades. Moreover, lending to investors is expanding at a fast pace, which could be funding additional speculative activity in the housing market and encourage other (more marginal) borrowers to increase debt. Lending growth is varied across geographical markets and individual lenders, which may suggest a build-up in loan concentrations and therefore correlated risks within the banking industry. The Reserve Bank's assessment is that the risk from the current strength in housing markets is more likely to be to future household spending than to lenders' balance sheets. However, the direct risks to banks will rise if current rates of growth in investor lending and housing prices persist, or increase further.

In light of the current risks, APRA has increased the focus of its supervision on banks' housing lending. Specifically, it has:

- begun a regular supervisory survey of a broader range of risk indicators for banks with material housing lending
- released a draft Prudential Practice Guide (PPG) for housing lending that outlined expectations for banks' risk management frameworks, serviceability assessments, deposit criteria and residential property valuations.[1] By way of example, prudent serviceability assessments are seen to involve: an interest rate add-on to the mortgage rate, in conjunction with an interest rate 'floor', to ensure the borrower can continue to service the loan if interest rates increase; a buffer above standard measures of household living expenses; and the exclusion, or reduction in value, of uncertain income streams. While much of the guidance in the PPG is already common practice within the industry, it is nonetheless important that practices are not deficient at even a minority of lenders
- written to individual bank boards and chief risk officers asking them to specify how they are monitoring housing loan standards and ensuing risks to the economy
- assessed the resilience of banks' housing loan (and other) portfolios to large negative macroeconomic shocks, including a severe downturn in the housing market, as part of its regular stress testing of banks' balance sheets.

In addition, the Reserve Bank is discussing with APRA, and other members of the Council of Financial Regulators (CFR), further steps that might be taken to reinforce sound lending practices, particularly for lending to investors.

International Exposures

Australian-owned banks' international exposures arise from the activities of their overseas branches or subsidiaries, as well as the direct cross-border activities of their Australian-based operations. International exposures were just under one-quarter of Australian-owned banks' global consolidated assets at March 2014 (Table 2.1).

The largest international exposure of the Australian-owned banks continues to be New Zealand, since each of the Australian major banks have a significant presence there. The major

Table 2.1: Australian-owned Banks' International Exposures
Ultimate risk basis, as at March

	Level	Share of international exposures	Share of global consolidated assets	
	2014	2014	2014	2009
	$ billion	Per cent	Per cent	Per cent
New Zealand	323	40.1	9.4	9.6
United Kingdom	135	16.8	3.9	5.2
United States	101	12.6	2.9	2.0
Asia[(a)]	147	18.2	4.3	1.2
– China	*39*	*4.9*	*1.1*	*0.1*
Europe	54	6.6	1.6	2.6
Other	46	5.7	1.3	1.1
Total	**807**	**100.0**	**23.4**	**21.8**

(a) Includes offshore centres Hong Kong and Singapore
Sources: APRA; RBA

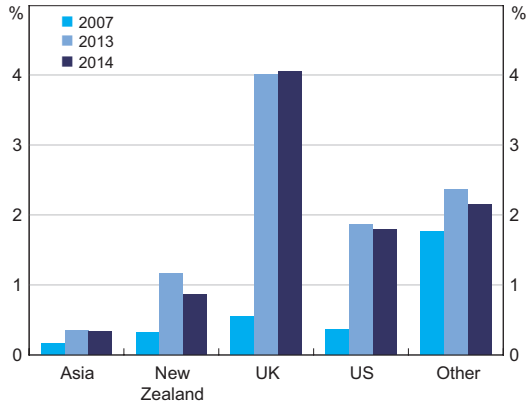
1 For further details, see APRA (2014), 'Draft Prudential Practice Guide: APG 223 – Residential Mortgage Lending', May.

banks' operations in New Zealand are similar to their Australian operations: they focus largely on lending to households and businesses, although within this, lending to agriculture is a higher share because of the importance of the dairy industry in New Zealand. Loan performance at the New Zealand subsidiaries has continued to improve following the peak in their non-performing asset ratio of over 2 per cent in early 2011. Despite this improvement, there are some risks in the New Zealand financial system that could adversely affect future loan performance. Banks' housing market exposures have garnered particular attention recently given strong growth in housing prices and the high level of household debt in the context of the economic volatility that New Zealand has historically experienced. Housing price growth remains strong in some major cities despite rising interest rates and recent policy measures restricting high-LVR lending. The Reserve Bank of New Zealand has also expressed concern about high debt burdens for some agricultural producers, which increases their susceptibility to an adverse shock, such as a decline in agricultural prices.

Australian-owned banks' aggregate exposures to the United Kingdom are substantial, even though they have fallen relative to total international exposures over recent years. In the United Kingdom, the non-performing asset ratio has been quite high for some time because of ongoing difficult economic and property market conditions (Graph 2.7). NAB, which has a large UK operation, has reported publicly that it sold a sizeable portfolio of UK impaired commercial property loans in July, but at a little above its book value, consistent with some improvement in UK commercial property markets. NAB's UK operations have also suffered sizeable losses and uncertainty because of some conduct issues that have been experienced more generally across the UK financial sector, specifically around payment protection insurance and interest-rate hedging products.

Exposures to Asia represent almost one-fifth of Australian-owned banks' total international exposures. These exposures have grown substantially

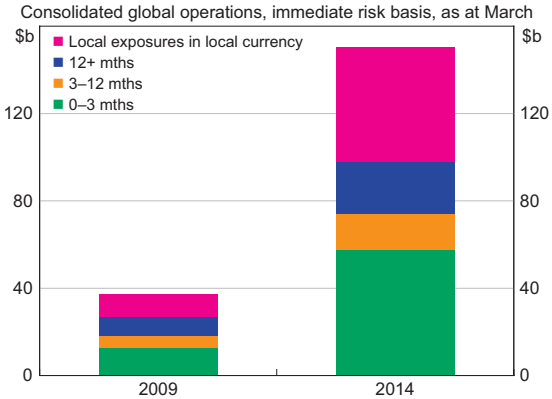
Graph 2.7
Non-performing Assets of Australian-owned Banks' Overseas Operations
Share of loans by region, as at June



Sources: APRA; RBA

over the past five years, particularly those to China. A key motivation for the Australian major banks' expansion into Asia has been to facilitate the large and growing trade and investment flows between Australia and Asia (indeed, this trend is also mirrored in the Asian banks' expansions in Australia noted above). Related to this, the majority of their exposures to Asia are shorter term and trade-related, which typically have lower funding and credit risks than long-term lending (Graph 2.8). Even so, expansion

Graph 2.8
Australian-owned Banks' Exposures to Asia*
Consolidated global operations, immediate risk basis, as at March



* Immediate risk basis excludes risk transfers, such as guarantees; data by maturity are available for cross-border exposures and local exposures in foreign currency, they are not available for local exposures in local currency; Asia includes offshore centres Hong Kong and Singapore

Sources: APRA; RBA

into Asian markets still poses a range of risks that banks need to manage carefully. This includes operational risks, given that conducting business in different jurisdictions adds to the complexity of a bank's operations. Further growth in exposures also increases the chance that direct financial linkages will be a channel by which any disruptions in Asia are transmitted to the Australian banking system (in addition to macroeconomic and global wholesale funding market channels).

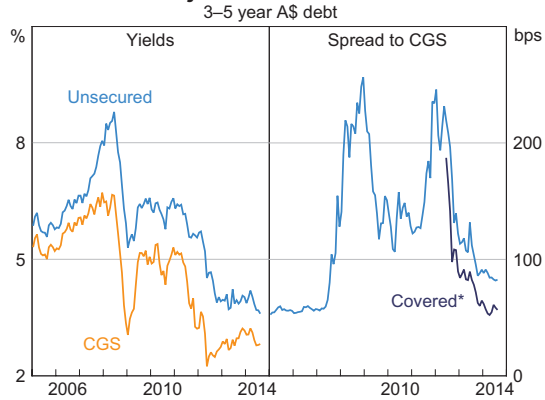
Funding and Liquidity

The liability side of Australian banks' balance sheets is also affected by international financial and economic developments. Turbulent conditions in global capital markets created wholesale funding pressures for Australian banks after the onset of the financial crisis, but market conditions have been gradually improving since around the middle of 2012 as investor risk appetite and search for yield behaviour has strengthened (see 'The Global Financial Environment' chapter). Reflecting this, secondary market spreads on the major banks' 3–5 year senior unsecured bonds are currently at their lowest levels since 2007 (Graph 2.9). In addition, bonds issued at longer maturities or by lower rated banks are being more readily absorbed by markets than previously.

Australian banks have increased their net bond issuance as conditions in wholesale funding markets have become more favourable. Australian banks issued just under $69 billion in bonds in the first half of 2014, around $14 billion more than the previous six months and $10 billion more than their bond maturities in this period (Graph 2.10). Covered bonds remained a small share of total bond issuance despite relatively favourable pricing on these instruments. Banks have currently issued about 40 per cent of their regulatory limit for covered bonds, leaving ample scope to increase issuance if unsecured bond market conditions deteriorate.

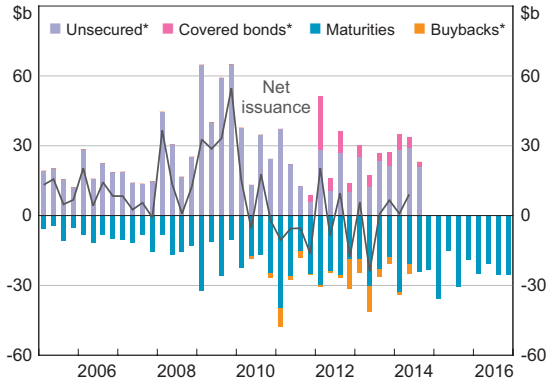
Conditions in the residential mortgage-backed securities (RMBS) market have also strengthened.

Graph 2.9
Major Banks' Bonds
3–5 year A$ debt



* Covered bond pricing interpolated to a target tenor of 4 years using bonds with a residual maturity between 2 and 10 years
Sources: Bloomberg; RBA; UBS AG, Australia Branch

Graph 2.10
Banks' Bond Issuance and Maturities
A$ equivalent

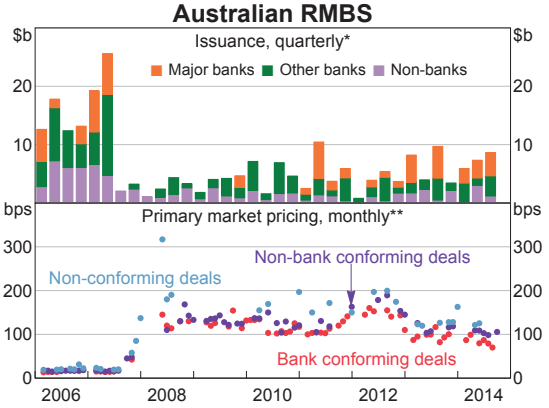


* September 2014 is quarter-to-date
Source: RBA

Primary market issuance spreads on senior RMBS tranches have tightened further this year for both bank and non-bank issuers, and issuance volumes have increased (Graph 2.11). Recent momentum in securitisation markets has been relatively beneficial for smaller institutions' funding, given they have more limited access to bond markets than the major banks.

Improved wholesale funding market conditions have also enabled some easing in deposit market competition, and over recent quarters banks' share of deposit funding has stopped rising. Banks report declines specifically in spreads on short-term deposits from financial institutions

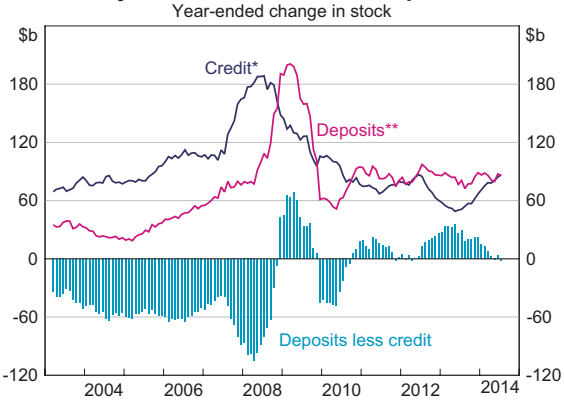
Graph 2.11
Australian RMBS



* September 2014 is quarter-to-date
** Face-value weighted monthly average of the primary market spread to bank bill rate
Source: RBA

and large corporations, consistent with these being treated less favourably under the upcoming Liquidity Coverage Ratio (LCR) requirement. While competition for retail deposits remains relatively strong overall, retail deposit rates have generally fallen relative to wholesale market rates over recent quarters. Banks are likely to further adjust the pricing and terms of their deposit products in the lead-up to the commencement of the LCR on 1 January 2015. The recent pick-up in credit growth has meant that the major banks' net deposit flows are no longer exceeding their net credit flows, as was the case in previous years (Graph 2.12).

Graph 2.12
Major Banks' Credit and Deposits
Year-ended change in stock

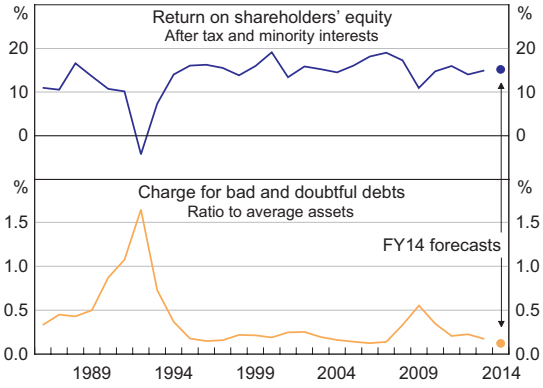


* Excludes securitisations
** Excludes intragroup deposits
Sources: APRA; RBA

Profitability

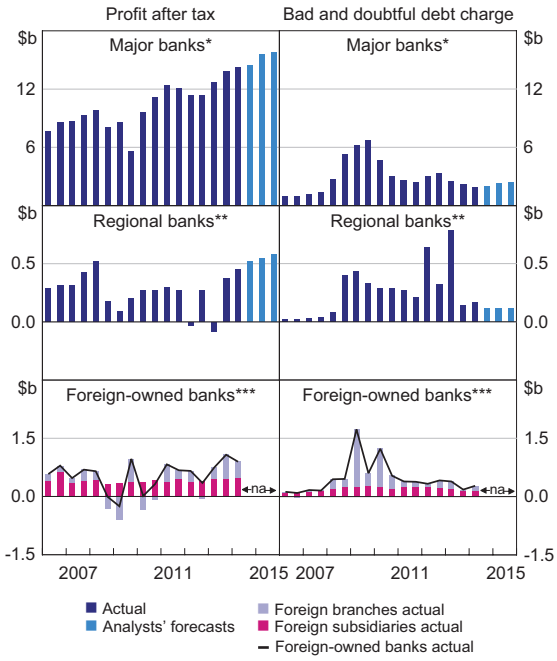
The improvement in banks' overall asset performance has been an important contributor to their profit growth over recent years, and this trend continued in the most recent period. The major banks' aggregate charge for bad and doubtful debts fell by 17 per cent in their latest half-yearly results and, for the 2014 financial year as a whole, it is expected to decline to a historically low level as a share of assets (Graph 2.13). Aggregate profit of the major banks was a little over $14 billion in their latest half-yearly results, an increase of around 13 per cent on the corresponding period a year earlier (Graph 2.14). In addition to lower bad and doubtful debt charges, profit growth was supported by higher net interest income: stronger growth in interest-earning assets more than offset a small decline in the aggregate net interest margin arising from strong competition in lending markets. After declining in 2013, operating expenses increased over the year to the latest half, reflecting higher staff and investment-related costs. The major banks' annual return on equity is expected to be 15 per cent in their 2014 financial year, similar to the average return they recorded over the 2010–13 period.

Graph 2.13
Major Banks' Profitability*



* Data from 2006 are on an IFRS basis, while prior years are on an AGAAP basis; dots represent financial year 2014 analysts' forecasts
Sources: Banks' Annual and Interim Reports; Credit Suisse; Deutsche Bank; Nomura Equity Research; RBA; UBS Securities Australia

Graph 2.14
Banks' Profit



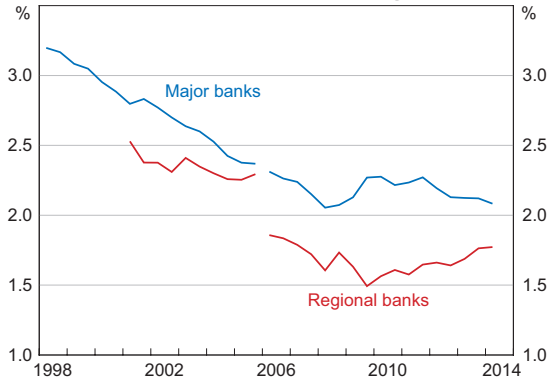
* ANZ, NAB and Westpac report half year to March and September, while CBA reports to June and December
** Suncorp Bank and Bendigo and Adelaide Bank report half year to June and December, while Bank of Queensland reports to February and August
*** All results are half year to March and September
Sources: APRA; Banks' Annual and Interim Reports; Credit Suisse; Deutsche Bank; Nomura Equity Research; RBA; UBS Securities Australia

Over recent years, the Australian major banks' returns on equity have been well above those recorded by large banks in many other advanced economy banking systems (see 'The Global Financial Environment' chapter). This partly reflects the relatively stronger asset performance of the Australian major banks. Another factor is their lower cost-to-income ratios than large banks in Europe and the United States, with the disparity having increased since the onset of the financial crisis (see 'Box B: Australian Major Banks' Cost-to-income Ratios'). The reduction in the major banks' aggregate cost-to-income ratio has been an offset to the decline in their net interest margin over the past couple of decades. However, given the relatively low level of this measure of operational efficiency, there is a question as to how much the major banks' costs can be further contained in future without their risk management capabilities or controls being affected.

Looking ahead, equity analysts are forecasting the major banks' profit growth to moderate, to 9 per cent in 2015 and 5 per cent in 2016. This is partly because bad and doubtful debt charges are now at low levels and will no longer provide the impetus to profit growth that they have in recent years. In addition, analysts expect the major banks' net interest margins to compress further, mainly due to competition in lending markets.

Aggregate profit for the three regional banks (Suncorp, Bank of Queensland, and Bendigo and Adelaide Bank) was $449 million in their latest half-yearly results. This follows a small aggregate loss in the corresponding period a year earlier, which mainly resulted from losses on Suncorp's sale of a portfolio of non-performing commercial property and corporate loans that had been in run-off. In contrast to the major banks, regional banks' profit was supported by a small rise in their net interest margin (Graph 2.15). Foreign-owned banks' profit in the six months to March 2014 was 20 per cent higher than the same period a year earlier. This increase was largely due to a significant fall in bad and doubtful debts at foreign branches, and a moderate rise in aggregate non-interest income.

Graph 2.15
Banks' Net Interest Margin*



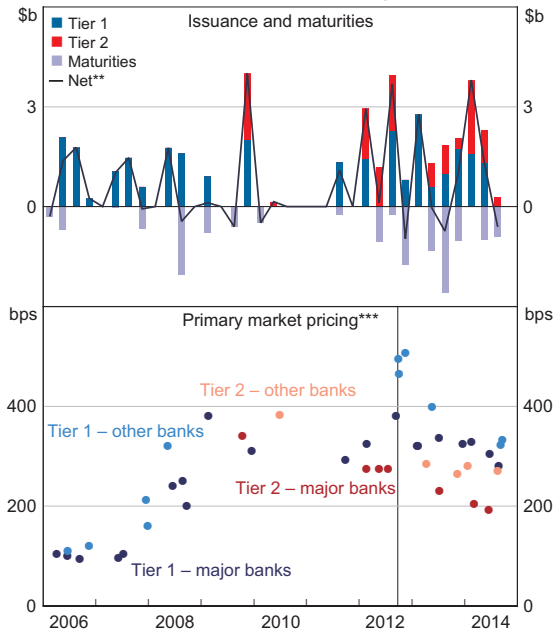
* Data from 2006 are on an IFRS basis, while prior years are on an AGAAP basis; includes St. George and, from 2009, Bankwest
Sources: Banks' Annual and Interim Reports; RBA

Capital

Robust bank profitability has underpinned a further strengthening in the Australian banking system's capital position. Banks' aggregate Common Equity Tier 1 (CET1) capital ratio rose by 0.4 percentage points over the six months to June 2014, to 9 per cent of risk-weighted assets (RWAs), largely reflecting the accumulation of retained earnings. Banks' total regulatory capital ratio rose in line with this, to stand at 12.3 per cent at June 2014.

Banks' issuance of non-common-equity capital instruments (Additional Tier 1 and Tier 2 instruments, that are sometimes referred to as 'hybrids') has been sizeable so far this year, consistent with the trend in a number of large banking systems internationally (see 'Box A: Recent Trends in the Issuance of Basel III Compliant Contingent Capital Instruments') (Graph 2.16). Investor take-up of these capital instruments continues to be supported by their high yields relative to some less risky financial products given the low interest rate environment, although recent strong demand has pushed down yields (relative to benchmark interest rates). Retail investors, particularly self-managed superannuation funds, have been the predominant buyers of these instruments. However, banks report that institutional investors (including foreign investors) have been significant purchasers of Tier 2 instruments this year, having become more comfortable with pricing the risk that a 'non-viability' trigger event will occur, which would result in the instrument being written down or converted to common equity.

Graph 2.16
Banks' Non-common-equity Capital*



* Includes securities that have been priced but not yet issued; September 2014 is quarter-to-date
** Net issuance may not directly translate to net movement in capital as maturing instruments may not be fully Basel III compliant
*** Spread to bank bill swap rate; excludes offshore issuances; vertical line indicates the timing of APRA's clarification of Basel III requirements for Additional Tier 1 and Tier 2 capital
Source: RBA

In addition to the increase in banks' common equity and non-common-equity capital, banks' capital ratios also benefited from slow growth in aggregate RWAs – that is, the denominator of the ratio – over the first half (Table 2.2). The credit risk component, which accounts for the bulk of total RWAs, grew at a slower pace than banks' on-balance sheet lending over this period. In addition, the market risk

Table 2.2: Australian Banks' Risk-weighted Assets
As at June 2014

	Level	Share of total	Six-month-ended annualised change
	$ billion	Per cent	Per cent
Credit risk	1 416	86	2.8
Operational risk	152	9	1.9
Market risk	76	5	–15.7
Total risk-weighted assets	**1 644**	**100**	**1.7**

Source: APRA

component of RWAs fell, partly due to a decline in long-term interest rates. While this component is relatively volatile, it represents only 5 per cent of the total given the large Australian banks' businesses are mainly focused on commercial banking rather than trading activities.

The other component of banks' RWAs, operational risk, has increased as a share of the total over the past couple of years. It has recently received greater attention among market commentators and the global regulatory community following a number of conduct-related issues that have resulted in significant legal expenses for certain global banks. Australian banks have generally been less affected by these issues than some banks in other countries, but there have still been some operational losses. The recent incidents globally highlight the importance of a sound operational risk framework that ensures the proper functioning and behaviour of systems, processes and people.

In addition to risk-based regulatory capital ratios, under APRA's implementation of the Basel III international capital framework Australian banks will be required to meet non-risk-weighted capital ratios, or 'leverage ratios', by 2018. The Basel III leverage ratio measures the size of banks' Tier 1 capital base relative to their total on- and off-balance-sheet exposures, with a low ratio indicating a greater reliance on non-equity funding. Banks globally, including the large Australian banks, will be required to begin publicly reporting their Basel III leverage ratios from 1 January 2015 (see 'Developments in the Financial System Architecture' chapter). The specification of the minimum ratio calculation is still to be finalised, although based on data provided to APRA, the large Australian banks currently meet the draft minimum leverage ratio requirement of 3 per cent.

As discussed in the previous *Review*, APRA designated the four major banks as domestic systemically important banks (D-SIBs) and they will be required to meet an additional CET1 capital requirement equivalent to 1 per cent of their RWAs from 1 January 2016. This will increase their minimum regulatory CET1 capital ratio to 8 per cent from 2016 (compared with 7 per cent for smaller banks). The major banks' capital targets will need to be somewhat higher than this to meet any capital add-ons that APRA imposes because of their risk profile, and to provide a buffer above their minimum requirements in case of a temporary negative shock to capital. APRA's recent clarification that wealth management non-operating holding companies (NOHCs) are to be included in banking groups for capital purposes will also add to the major banks' future capital needs; most of the major banks have had capital benefits by treating NOHCs as 'non-consolidated' subsidiaries.[2] APRA will phase out this treatment by 2018.

The major banks are well placed to adjust to these higher requirements through earnings retention if current profitability persists. However, given their overall task and the potential for market scrutiny of their progress, the major banks may want to build up common equity at a faster pace. Most major banks have done so during recent months by issuing a modest amount of equity through dividend reinvestment plans. Over the past couple of years the major banks have generally offset the boost to common equity arising from their dividend reinvestment plans by purchasing their shares on the market.

Shadow Banking

As reported in previous *Reviews*, one of the four main international regulatory reform areas since the crisis has been to respond to risks from shadow banking, broadly defined as credit intermediation involving entities and activities outside the prudentially regulated banking system. The shadow banking sector in Australia is estimated at around 5 per cent of financial system assets, with this share declining noticeably since the onset of the financial crisis (Table 2.3). Given its small size, and limited credit

2 For further details, see APRA (2014), 'Composition of a Level 2 Authorised Deposit-Taking Institution Group', Letter to Authorised Deposit-taking Institutions', 14 May.

Table 2.3: Financial Sector Composition by Entity Type[(a)]
Share of financial system assets, as at December

	2007 Per cent	2013 Per cent
Banks, credit unions and building societies	52	55
Superannuation funds[(b)]	24	27
Insurers	3	3
Total prudentially regulated	**79**	**85**
Structured finance vehicles	6	6
Other investment funds	9	5
Finance companies	3	2
Money market corporations	2	1
Cash management trusts	1	0
Total non-prudentially regulated	**21**	**15**
Less:		
– Self-securitisation	0	4
– Real estate investment funds	4	3
– Equity funds	4	2
– Prudentially consolidated assets[(c)]	3	1
Shadow banking sector estimate	***10***	***5***

(a) Excludes central bank
(b) Includes self-managed superannuation funds which are regulated by the Australian Taxation Office
(c) Assets that are consolidated as part of the prudentially consolidated banking group
Sources: ABS; APRA; RBA

and funding links to the regulated banking system, the shadow banking sector continues to pose little systemic risk in Australia. This is in contrast to the case in some other countries. Nonetheless, the Reserve Bank continues to monitor these trends given the potential for bank-like activities to migrate to the shadow banking sector, particularly as full implementation of the tighter post-crisis prudential framework for banks progresses. As part of its monitoring efforts, the Reserve Bank provides annual updates to the CFR and participates in the annual assessment of global developments that is conducted by the Financial Stability Board (FSB).[3]

One area of shadow banking activity in Australia that warrants particular attention is non-bank securitisation activity, given strengthening investor risk appetite as well as the connections between this activity, the housing market and the banking system (through the various support facilities provided by banks). As discussed, RMBS issuance has picked up since 2013 and spreads have narrowed, including for non-bank issuers (i.e. mortgage originators). Mortgage originators tend to have riskier loan pools than banks; this is partly because they are the only suppliers of non-conforming residential mortgages, which are typically made to borrowers who do not meet the standard underwriting criteria of banks. These originators currently account for about 2 per cent of the Australian mortgage market (not all of which is non-conforming), and so have limited influence on competition in the mortgage market and the housing price cycle. Even so, it is useful to monitor any signs of greater non-bank activity, as this could signal a broader pick-up in risk appetite for housing.

3 See Financial Stability Board (2013), 'Global Shadow Banking Monitoring Report 2013', 14 November.

Managed Funds

Consolidated assets held by domestic funds management institutions continued to grow at a strong, albeit slower, pace over the six months to June 2014 (Table 2.4). Growth in superannuation funds' assets, which make up around three-quarters of total managed funds' assets, was somewhat slower than in 2013. Superannuation funds' net investment income was softer, largely attributable to broadly flat domestic equity market prices and valuation effects on overseas assets from the appreciation of the Australian dollar during the period.

As part of the Government's superannuation safety reforms, APRA released a suite of prudential and reporting standards for the superannuation industry over 2012 and 2013 relating to, among other things, risk management and governance. From the beginning of 2014, all default superannuation contributions were required to be paid into MySuper products, which are offered by APRA-authorised providers that satisfy certain requirements regarding investment strategy, fees, and governance.[4] In light of these reforms, APRA will be closely monitoring compliance with MySuper requirements, including operational risk requirements. Over the medium term, the availability of a low-cost default option may have implications for the asset allocation of the superannuation industry and linkages with the banking sector more broadly, although the precise shape of such changes is difficult to predict. Any changes would be in addition to the structural changes already occurring as a result of the rise in self-managed superannuation funds.

Insurance

The general insurance industry is well capitalised, with its capital equivalent to 1.9 times APRA's prescribed amount. General insurers' profitability is also strong – the industry recorded an annualised return on equity of 17 per cent in the first half of 2014 (Graph 2.17). The aggregate underwriting result remained robust, mainly reflecting a favourable outcome for claims expenses. Natural catastrophe claims in 2014 to date are at their lowest levels in a couple of decades, with no substantial claims events recorded as yet (Graph 2.18). Insurers' investment

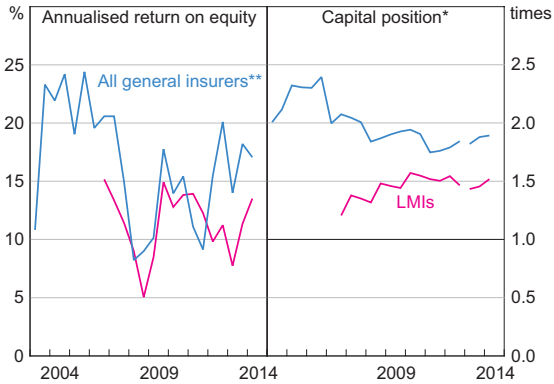
Table 2.4: Assets of Domestic Funds Management Institutions
As at June 2014

	Level	Share of total	Six-month-ended annualised change	
			Dec 2013	Jun 2014
	$ billion	Per cent	Per cent	Per cent
Superannuation funds	1 745	74	19.2	6.0
Life insurers[(a)]	281	12	14.9	5.4
Public unit trusts	294	12	2.9	1.7
Other managed funds[(b)]	36	2	–12.8	–2.7
Total (unconsolidated)	**2 356**	**100**	**15.8**	**5.2**
of which:				
Cross investments	461	–	19.9	–5.5
Total (consolidated)	**1 895**	**–**	**14.8**	**8.1**

(a) Includes superannuation funds held in the statutory funds of life insurers
(b) Cash management trusts, common funds and friendly societies
Sources: ABS; RBA

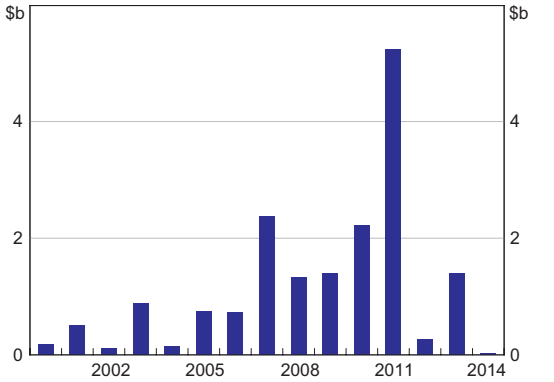
4 See APRA (2014), 'MySuper Authorisation', *APRA Insight*, Issue One, pp 30–56.

Graph 2.17
Financial Performance of General Insurers
Semiannual



* Capital held relative to respective regulatory minimum; break due to capital reforms implemented at the start of 2013
** Includes lenders mortgage insurers (LMIs)
Source: APRA

Graph 2.18
Claims from Natural Catastrophes in Australia*



* Losses from catastrophe events before 2011 have been indexed to 2011 prices; events from 2011 to 2014 are the actual cost; the cost of events in late 2013 and 2014 have not been finalised
Source: Insurance Council of Australia

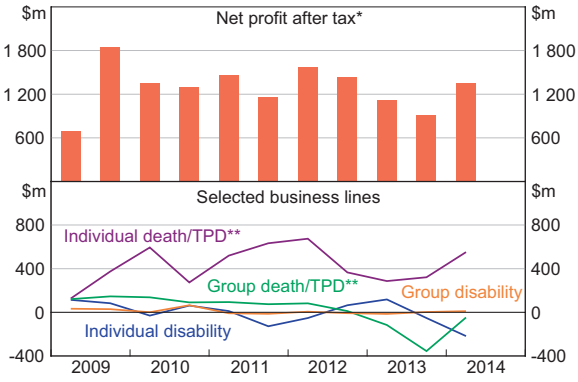
income also increased in the latest period due to tighter credit spreads on benchmark fixed-income securities.

Insurers' profitability in the past couple of years has also been supported by rises in premium rates on some business lines (particularly home insurance) following natural catastrophes in 2010 and 2011. However, insurers report that strong price competition has emerged this year for 'short tail' classes of insurance, such as home and motor vehicle, with the outlook for associated premium rates therefore weaker than in previous years. This has been mainly attributed to the entry of some lower-cost brands to the general insurance market. An emerging challenge for the general insurance industry has been the growth of 'aggregator' or price comparison websites. Although these websites can provide a valuable comparison tool for consumers and promote competition, some insurers have raised concerns that the focus on price (as opposed to other product features) could lead to consumers making uninformed choices and placing themselves at risk of underinsurance. More generally, given these developments, there is also the potential for insurers to under price risk in order to remain competitive, which could adversely impact insurers' overall future profitability.

Lenders mortgage insurers (LMIs) are specialist general insurers that offer protection to banks and other lenders against losses on defaulted mortgages, in return for an insurance premium. LMIs' profitability improved in the first half of 2014, with the industry posting a return on equity of about 14 per cent, up from an average of around 10 per cent over the preceding few years. The number and average value of claims on LMIs has declined recently in response to the buoyant housing market, as well as previous improvements in underwriting standards. In addition, some LMIs have recently increased their premium rates. In May, the largest LMI, Genworth Australia, successfully listed on the ASX, with around one-third of the company now independently owned. Also, in August QBE announced plans to partially float its subsidiary, which is the other major LMI in Australia. Share market listing will subject the relatively concentrated Australian LMI industry to greater market scrutiny and increase its access to domestic capital markets; such developments could be beneficial to financial stability given the LMI industry's involvement in the credit creation process and linkages to the banking system.

Life insurers' profit increased in the first half of 2014 following a sharp decline in 2013 (Graph 2.19). The increase was partly due to a better result for

Graph 2.19
Life Insurers' Profit



* Includes profit from other non-risk business
** TPD = total and permanent disability
Source: APRA

superannuation 'group' life insurance business, which has been facing a challenging operating environment in recent years. As discussed in the previous *Review*, excessive competition for group life insurance policies led to an under-pricing of risk and subsequent losses. Some life insurers have responded by increasing premium rates recently on group policies. APRA is liaising closely with both life insurers and superannuation fund trustees to address sustainability issues in this line of business, particularly with regards to policy design, underwriting standards, claims management and data quality.[5] More broadly, the profitability of the life insurance industry has also been weighed upon by high policy lapse rates, as well as changes in social attitudes to insurance, which have increased the propensity of policyholders to make claims and for a broader range of reasons (for example, mental illnesses). Despite the difficult conditions, the life insurance industry's capital position is sound, at 1.9 times APRA's prescribed capital amount.

Financial Market Infrastructure

Financial market infrastructures (FMIs), such as payments systems, central counterparties (CCPs) and securities settlements systems, facilitate most financial market transactions in the economy.[6] FMIs can, if well-designed, contribute to the efficiency and stability of the financial system. But they can also be a source of risk because of their size, strong connections with banks and other financial institutions, and the lack of substitutes for the services that they provide. The resilience and risk management practices of FMIs are therefore important for financial stability. This is increasingly so given global regulatory reforms are driving the increased use of centralised infrastructure, such as CCPs.

Reserve Bank Information and Transfer System

The Reserve Bank owns and operates Australia's real-time gross settlement (RTGS) system, the Reserve Bank Information and Transfer System (RITS), through which most Australian dollar-denominated interbank payments are settled. RITS continued to operate smoothly over the past six months, settling around five million payments worth $20 trillion.

The Reserve Bank invests in regular upgrades to its systems to ensure that RITS maintains resilient operations. An upgrade of core infrastructure was completed in the six months to June 2014, including the replacement of operating systems and databases, while system monitoring capabilities were enhanced. The Reserve Bank also invests in developing new functionality in RITS to help meet the changing needs of the payments system. One such piece of work nearing completion will settle the interbank cash settlement leg of property transactions, as part of a national electronic conveyancing system. The new system is intended to remove the manual processes and paperwork associated with property transactions, thereby delivering efficiency gains and cost savings to consumers and industry participants. Enhancement to RITS functionality to support settlement of these transactions will be implemented in late 2014.

5 For further discussion, see Rowell (2014), 'APRA's Expectations of Superannuation Fund Trustees', Speech to ASFA Unpacks: The Future of Insurance in Superannuation, Sydney, 29 April.

6 A full list of FMIs operating in Australia, as well as indicators of their systemic importance, is available in RBA (2014), *Submission to the Financial System Inquiry*, March, pp 91–92.

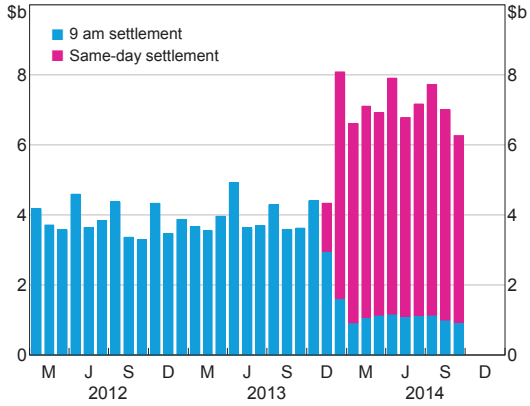
Interbank obligations arising from low-value payments, such as cheques, direct entry, and consumer electronic (card-based) transactions, settle in RITS on a multilaterally netted basis, rather than on an RTGS basis. Over the past six months, the average daily gross value of these obligations accounted for around 9 per cent of total daily payments settled in RITS. Cheques and consumer electronic obligations are settled at 9.00 am on the business day following their exchange. Since November 2013, most non-government direct entry obligations have been settled on a same-day basis in five intraday multilateral net batches, at 10.45 am, 1.45 pm, 4.45 pm, 7.15 pm and 9.15 pm.[7] This has allowed direct entry transactions to be finalised in a more timely fashion, and reduced the credit exposure that can arise when payments are posted to customer accounts ahead of interbank settlement.

Same-day settlement of interbank direct entry obligations has also resulted in a significant increase in the average daily multilateral net settlement value because the direct entry obligations are now separated into five daily settlements, which are no longer being netted against other low-value payments. Prior to November 2013, the net average daily value of the 9.00 am settlement was $4 billion, whereas subsequently around $7 billion in net multilateral settlements have been settled each day (Graph 2.20).

To facilitate the same-day settlement of direct entry obligations, the Reserve Bank introduced new liquidity arrangements in RITS, whereby the Reserve Bank makes Exchange Settlement Account (ESA) funds available to participants via repurchase agreements (repos) with an open-ended repurchase date. These open repos allow participants to meet the funding requirements of the two 'late' (7.15 pm and 9.15 pm) multilateral settlements that settle outside of normal banking hours. As a result, total system liquidity increased significantly in November 2013 and has remained at these elevated levels since (Graph 2.21).

The additional system liquidity has contributed to shorter queue times for RTGS payments, on average, as well as earlier settlement of payments in the day.

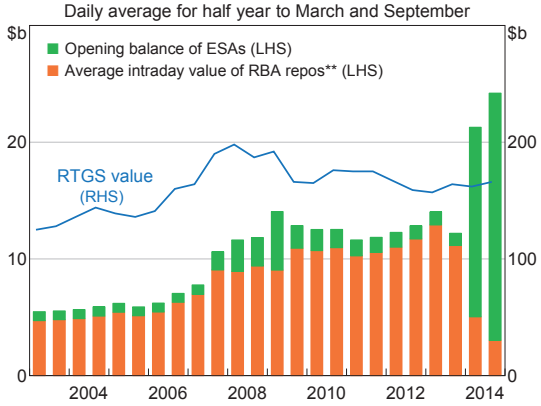
Graph 2.20
Multilateral Net Settlement in RITS*
Average daily value



* Multilateral net settlements of low-value clearing obligations; excludes the CHESS batch – that is, settlement of transactions in the ASX Limited's Clearing House Electronic Subregister System; September 2014 is month-to-date

Source: RBA

Graph 2.21
Average Liquidity*
Daily average for half year to March and September



* September 2014 is six-months-to-date

** Measured as the average balance of intraday RBA repos during the Daily Settlement Session; not adjusted for overnight repos

Source: RBA

7 For further details on the implementation of same-day settlement of direct entry obligations, see Fraser S and A Gatty (2014), 'The Introduction of Same-day Settlement of Direct Entry Obligations in Australia', Reserve Bank of Australia *Bulletin*, June, pp 55–64.

Developments in CCP risk management

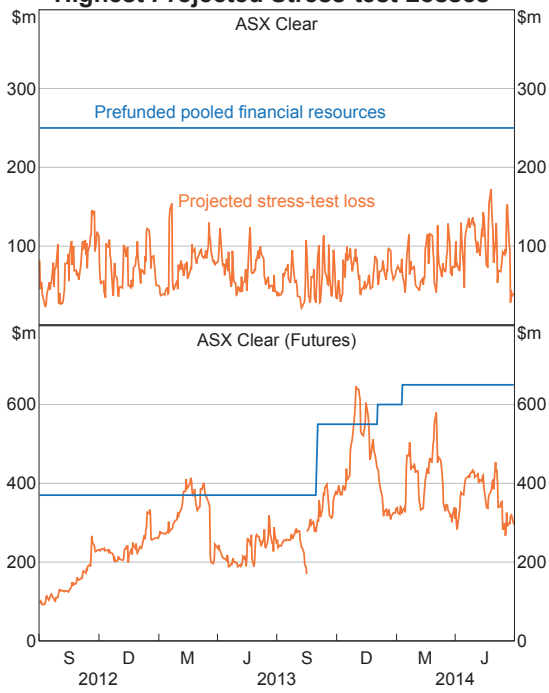
CCPs provide centralised management of counterparty risk to their participants. In Australia there are three licensed CCPs:

- ASX Clear and ASX Clear (Futures) are both owned by the ASX Group (ASX) and clear trades from ASX's equities and derivatives markets, and the over-the-counter (OTC) interest rate derivatives market
- LCH.Clearnet Limited (LCH.C Ltd) is licensed in Australia to clear OTC interest rate derivatives and certain financial products that are to be traded on a soon-to-launch derivatives market, the Financial and Energy Exchange.

Given their importance to the financial system, CCPs licensed to operate in Australia must meet Financial Stability Standards (FSS) determined by the Reserve Bank. The FSS were adjusted in early 2013 to align with new international standards, the *Principles for Financial Market Infrastructures* (see 'Developments in the Financial System Architecture' chapter). Amongst other changes, the revised FSS introduced more detailed requirements for the validation of CCP risk models. These include the assessment of model performance against historical data, analysis of the sensitivity of models to key assumptions, and periodic independent reviews of the modelling approach.

Consequently, during 2013/14, a major focus of the Bank's oversight of ASX's CCPs has been on how the CCPs validate the performance of their risk models. CCPs use risk models to estimate their potential credit and liquidity exposures in both normal and stressed market conditions. For example, in order to assess the adequacy of their financial resources, ASX Clear and ASX Clear (Futures) each perform daily capital stress tests that compare available prefunded resources against the largest potential loss in the event of the default of a participant (Graph 2.22). The CCPs also maintain models to ensure that the value of collateral they receive from participants to cover these exposures can be relied upon, even in stressed market conditions.

Graph 2.22
Highest Projected Stress-test Losses*



* Projected largest potential loss in the event of the default of a participant (and affiliates of the participant from 2 April 2013) under a range of extreme but plausible scenarios; for ASX Clear (Futures), from 19 August 2013 projected losses are in the event of the default of two participants

Source: ASX

The ASX CCPs have made significant progress in implementing enhancements to all areas of their model validation framework. The Reserve Bank found in its 2013/14 Assessment of the ASX CCPs that they now observe the majority of the model validation requirements in the FSS. Overall, the Assessment concluded that the ASX CCPs had either observed or broadly observed the full range of relevant requirements under the FSS, while making a number of recommendations to strengthen further the CCPs' observance of these requirements.[8] Other key matters covered in the report included initial work by the CCPs to plan for recovery from an extreme event that threatened their ongoing provision of clearing services, and ASX's risk management arrangements for its investment portfolio.

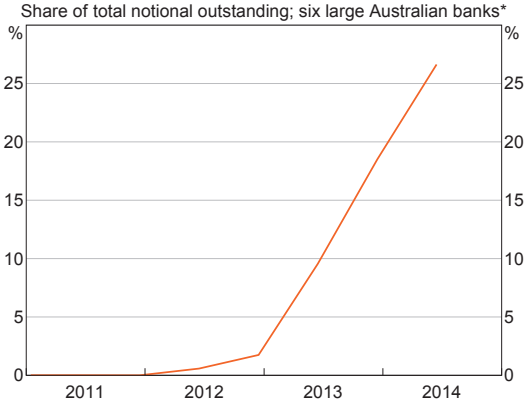
8 For further details, see RBA (2014), '2013/14 Assessment of ASX Clearing and Settlement Facilities', September.

The Bank has also recently released its first assessment of LCH.C Ltd against the FSS, covering the financial year 2013/14.[9] This period was a time of transition for LCH.C Ltd, during which it admitted its first Australian participants. The tailoring of LCH.C Ltd's services to Australian participants has been a focus of the Reserve Bank's oversight of LCH.C Ltd. During the period, LCH.C Ltd introduced a formal structure to facilitate the input of Australian participants into its governance and risk management. It has also applied to the Reserve Bank to open an Exchange Settlement Account, and intends to extend the operating hours of its OTC interest rate derivatives clearing service to cater for the Australian time zone.

Use of CCPs for clearing OTC derivatives

The volume and value of OTC interest rate derivatives that are centrally cleared by Australian banks has continued to rise; the value of banks' interest-rate derivatives cleared at LCH.C Ltd, which clears the majority of banks' activity in this market, rose from 19 per cent to 27 per cent of the total notional principal outstanding over the six months to June 2014 (Graph 2.23). This increase has occurred even though a mandatory clearing requirement for interest rate derivatives has not yet come into effect in Australia (see 'Developments in the Financial System Architecture' chapter). This at least partly reflects that mandatory central clearing requirements are already in place in certain overseas markets and banks are anticipating the introduction of additional mandates both domestically and overseas. In addition, there are commercial incentives to move to the centrally cleared market. In particular, with most interest rate derivatives trades between large internationally active dealers being centrally cleared, liquidity and pricing are generally more favourable for centrally cleared trades. This has been driven, in part, by dealers seeking to maximise operational and netting efficiencies, and minimise capital requirements.

Graph 2.23
Centrally Cleared OTC Interest Rate Derivatives
Share of total notional outstanding; six large Australian banks*



* Principal notional outstanding with LCH.C Ltd as a percentage of all AUD and non-AUD OTC interest rate derivative positions reported by Australian banks in the BIS semiannual derivatives survey

Sources: BIS; LCH.C Ltd; RBA

The two CCPs licensed in Australia to clear OTC interest rate derivatives – ASX Clear (Futures) and LCH.C Ltd – continue to accept Australian banks as direct participants. Four of the large domestic banks have joined ASX Clear (Futures) as direct participants and three have joined LCH.C Ltd, although some additional participants are expected in the near future. A number of domestic banks also continue to clear OTC interest rate derivatives indirectly – that is, using a 'client' clearing arrangement with a clearing agent that is a direct clearing participant – through LCH.C Ltd and the Chicago Mercantile Exchange.

Although central clearing among smaller financial institutions and non-financial corporations (collectively referred to as non-dealers) is currently limited, a small number of large non-dealers have client clearing arrangements in place. Central clearing by non-dealers is most common in products that are subject to foreign mandatory clearing requirements.

Both ASX Clear (Futures) and LCH.C Ltd's services allow non-dealers that clear indirectly the option to segregate their positions and collateral from both their clearing agent and other clients of their clearing agent. This allows non-dealers to better manage the risks they face from clearing indirectly, and increases the likelihood that, in the event of the default of their clearing agent, their positions and associated collateral could be transferred ('ported') to an alternative clearing participant.

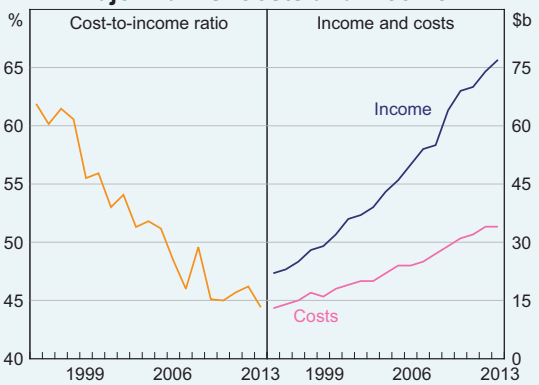
9 For further details, see RBA (2014), '2013/14 Assessment of LCH.Clearnet Limited's SwapClear Service', September.

Box B

Australian Major Banks' Cost-to-income Ratios

Improvement in operational efficiency is one factor underlying the strong profitability of the four major Australian banks over the past couple of decades. Operational efficiency in banking is commonly proxied by the cost-to-income (CI) ratio – that is, the ratio of total operating costs (excluding bad and doubtful debt charges) to total income (the sum of net interest and non-interest income). The major banks' aggregate CI ratio has fallen by just under 20 percentage points since the mid 1990s, to be 44 per cent in the 2013 financial year (Graph B1).[1]

Graph B1
Major Banks' Costs and Income*



* Measured on an underlying basis; data from 2006 are on an IFRS basis, while prior years are on an AGAAP basis; includes St. George and, from 2009, Bankwest

Sources: Banks' Annual and Interim Reports; RBA

The Australian major banks' CI ratios have been at the bottom end of the range of their peers internationally in recent years, contributing to their relatively higher profitability (see Graph 1.8 in the 'The Global Financial Environment' chapter).[2] Reported CI ratios vary widely across a sample of 52 large international banks (Graph B2). Hong Kong banks recorded the lowest CI ratios in 2013 at 32 per cent, followed by New Zealand, Australian and Swedish banks, which had CI ratios below 50 per cent. Given the New Zealand banks are subsidiaries of the Australian major banks, it is not surprising that their CI ratios were similar to those of their Australian parents.[3] In contrast, CI ratios for large banks in Switzerland, Germany and the United Kingdom were relatively high in 2013, at above 70 per cent. The most notable change compared with 2007, just prior to the financial crisis, is that some German and United Kingdom banks' CI ratios were significantly higher in 2013, reflecting large declines in income. CI ratios were broadly unchanged over this time in those banking systems with the lowest CI ratios, including Australia.

Banks' CI ratios can be decomposed into various categories of operating costs: personnel, occupancy, information technology (IT) and 'other' costs (which include expenses such as fees and commissions, marketing and litigation) (Graph B3). Personnel and 'other' costs are the largest components of banks' total costs and, as such, are important drivers of CI ratios. Those banks which reported the lowest CI ratios in the sample also had the lowest personnel and 'other' costs-to-income. Most European banks, in particular Swiss banks, reported relatively high personnel and 'other' costs-to-income. There is less variation in occupancy and IT costs-to-income across banks, although it is notable that the Australian major banks recorded among the lowest occupancy costs-to-income in 2013.

1 This has been an offset to the decline in the major banks' net interest margin over this period.

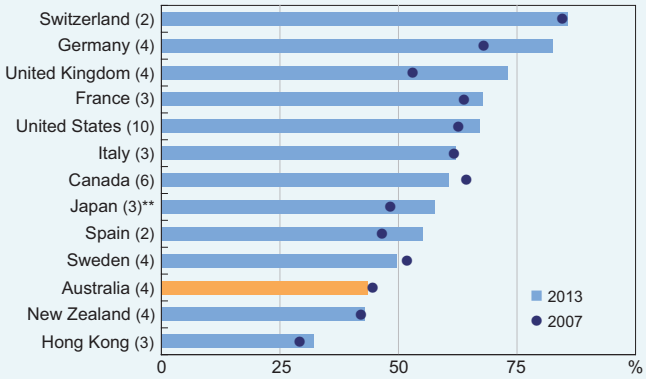
2 For example, the Australian major banks were ranked as the most profitable among their advanced economy peers in the 2012/13 and 2013/14 Annual Reports of the Bank for International Settlements.

3 The New Zealand subsidiaries have similar business models to their Australian parents and are likely to have benefited from similar efficiency improvements. Nonetheless, the New Zealand subsidiaries have been included separately because the cost structure in the New Zealand economy could differ from that in Australia.

Graph B2

Large Banks' Cost-to-income Ratios*

Consolidated, selected banking systems

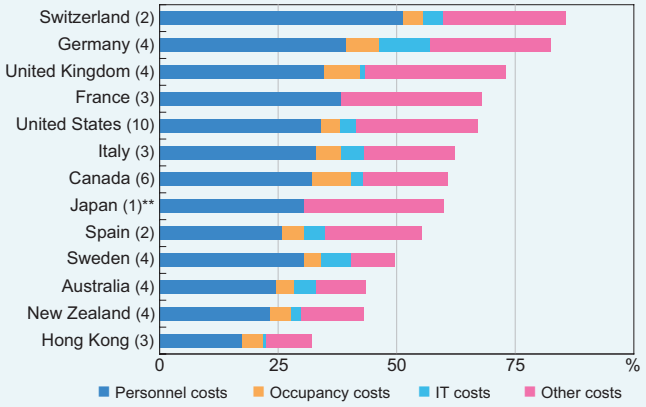


* Numbers in parentheses refer to the number of banks in sample
** Includes one Japanese bank in 2007 due to data availability
Sources: RBA; SNL Financial

Graph B3

Decomposition of Cost-to-income Ratios*

Consolidated, selected banking systems, 2013



* Numbers in parentheses refer to the number of banks in sample; full breakdown of costs not available for France and Japan
** Includes one Japanese bank due to data availability
Sources: RBA; SNL Financial

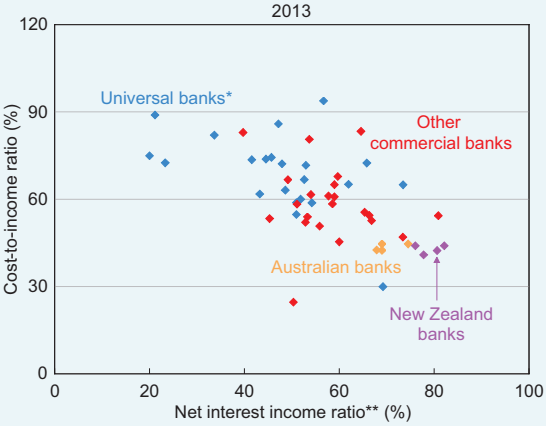
The decline in the Australian major banks' aggregate CI ratio over the past two decades reflects a number of factors. By adopting new technologies, banks have been able to provide more streamlined banking services to customers and improve back-office processes such as loan approvals, and information processing and management. Additionally, a focus on reducing high-cost, low-value operations resulted in the closure of a large number of branches during the 1990s.[4] The major Australian banks have renewed their focus on costs in the past few years to help counteract the effect of more moderate balance sheet growth on their profitability. Specifically, they have undertaken a range of initiatives including restructuring operations, upgrading their core

4 See Stewart C, B Robertson and A Heath (2013), 'Trends in the Funding and Lending Behaviour of Australian Banks', RBA Research Discussion Paper No 2013-15.

banking systems, and outsourcing back-office processing and support operations to lower cost locations offshore. In addition, the major banks have moved towards branch operating models that focus on product sales and cross-selling, as opposed to traditional transactional banking activities that are being done increasingly through internet and mobile facilities.

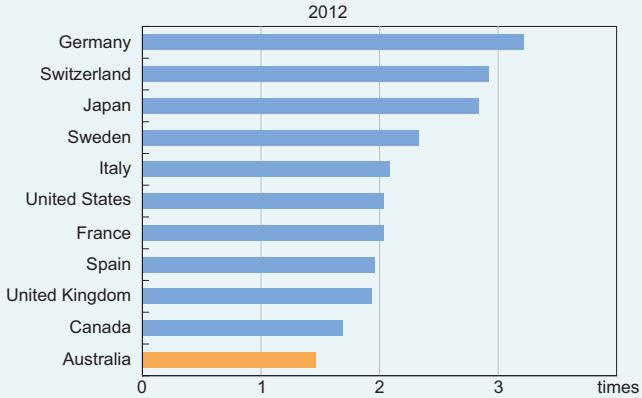
The Australian major banks' focus on commercial banking – that is, lending to households and businesses – appears to be a contributor to their relatively low CI ratio. In 2013, those large banks that earned a greater share of their income from net interest income (a proxy for a bank's focus on lending activities) tended to have lower CI ratios than 'universal' banks, which earned a larger share of their income through non-interest sources such as investment banking or wealth management (Graph B4).[5] One possible reason for this relationship is that universal banks tend to pay higher levels of staff remuneration, on average. This is consistent with the pattern in Graph B3 which shows that many of the large European banks – which typically earn a higher share of income from investment banking and wealth management activities – have higher personnel costs-to-income and pay a higher premium to the average wage in their respective home economies (Graph B5). A further potential explanation for the

Graph B4
Cost and Net Interest Income Ratios
2013



* Banks with a loan-to-asset ratio less than 50 per cent
** Net interest income as a share of total income
Sources: RBA; SNL Financial

Graph B5
Large Banks' Personnel Cost Premium*
2012



* Large banks' average personnel cost per employee in their consolidated global operations relative to average wage in home economy; data for Hong Kong and New Zealand not available; reduced sample for France and Japan due to data availability
Sources: OECD; RBA; SNL Financial

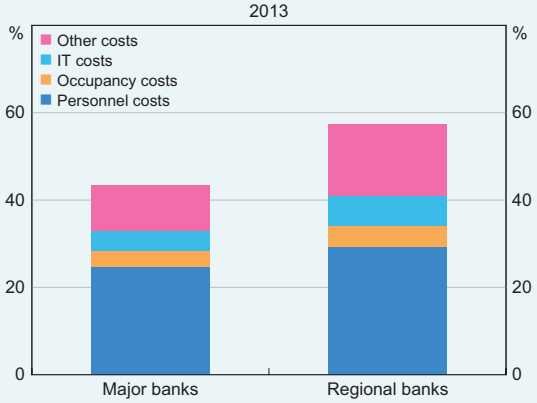
5 While some universal banks' CI ratios have been higher in recent years due to large declines in trading income following the global financial crisis, the relationship between banks' business models and CI ratios still broadly held in 2007.

Australian major banks' relatively low CI ratio, even compared with some other commercial banks, is that residential mortgage lending represents a high share of their total lending; as housing mortgages are more homogenous than business loans, the cost of distributing them is likely to have benefited more from technological advances than business lending or relationship-based financial services.

The above analysis suggests that there may be diseconomies of scope for some large banks – that is, average costs increase as they diversify outside of commercial banking services. This is consistent with some literature which points to negative returns to scope when banks move into market-based activities.[6] While market-based activities can provide a more diversified revenue stream for banks, they are typically a more volatile source of income and can expose banks to additional risks and complexity. Interestingly, the Bank for International Settlements noted in its 2013/14 Annual Report that in the post-crisis period, a number of large international banks with significant trading businesses have adjusted their business models away from those activities somewhat, consistent with the better performance and efficiency of banks with a more commercial banking model.

The Australian major banks' CI ratios are also well below those for smaller banks in Australia; for example, in 2013 the regional banks' aggregate CI ratio was 57 per cent, compared with 44 per cent for the major banks (Graph B6). Given that the major banks and regional banks have similar (commercial banking) business models and are likely to face a similar operating cost base, economies of scale could be one factor explaining the difference between their CI ratios. For example, the major banks may have been able to achieve efficiencies through spreading the fixed component of their operating costs over a larger revenue or asset base.[7]

Graph B6
Australian Banks' Cost-to-income Ratios*



* Includes four major banks and three regional banks
Sources: RBA; SNL Financial

6 See Laeven L, L Ratnovski and H Tong (2014), 'Bank Size and Systemic Risk', IMF Staff Discussion Note 14/04 (and references within). As summarised in this paper, the source of negative returns to scope in the literature is the agency costs associated with monitoring complex financial conglomerates, which can result in lower market valuations, higher systemic risk and lower risk-adjusted returns.

7 While early literature found economies of scale in banking to be limited to relatively small banks, more recent academic studies have found evidence of scale economies in large banks. See Kovner A, J Vickery and L Zhou (2014), 'Do Big Banks Have Lower Operating Costs?', Federal Reserve Bank of New York *Economic Policy Review*, 20(2), pp 1–27 (and references within).

3. Household and Business Finances

The pick-up in household risk appetite that was evident six months ago appears to have continued, as has the associated willingness to take on some types of debt. Housing prices have been rising strongly in the larger cities. To some extent, these outcomes are to be expected given the low interest rate environment and the search for yield behaviour of investors more generally, both here and overseas. However, the composition of housing and mortgage markets is becoming unbalanced. This has been most evident in the current strength of investor activity in the housing market, and in its concentration in Sydney and Melbourne. The apparent increase in the use of interest-only loans by both owner-occupiers and investors might also be consistent with increasingly speculative motives behind current housing demand.

At this stage, the main risk from this strong investor activity appears to be that the extra demand may exacerbate the housing price cycle and increase the potential for prices to fall later. The risks from the consequent declines in household wealth and spending are likely to be macroeconomic, rather than direct risks to the stability of financial institutions. In other respects, some households have continued to foster sustainable financial positions by taking advantage of lower interest rates to pay down debt. Although the household saving rate has drifted down a little, it remains much higher than in recent decades.

Near-term risks from the non-financial business sector appear to be low, with a possible exception of the commercial property sector, where strong demand from domestic and foreign investors has meant the divergence between rising prices and soft leasing conditions has persisted. With attractive yields on Australian commercial property, many of the dynamics evident in investor housing are also playing out in this market, increasing the vulnerability of the commercial property market to a price correction. More broadly, business conditions remain around long-run average levels and corporate balance sheets appear generally to be in good shape, with gearing low and the ability to service debt fairly high. For businesses outside the property sector, there is moderate appetite for taking on debt for investment purposes, despite ready access to credit. At this stage, lending standards have been little changed overall and the performance of existing business loans has continued to improve.

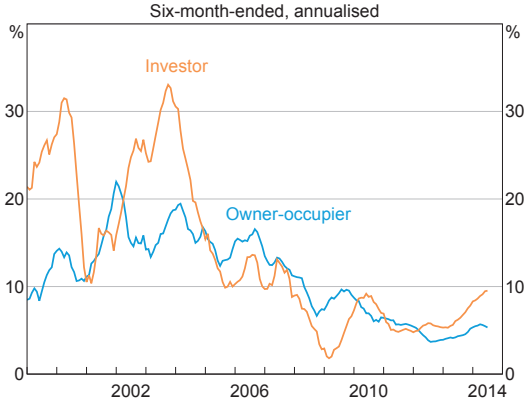
Household Sector

Borrowing and balance sheet position

Households' appetite for risk has continued to increase over 2014. This trend has been evident for the past year or so and is to some extent an expected reaction to low interest rates; housing price inflation and, more recently, competition amongst lenders on price have also played a role. Accordingly, household credit growth has picked up, almost entirely driven by investor housing credit, which is growing at its fastest pace since late 2007 (Graph 3.1).

The willingness of some households to take on more debt, combined with slower growth in incomes, means that the debt-to-income ratio has picked

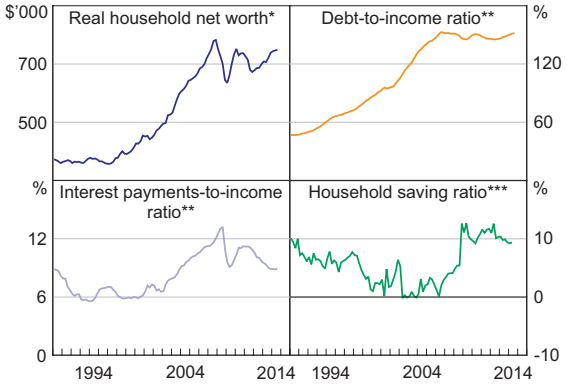
Graph 3.1
Housing Credit Growth
Six-month-ended, annualised



Sources: APRA; RBA

up a little in the past six months. While this ratio is still within its range of the past eight years at around 150 per cent, it is historically high and hence any further increases in household indebtedness would be taking place from an already high base (Graph 3.2). Households' ability to service their debt has been aided by ongoing low interest rates. The proportion of disposable income required to meet interest payments on household debt has stabilised accordingly, at around 9 per cent.

Graph 3.2
Household Indicators



* In 2011/12 dollars; deflated using the household final consumption expenditure implicit price deflator; RBA estimates for June quarter 2014 and September quarter 2014
** RBA estimate for September quarter 2014
*** Household sector includes unincorporated businesses; net of depreciation
Sources: ABS; APRA; RBA; RP Data-Rismark

Households continue to take advantage of lower interest rates to pay down their mortgages more quickly than required. The aggregate mortgage buffer – balances in mortgage offset and redraw facilities – has risen to be around 15 per cent of outstanding balances, which is equivalent to more than two years of scheduled repayments at current interest rates. Prepayment rates and the proportion of borrowers ahead of schedule on their mortgage repayments are also high according to liaison with banks. Part of this prepayment behaviour has been due to some banks' systems not automatically changing customer repayment amounts as interest rates have declined, while in many cases households have not actively sought to reduce their repayments. This might be a sign that household stress is currently limited. The household saving ratio, although trending down a little lately, remains high at just under 10 per cent. Households' aggregate balance sheet position has continued to improve in recent quarters: real net worth per household is estimated to have increased by 4 per cent over the year to September 2014.

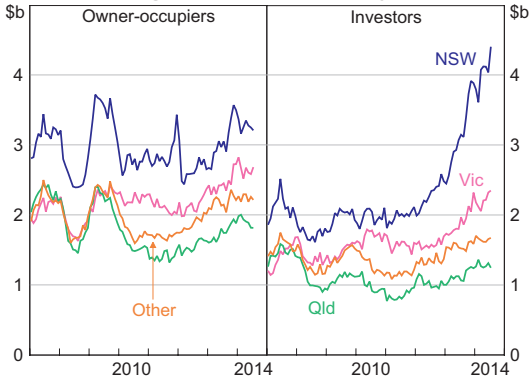
Outside of property investment, households have also shown some appetite for risk in their financial investments. As discussed in 'The Australian Financial System' chapter, retail investors have been attracted to the relatively high yields on non-common-equity instruments issued by banks (often referred to as 'hybrids'). These instruments are complex in nature and feature elements of both debt and equity. The Australian Securities and Investments Commission has in the past issued public warnings about the risks involved in holding hybrid instruments and, as with any complex instrument, households should understand and take into account the associated financial risks.

Housing market activity

The increase in household risk appetite is most evident in the continued strength of investor activity in the housing market. The momentum in investor housing activity has been concentrated in Sydney

and (to a lesser extent) Melbourne: investor housing loan approvals are almost 90 per cent higher in New South Wales than they were two years ago and are 50 per cent higher over the same period in Victoria (Graph 3.3). As a share of approvals, both are back around previous peaks. By contrast, the momentum in the owner-occupier market appears to have slowed over the past six months or so, with loan approvals to owner-occupiers little changed. Some potential first home buyers are likely to have been priced out of parts of the market by investors, who typically have higher incomes and are therefore able to bid up prices. The broad-based reduction in grants to first home buyers for established housing since late 2012 has also contributed to reduced demand from these buyers.

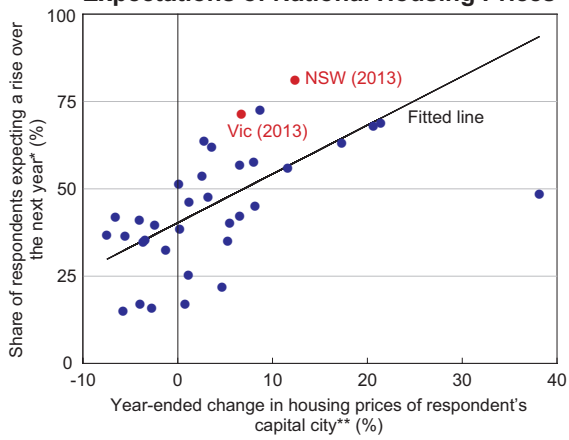
Graph 3.3
Housing Loan Approvals by State*



* Excludes construction; investor approvals include refinancing
Sources: ABS; RBA

Strong investor demand can be a sign of speculative excess, with the risk that additional speculative demand can amplify the cycle in housing prices and increase the potential for prices to fall later. This is particularly the case if that demand is largely based on unrealistic expectations of future price growth, perhaps extrapolated from recent experience. A Mortgage Choice survey shows a positive relationship between the share of households expecting further housing price inflation and the rate of price inflation in the current year; that is, expectations of future housing prices seem to be influenced by the recent past (Graph 3.4). This

Graph 3.4
Expectations of National Housing Prices



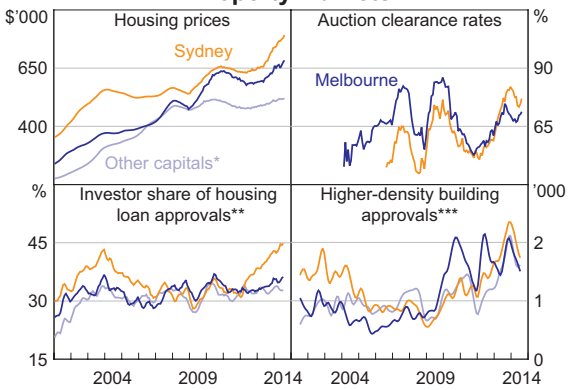
* Annual data from November 2006
** Cities include Adelaide, Brisbane, Melbourne, Perth and Sydney
Sources: Mortgage Choice; RBA; RP Data-Rismark

tendency was stronger than average in New South Wales and Victoria at the end of last year. The risks associated with this behaviour are likely to be macroeconomic in nature if households were to react to declines in their wealth and any repayment difficulties by cutting back their spending.

A speculative upswing in demand can also be damaging if it brings forth an increase in construction on a scale that leads to a future overhang of supply. This risk is more likely to arise in particular local markets than at the national level. Nationally, Australia is a long way from an oversupply of housing and some increase in supply is to be expected in response to higher prices, which should also help to temper those rising prices.

- The pick-up in housing prices and investor lending has been most pronounced in Sydney (Graph 3.5). Construction of new dwellings has also recovered over the past two years, but this follows a reasonably long period of limited new supply. In addition, the pick-up in construction has been spread geographically in both the inner and middle areas of Sydney, and has also been for both higher-density (apartments) and detached dwellings. These factors reduce the risk that pockets of oversupply in particular regions or of a particular dwelling type will emerge.

Graph 3.5
Property Markets

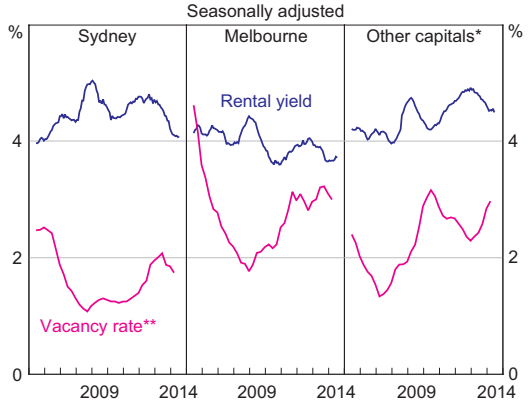


* Adelaide, Brisbane, Canberra, Darwin, Hobart and Perth
** Data for all states and territories; three-month moving average; excludes construction, includes refinancing
*** 13-period Henderson trend
Sources: ABS; APM; RBA; REIV; RP Data-Rismark

- The risk of localised oversupply seems somewhat higher in Melbourne where there has been greater geographic concentration of building activity recently. Apartment construction in the inner city has been at high levels for some time and, given the time lags in completing higher density constructions, is expected to remain elevated for the next few years. That said, liaison suggests that construction in Melbourne continues to be driven by strong demand, including from foreign investors, with pre-sale levels remaining high.
- A related risk, which is likely to be currently most pronounced in Melbourne, is that some new developments may appeal to a relatively narrow segment of tenant or owner demand. For example, some new developments involve smaller-sized apartments that are targeted at international students, which could be harder to sell in the secondary market than more traditional-sized apartments. This could place downward pressure on apartment prices if student demand weakens or if there are other shocks that reduce foreign investors' appetite for these apartments.

Despite the activity and housing price inflation in the Sydney and Melbourne property markets, rental yields have not declined to a significant extent and vacancy rates in these cities remain fairly low (Graph 3.6). However, rental yields may come under pressure if the momentum in housing price inflation continues. Households should therefore be mindful of the risks when making investment property decisions in these conditions (for discussion of the financial position of investor households, see 'Box C: Households' Investment Property Exposures: Evidence from Tax and Survey Data').

Graph 3.6
Rental Market
Seasonally adjusted



* Adelaide, Brisbane, Canberra and Perth; rental yield also includes Darwin and Hobart
** Four-quarter moving average
Sources: ABS; RBA; REIA; RP Data-Rismark

Housing loan characteristics

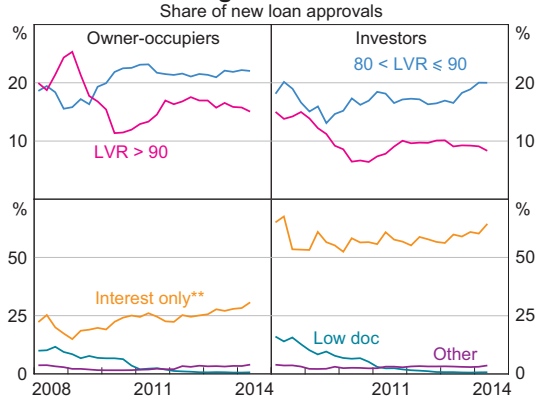
In an environment of historically low interest rates, rising housing prices and strong price competition in the mortgage market, there is some risk that households may attempt to take out loans that they would not be able to service comfortably if interest rates were to rise. Lenders' credit decisions and policies should be, and in Australia generally are, designed to prevent this. As discussed in the chapter 'The Australian Financial System', to help mitigate this risk further, the Australian Prudential Regulation Authority's (APRA) draft Prudential Practice Guide on mortgage lending emphasises that banks should apply an interest rate add-on to the mortgage rate, in conjunction with an interest rate 'floor', in assessing a borrower's capacity to service their loan. The lending behaviour of banks in this environment, including

their adherence to prudent practices like the use of add-ons and floors in assessing serviceability, is particularly important; it is no surprise that APRA is keeping a close watch on this. So far, it appears that banks' lending standards have been holding fairly steady overall; while some elements or market segments have eased a little, others have tightened up a bit (Graph 3.7).

- The share of loan approvals with loan-to-valuation ratios (LVRs) over 90 per cent has trended down since early 2013 for both owner-occupiers and investors, though some of this seems to have shifted into the group of approvals with LVRs between 80 and 90 per cent.
- Some institutions appear to be lending at high loan-to-income ratios and, overall, the average size of new loans has risen recently. Importantly from a household risk perspective, only a small share of new lending currently appears to have both a high LVR and a high loan-to-income ratio, which implies that few households are simultaneously exposed to the risks of falling into negative equity and facing difficulty making their loan repayments. Any increase from the current small share of new lending with both a high LVR and high loan-to-income ratio would, however, be undesirable and this configuration of lending continues to be closely monitored.

Another feature worthy of close monitoring is the aggregate interest-only share of banks' new lending, which has continued to increase for both investors and owner-occupiers in 2014. This might be indicative of speculative demand motivating a rising share of housing purchases. Consistent with mortgage interest payments being tax-deductible for investors, the interest-only share of approvals to investors remains substantially higher than to owner-occupiers. According to liaison with banks, the trend in interest-only owner-occupier borrowing has been largely because these loans provide increased flexibility to the borrower. It does not necessarily mean that borrowers are taking on debt that they may not be able to service if both interest

Graph 3.7
Banks' Housing Loan Characteristics*
Share of new loan approvals



* LVR = loan-to-valuation ratio; 'Other' includes loans approved outside normal debt-serviceability policies, and other non-standard loans
** Series is backcast before December 2010 to adjust for a reporting change by one bank
Sources: APRA; RBA

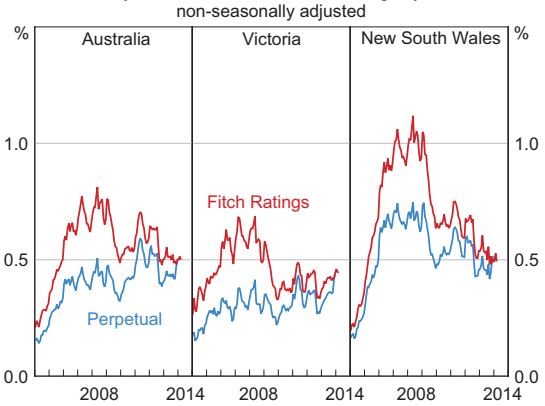
and principal repayments are made. Rather, some of these borrowers are likely to be building up buffers in offset accounts.

In any case, APRA's draft Prudential Practice Guide emphasises that a prudent authorised deposit-taking institution would assess customers' ability to service principal and interest payments following the expiry of the interest-only period. More broadly, consumer protection regulations require that lenders do not provide credit products and services that are unsuitable because, for example, the consumer does not have the capacity to meet the repayments.

Loan performance and other indicators of household financial stress

Aggregate indicators suggest that household financial stress is generally low, despite the increase in the unemployment rate over the past year. The share of banks' housing loans that are non-performing has declined for both owner-occupiers and investors since reaching a peak in the middle of 2011. Data on securitised housing loans show that the share that are 90 days or more past due has declined over the year for most states, coinciding with lower interest rates and rising housing prices (Graph 3.8). In Victoria, however, loan performance has deteriorated slightly, particularly in those geographic regions

Graph 3.8
Securitised Housing Loan Arrears
90+ days in arrears, share of outstandings by value, non-seasonally adjusted



Sources: Fitch Ratings; Perpetual; RBA

such as outer-west and north Melbourne where unemployment rates have either increased recently or are at elevated levels. The large volume of supply coming online in the Melbourne inner-city apartment market increases the risk of further deterioration in loan performance in Victoria. More generally, future housing loan performance is likely to at least partly depend on labour market performance. Although forward-looking indicators of labour demand have generally improved since last year, they remain consistent with only moderate employment growth in the near term.

Other indicators also point to fairly low levels of stress in the household sector. Applications for property possessions as a share of the dwelling stock have trended down since 2011 in the states for which data are available (New South Wales, Queensland, Victoria and Western Australia) and are currently at their lowest levels in more than seven years. The non-performance rates on banks' credit card and other personal lending, which are inherently riskier and less likely to be secured than housing loans, have been little changed in recent quarters. These loans remain a small share of total household credit.

Commercial Property

The commercial property sector is especially important from a financial stability perspective, given that it accounts for almost 30 per cent of banks' domestic non-financial business lending. Historically, the sector has also comprised a disproportionately large share of banks' non-performing loans. Many of the dynamics discussed for the housing market are also relevant in the commercial property market, in part due to the role of residential property development in the sector. The attractive yields on Australian commercial property relative to returns overseas and on other asset classes have also added to these dynamics.

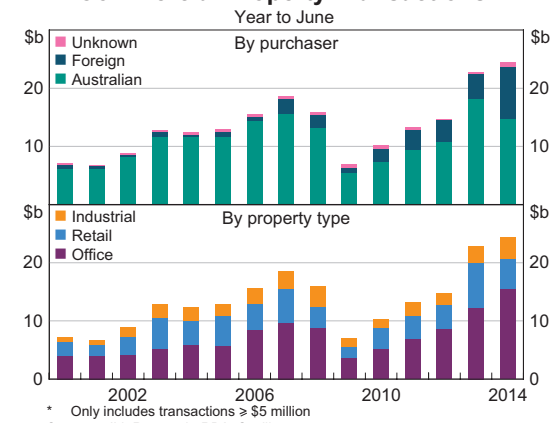
In particular, in the global environment of low interest rates and the consequent search for yield, the high yield on Australian commercial property has attracted strong investor demand, with a sharp increase in the total value of office, retail and industrial property transactions over the past two years (Graph 3.9). This demand has come from both domestic and foreign investors; the flow of foreign capital into the sector increased strongly over the past year.[1] Foreign capital is also flowing into residential property development, particularly in the inner-city Melbourne apartment market.

The strong demand for commercial property continues to boost prices, especially for CBD office and industrial properties, despite weak leasing conditions and subdued tenant demand in some states (Graph 3.10). In particular, lower demand from government organisations in Brisbane and mining-related companies in Brisbane and Perth has weighed on conditions in these CBD office markets. By contrast, the Sydney office market, where price rises have been greatest, has been somewhat shielded from the effects of weaker tenant demand, in part because withdrawals of property from the market (particularly the conversion of older office space to residential property) have constrained supply.

A substantial supply of office properties is under construction or being refurbished and is therefore expected to come online in the next couple of

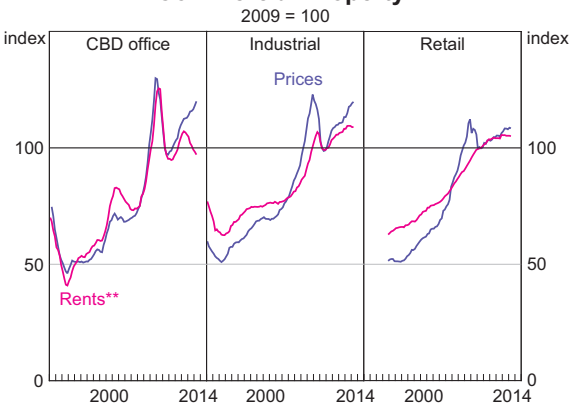
1 For further detail on foreign investment in the commercial property market, see Lane K, A Sinclair and D Orsmond (2014), 'Foreign Investment in Australian Commercial Property', RBA *Bulletin*, September, pp 21–26.

Graph 3.9
Commercial Property Transactions*



* Only includes transactions ≥ $5 million
Sources: JLL Research; RBA; Savills

Graph 3.10
Commercial Property*



* CBD office and industrial are prime property, retail is regional (non-CBD) centres
** CBD office is effective rents, industrial and retail are face rents
Sources: ABS; JLL Research; RBA

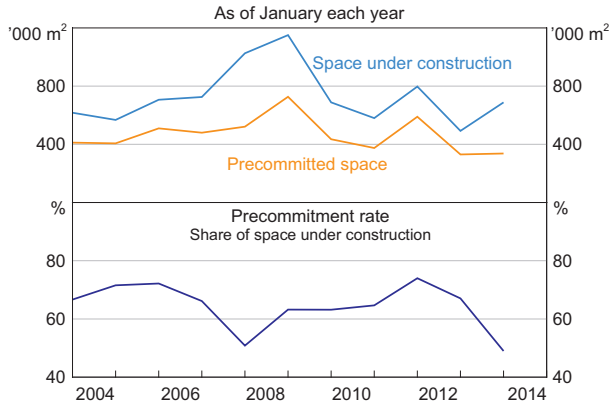
years in Sydney, Brisbane and Perth. Beyond this, industry liaison indicates that the current softness in tenant demand has led to some projects being delayed or cancelled, and building approvals have declined over the first half of this year. Supply-side pressure in the retail sector should remain limited, with the increase in construction activity over the past few years largely related to the refurbishment and modest expansion of existing centres, and construction of 'large format' retail centres (occupied by a single retailer).

One risk facing the commercial property sector is that a reversal in the strong growth in investor demand might expose the market to a sharp repricing. In particular, inflows of foreign capital could slow or cease once global interest rates start to rise or if conditions were to weaken in foreign investors' home countries. The risk may also be exacerbated by further weakness in commercial property leasing conditions.

Another risk facing commercial property lending, especially lending for new property development, is tenancy risk – that is, the risk that the developer fails to secure tenants for their property and consequently struggles to meet their loan repayments. This risk is higher for developments with a lower precommitment rate. For office property, the strength in investment demand and relative weakness in tenant demand have contributed to a decline in the average precommitment rate (Graph 3.11), though available data for selected years from the early 1990s suggest it remains significantly higher now than it was in the lead-up to the severe market downturn in the early 1990s. By contrast, pre-sales currently remain high for residential property.

At this stage, the direct risk to Australian-owned lenders from these factors appears limited; liaison with industry suggests that office projects with lower precommitment rates are generally financed from developers' own equity (or that of their investment partners). Also, as discussed above, while some residential developments that are targeted at

Graph 3.11
CBD Office Tenant Precommitments*

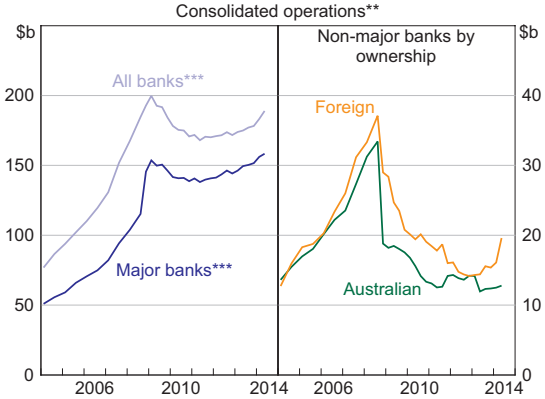


* Projects under construction that are expected to be completed in the next two years for which data on precommitments are available
Sources: Property Council of Australia; RBA

foreign investors comprise smaller-sized apartments that may be harder to sell in the secondary market, many of these are being constructed by foreign developers that are funded by equity or foreign banks. Still, a downturn in the markets for these properties could weigh on prices of nearby property and therefore affect banks' portfolios indirectly.

More broadly, the near-term risks to the domestic financial system from the commercial property sector appear modest. Although banks' commercial property exposures are increasing, they are a smaller share of banks' total assets than prior to the financial crisis. The increase in exposures has been driven by the major banks and Asian-owned banks, particularly for the retail, office and 'other' (including some property trusts, healthcare and education) property segments (Graph 3.12).

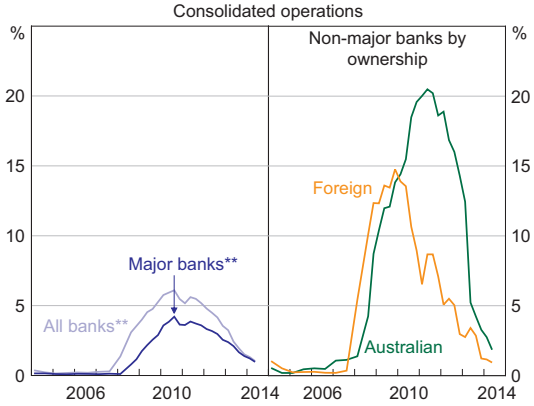
Graph 3.12
Banks' Commercial Property Exposures*
Consolidated operations**



* Quarterly from September quarter 2008; some banks report only on a semiannual basis
** Exposures in the June quarter 2014 boosted by bridging loans, some of which should be unwound in the September quarter 2014
*** Excludes overseas exposures
Sources: APRA; RBA

While a deterioration in future loan performance of commercial property cannot be ruled out, banks have been successful in recent years in reducing their non-performing commercial property loans. The impairment rate on banks' commercial property loans continued to decline over the past six months, and is now at its lowest level since 2007 (Graph 3.13). Part of the improvement in loan performance over recent years was likely to have been due to the

Graph 3.13
Commercial Property Impairment Rate*
Consolidated operations



* Quarterly from September quarter 2008; some banks report only on a semiannual basis
** Excludes overseas exposures
Sources: APRA; RBA

write-off or disposal of impaired loans; the recent strong investor demand in the commercial property market may have facilitated some of those disposals. The fall has been broadly based across property types, though it has been most pronounced in retail and residential property, which had the highest peaks in impairment rates.

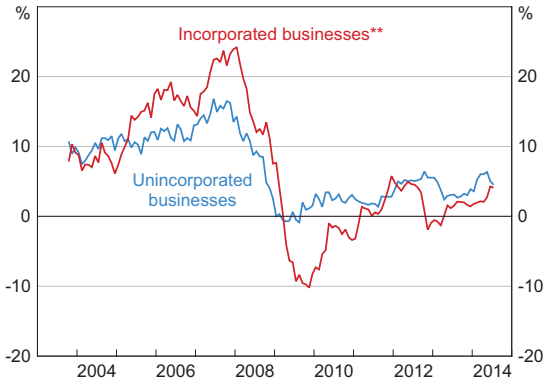
Business Sector

Funding and balance sheet position

Outside of commercial property, businesses' risk appetite generally remains subdued despite the low level of interest rates. In line with subdued non-mining investment, growth in intermediated business credit remains modest, though it has picked up over the past six months (Graph 3.14). Market-sourced funding also remains subdued (Graph 3.15). Net issuance of corporate bonds has been negative so far this year, while equity raisings have picked up a touch in recent quarters, due to an increase in initial public offerings.

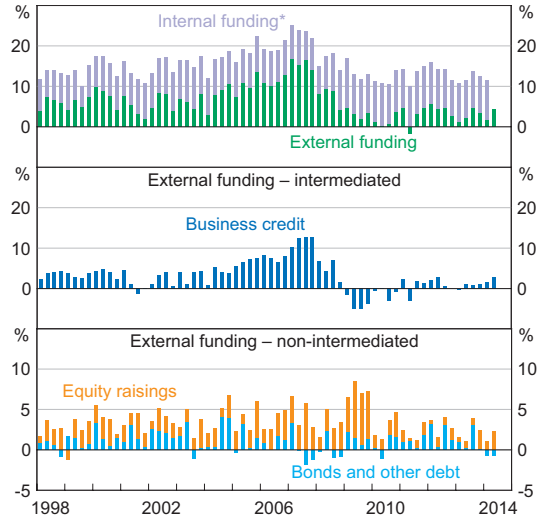
Corporate balance sheets appear to generally be in good shape following the sustained period of deleveraging after the financial crisis. The aggregate gearing ratio of listed corporations is near historical lows and, importantly, gearing ratios in the more

Graph 3.14
Business Credit Growth*
Six-month-ended, annualised



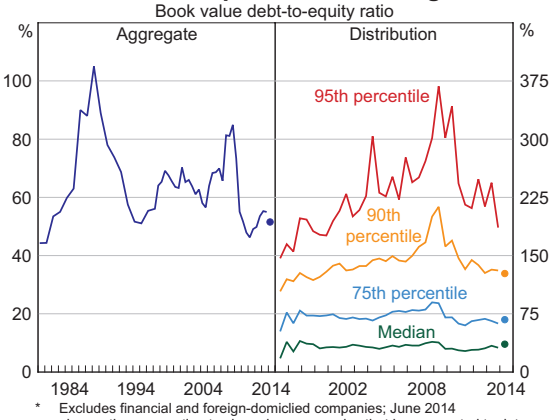
* Excludes securitised loans and lending to financial corporations
** Business credit extended during June 2014 was boosted by bridging loans, some of which were unwound in July 2014
Sources: APRA; RBA

Graph 3.15
Business Funding
Net change as a per cent to GDP



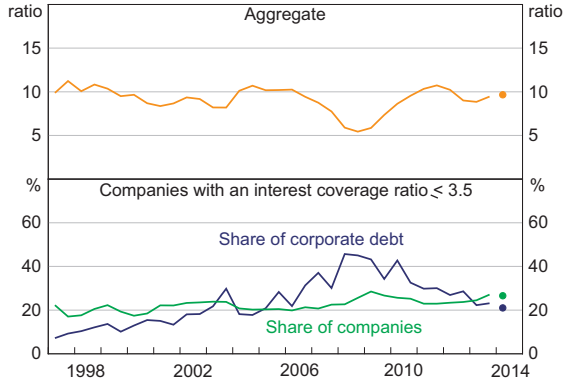
* March 2014 observation is the latest available
Sources: ABS; APRA; ASX; RBA

Graph 3.16
Listed Corporations' Gearing*
Book value debt-to-equity ratio



* Excludes financial and foreign-domiciled companies; June 2014 observations are estimates based on companies that have reported to date
Sources: Bloomberg; Morningstar; RBA; Statex

Graph 3.17
Listed Corporations' Interest Coverage*
Ratio of EBITDA to net interest expense, annual



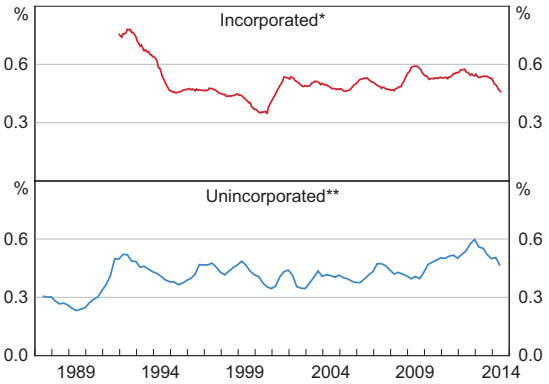
* Excludes financial and foreign-domiciled companies; June 2014 observations are estimates based on companies that have reported to date
Sources: Bloomberg; Morningstar; RBA

vulnerable upper tail of the distribution have fallen significantly from their peak in June 2009 (Graph 3.16). The aggregate interest coverage ratio of listed corporations remains fairly high, with companies' profits able to cover their net interest expenses around 10 times (Graph 3.17). Despite this, the share of listed corporations with a reasonably low coverage ratio (assessed here as 3½ or less) exceeds its pre-crisis average. At current levels of profitability, these companies could face some difficulty servicing their debts in a higher interest rate environment. Any risk to the Australian financial system is likely to be modest given the share of listed corporate debt owed by these companies has halved from its 2008 peak, to be currently around 20 per cent.

Loan performance and other indicators of business stress

Indicators of business stress have continued to improve over the past six months (Graph 3.18). Failure

Graph 3.18
Business Failures
Share of businesses in each sector, annual



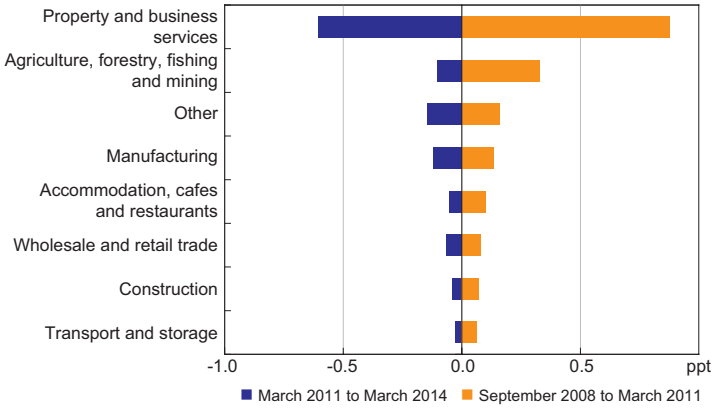
* Companies entering external administration
** Includes business-related personal bankruptcies and other administrations
Sources: ABS; AFSA; ASIC; RBA

rates for both incorporated and unincorporated businesses are well below their recent peaks in 2012. Among incorporated businesses the decline in the failure rate has been led by a fall in the number of failures in the services and construction industries.

As discussed in the chapter 'The Australian Financial System', the share of banks' business loans that is non-performing continues to fall. Data for the major banks suggest the improvement in loan performance over recent years has been broadly based across industries, but has been especially marked in the property and business services (mostly commercial property), and manufacturing industries (Graph 3.19). The agriculture, forestry, fishing and mining category also contributed to the previous increase in non-performing loans, although less than half of the deterioration has currently been reversed.

One potential risk to future loan performance is that banks might compete for the limited demand from businesses for intermediated credit by easing lending standards. As discussed in the chapter 'The Australian Financial System', while pricing competition between banks in extending loans to large corporations has intensified, so far there has not been a broad relaxation in non-price terms for corporate loans.

Graph 3.19
Non-performing Loans by Industry*
Contributions to changes in the business non-performing loan ratio



* Major banks; consolidated global operations; December 2008, June 2011 and June 2014 for CBA
Sources: Banks' Pillar 3 Reports; RBA

Box C

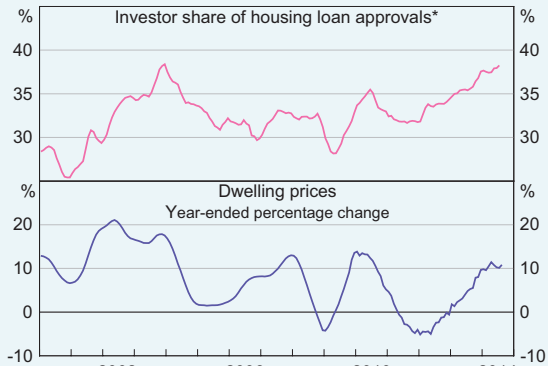
Households' Investment Property Exposures: Evidence from Tax and Survey Data

The characteristics and risk profile of households' investment property exposures warrant close examination given the recent strength of investor demand for housing. Investor housing loan approvals currently account for almost 40 per cent of the value of total housing loan approvals, similar to their share in the early 2000s, a period of rapid housing price inflation and strong investor demand (Graph C1). As a result, lending to households for property investment currently accounts for around 20 per cent of banks' total lending. This box reviews households' investment property exposures and resulting risk factors, using data from the Australian Taxation Office (ATO) up to 2011/12 and the 2010 Household, Income and Labour Dynamics in Australia (HILDA) survey – the latest data available from both sources.

Investor housing lending typically has attributes that differ from those of owner-occupier loans and that affect its risk profile.

- Because interest expenses on investment property are tax-deductible, investors have stronger incentives than owner-occupiers to take out interest-only loans. In Australia, around 64 per cent of loan approvals to investors are interest-only loans compared with 31 per cent to owner-occupiers. The typical interest-only period on these loans is around five years, though up to 15-year periods are also available. During this period, the loan principal is usually not being paid down, although liaison with banks suggests that some borrowers with these loans do make discretionary repayments. If the loan balance is not declining via principal repayment, it is more likely that it will exceed the property value (be in negative equity) if housing prices should fall. There is also a risk that the borrower could face difficulty servicing the higher (principal and interest) repayments after the interest-only period ends. To reduce this risk, banks assess borrowers' ability to service the higher repayments.
- Investor loans tend to have lower loan-to-valuation ratios (LVRs) at origination compared with owner-occupier loans. Part of this is likely to be driven by investors seeking to avoid the cost of lenders mortgage insurance, which is typically required for loans with an LVR greater than 80 per cent. Some institutions also have lower maximum LVRs for investor loans, partly to offset the risks from lower repayments noted above.

Graph C1
Investor Lending and Housing Prices



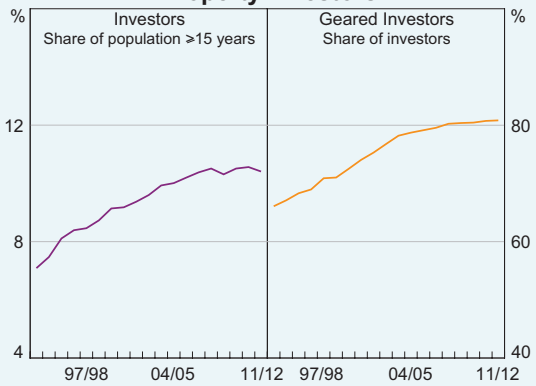
* Three-month moving average; excludes construction, includes refinancing
Sources: ABS; RBA; RP Data-Rismark

According to ATO data, the share of the population aged 15 years and over with an investment property grew steadily through the 1990s and early 2000s, before stabilising in the late 2000s at around 10 per cent (Graph C2).[1] Over the same period, the share

1 Property investors are defined as individuals who declare a net rental profit or loss on their individual tax return. The data do not distinguish between rental receipts/deductions from residential and commercial property. Property investments held in self-managed superannuation funds are not captured in these data.

of these investments that were geared – where the investor claimed interest deductions – increased steadily before levelling off at a little over 80 per cent. Given the sharp increase in investor loan approvals over 2013 and 2014 to date, especially in New South Wales and Victoria, the share of investors is likely to have increased further of late.

Graph C2
Property Investors

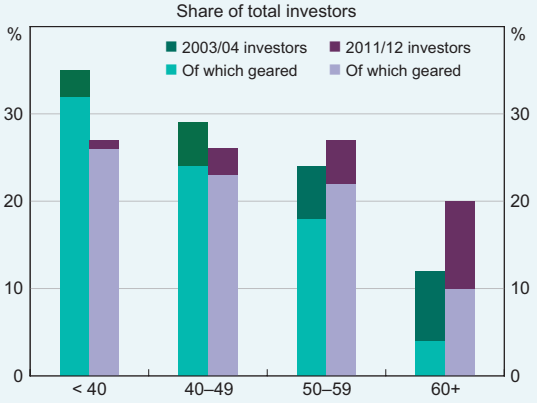


Sources: ABS; ATO; RBA

While aggregate measures of property investment and gearing increased only modestly from the early 2000s to 2011/12, there were some notable changes in the distribution of investment and gearing across age groups. In particular, the share of property investors aged 60 years and over increased significantly, to account for around one-fifth of investors in 2011/12 (Graph C3). This shift in the distribution of investors towards older individuals reflects both the ageing of the population as well as an increase in the extent of investment property ownership within this age group. Individuals in this group also became more likely to have a mortgage against their property investment, with around half of these investors claiming interest deductions from their total incomes, though borrowing remained far more prevalent among younger investors, with almost all investors below the age of 40 years being geared.

ATO data also show that the incidence of property investment and the incidence of geared property

Graph C3
Age Distribution of Property Investors*



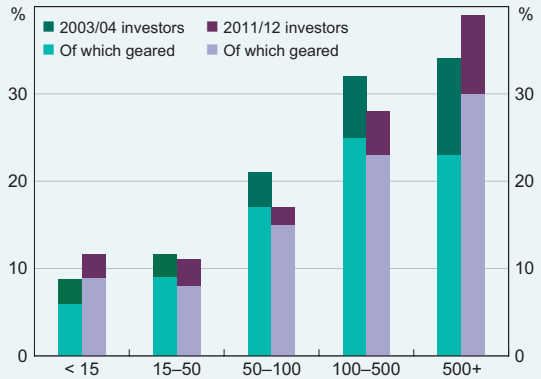
* Individual sample file data; age groups for 2003/04 differ slightly
Source: ATO

investment both increase with total income (Graph C4).[2] While the incidence of investment fell between 2003/04 and 2011/12 for people with total incomes between $15 000 and $500 000, it increased for those with very low incomes and those with very high incomes. For investors with very low incomes (below $15 000), individuals aged 60 years or older comprised a larger share in 2011/12 than in 2003/04, as an increasing number of baby boomers owning investment properties entered retirement.[3] These investors may be more capable of servicing any investment property debt than their younger low-income counterparts. In particular, even though their total income (for tax purposes) is low, they are likely to have non-taxable sources of income (such as pension streams and drawdowns from superannuation funds) to draw on.

2 Total gross (before-tax assessable) income includes wages and salaries, net rental income, net capital gains, income derived from financial assets and certain other income items. It excludes non-taxable sources of income such as pension streams and drawdowns from superannuation funds. The average total income per taxpayer was around $55 000 in 2011/12, excluding these non-taxable sources.

3 The increase in lower-income individuals aged 60 years and over was also partly driven by changes to taxation of superannuation in July 2007. Total income as recorded on the individual's tax return fell for those aged 60 years and over after the changes, because some superannuation benefits that had previously been taxed became tax-free and are therefore no longer recorded in total income.

Graph C4
Property Investment and Gearing
Share of taxpayers, by total income ($'000)



Source: ATO

The HILDA survey provides further insight into the finances and total debt outstanding of geared property investors. After-tax (disposable) income can also be calculated, which is arguably a better measure than total gross income (as in the ATO data) for assessing the ability of borrowers to service their debt. Based on these data, investor households with incomes in the top 20 per cent of the income distribution owe the bulk of the investor housing debt and over a quarter of total housing debt outstanding. These households appear fairly well placed to service their debt: the highest income earners are typically using less than 30 per cent of their income to service their total property debt, and more than half are ahead of schedule on their owner-occupier mortgage repayments (Table C1).[4]

At the other end of the income distribution, the HILDA survey suggests that households in the bottom 20 per cent account for just 2 per cent of investor housing debt. However, these investors typically have a much higher debt-servicing burden compared with their higher-income counterparts. Consistent with the tax data, the HILDA survey finds that one-quarter of these geared low-income property investors are retirees. HILDA data suggest that although the debt-servicing burden of retired low-income investor households is high, these investors typically have built up more liquid assets to draw on should they fall into difficulty servicing their property debt, than their younger low-income counterparts.

Table C1: Investor Housing Leverage and Debt Serviceability
Households with investor housing debt, by disposable income quintile, 2010

Income quintile	Share of investor housing debt[a]	Share of total housing debt[b]	Median total housing debt repayments to disposable income ratio	Ahead of schedule on owner-occupied housing debt repayments
	Per cent	Per cent	Per cent	Per cent of households in each income quintile
1 (lowest)	2	1	127	19
2	7	2	49	17
3	12	5	42	49
4	20	10	33	47
5 (highest)	60	28	28	54

(a) Sum does not total 100 due to rounding
(b) Total housing debt includes debt on investment properties and any owner-occupier housing debt
Source: HILDA Release 12.0

4 Debt servicing in the HILDA survey is measured as 'usual repayments'. For an amortising loan it is likely to capture scheduled principal and interest repayments as well as any regular excess repayments made by the borrowers.

4. Developments in the Financial System Architecture

The G20 and the Financial Stability Board (FSB) have continued to work in recent months on key aspects of the four core financial regulation reform areas: building resilient financial institutions; addressing 'too big to fail'; responding to shadow banking risks; and making derivatives markets safer. Substantial progress has been made in advancing reforms across these four areas ahead of the G20 Leaders' Summit in Brisbane in November. Challenging areas remain, however, particularly on aspects of 'too big to fail' and derivatives markets reform. With Australia as G20 Chair for 2014, the Reserve Bank, along with the Australian Treasury, has been contributing to these efforts in recent G20 and FSB meetings, including the meetings held in Cairns in September. Progress has also been made in other reform areas, including financial benchmarks.

Domestically, the Financial System Inquiry released its *Interim Report* in July. The *Interim Report* raised a range of policy issues across many aspects of the financial system and regulation, though overall it gave a positive assessment of the current financial regulatory framework. Following on from its initial comprehensive submission, the Bank made a second submission to the Inquiry, covering areas related to financial stability and the responsibilities of the Bank, particularly for the payments system. Agencies on the Council of Financial Regulators (CFR) continued to progress domestic reforms. These include proposed new standards by the Australian Prudential Regulation Authority (APRA) on the supervision of financial conglomerates, and a government consultation paper, released by the Treasury, on central clearing of interest rate derivatives denominated in Australian dollars.

International Regulatory Developments and Australia

Building resilient financial institutions

As discussed in previous *Reviews*, much of the policy development work in this reform area (namely the Basel III capital and liquidity reforms) has been completed, and banks globally and in Australia continue to move towards meeting the new requirements. Nonetheless, the Basel Committee on Banking Supervision (BCBS) is working on several outstanding elements of its reforms in this area and will, by the Leaders' Summit in November:

- finalise the Net Stable Funding Ratio (NSFR), following a consultation earlier in the year. The NSFR is a long-term liquidity requirement which aims to make banks' funding structures more resilient.
- set out its plan to address excessive variability in banks' risk-weighted asset (RWA) calculations, to improve consistency and comparability in bank capital ratios. The BCBS has been considering measures such as improved disclosure and narrowing the modelling choices available for banks to calculate RWAs.

In addition to Basel III and related work, the BCBS has over the past six months proposed or finalised measures to enhance aspects of the broader Basel framework for bank supervision and risk management.

- In April, the BCBS published its finalised framework for measuring and controlling banks' large exposures to a single counterparty. Taking effect from 2019, this framework limits a bank's

total exposures to a single counterparty to 25 per cent of that bank's Tier 1 capital. A tighter limit of 15 per cent of Tier 1 capital applies to exposures between global systemically important banks (G-SIBs), to reduce the risk of contagion between them.

- In June, the BCBS released its guidelines for dealing with weak banks as well as updated principles for effective supervisory colleges. It also released proposals to change Basel Pillar 3 disclosure requirements.
  - The guidelines for dealing with weak banks emphasise the need for: an effective supervisory framework; supervisors who can detect problems early and act quickly; detailed preparation, including resolution techniques and public disclosure strategies that minimise contagion; and close collaboration with supervisors in other jurisdictions. The consultation ended in mid September.
  - Supervisory colleges are international groupings of supervisors of the parent company and key branches or subsidiaries of global banking groups such as G-SIBs. The key changes to the principles include greater emphasis on: collaboration and information-sharing among college members; consistent feedback from the home and host supervisors to the institution; and the relationship between a G-SIB's college and its crisis management group.
  - Pillar 3 measures aim to enhance market discipline on banks, to complement Basel minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2). The proposed revisions to the Pillar 3 disclosure regime aim to enhance comparability across banks, with a particular focus on ensuring transparency of the internal models used by banks to calculate minimum capital requirements. The consultation ends in October.

In September, APRA outlined its proposed implementation of BCBS disclosure requirements in several areas. The proposals are based on the relevant Basel framework but with modifications for Australian circumstances.

- In line with the BCBS' timetable, it is proposed that a disclosure requirement for the Basel III leverage ratio commences from January 2015 for the five Australian banks using the internal ratings-based approach to credit risk. These banks are already reporting their leverage ratios to APRA as part of the BCBS' monitoring process.
- It is proposed that authorised deposit-taking institutions (ADIs) subject to the Liquidity Coverage Ratio (LCR) meet LCR disclosure requirements from January 2015, when the LCR becomes effective in Australia. The LCR, which is the BCBS' short-term liquidity requirement, will apply to the larger, more complex ADIs.
- From January 2015, it is proposed that the four major Australian banks must disclose 12 indicators used in the annual G-SIB assessment exercise conducted by the BCBS. While not currently identified as G-SIBs, these four banks have been providing data to the BCBS as part of its annual G-SIB assessment exercise, and meet the size threshold for disclosing data under the G-SIB framework.

APRA also proposed minor amendments to the ADI capital adequacy and public disclosure prudential standards, to remedy minor deviations from the Basel framework that were identified during the BCBS' recent review of Australia's compliance with the Basel capital framework.

Systemically important financial institutions (SIFIs)

A continuing high priority for the FSB has been to address the 'too big to fail' issue posed by SIFIs. Among several ongoing elements of this work, attention has recently focused on developing two aspects: the proposal for total loss-absorbing capacity (TLAC), a variant of which was discussed

in the previous *Review,* and a framework for cross-border recognition of resolution actions. TLAC initiatives aim to ensure that G-SIBs have enough loss-absorbing capacity in a stress event, so they can be resolved in an orderly way that minimises the effect on financial stability and avoids using taxpayer funds for recapitalisation. It is envisaged that TLAC requirements could in part be met through issuance of loss-absorbing debt instruments. Private creditors holding this debt would be 'bailed in' (i.e. their debt claim written down or converted into equity) when a G-SIB approaches resolution.

The FSB is leading the work on finalising the TLAC proposal for presentation to the G20 Leaders' Summit in November. A consultation document is planned to be released in time for the Summit, and the proposal will be subject to a quantitative impact assessment before any final measure is agreed. TLAC requirements are intended to apply to G-SIBs only, so they will not directly apply to Australian banks. However, as G20 Chair, the Australian authorities are working with the FSB towards finalising a proposal which takes into account differing financial system characteristics and legal frameworks, and emphasises financial stability objectives. The TLAC proposal was one of several international regulatory developments discussed at recent CFR meetings.

Establishing a framework for the orderly resolution of large, often complex, banks with sizeable operations in multiple jurisdictions is another priority of the G20 and the FSB. The FSB will soon release a draft consultative report with recommendations for contractual and statutory approaches to ensure cross-border recognition of resolution actions, including bail-in of debt issued under foreign law, as well as temporary stays on early termination rights when a firm enters resolution. As part of this, the financial industry is developing a draft protocol that would support the enforceability of temporary stays. At its recent meeting in Cairns, the FSB discussed the need for regulatory measures to promote broad adoption of the protocol.

Work has also continued internationally on other elements of the SIFI framework.

- Strengthening resolution regimes continues to be a key component of the policies to address 'too big to fail', with jurisdictions encouraged by the FSB to implement its *Key Attributes of Effective Resolution Regimes for Financial Institutions* (*Key Attributes*). While implementation has focused mainly on banks, the *Key Attributes* also applies to other types of financial entities that could be systemically significant or critical if they fail. To provide further guidance for authorities implementing specific elements of the *Key Attributes*, especially in relation to non-bank financial institutions, the FSB will publish in mid October annexes to the *Key Attributes* on insurance firms, financial market infrastructures, treatment of client assets, and information sharing. In addition, consultation papers will be published on cooperation and information sharing between G-SIB home and host authorities, and on the identification of critical functions in global systemically important insurers (G-SIIs).
- In April, the FSB released a progress report on enhanced supervision, which describes the changes in supervisory practices since the financial crisis and identifies areas where more work is needed. It also released a framework for assessing risk culture, which takes into account feedback received on an earlier consultative document. These two reports are part of the FSB's ongoing efforts to reduce the risks posed by SIFIs through more intense and effective supervision. Consistent with this, the FSB also recently commenced a 'thematic' peer review, in consultation with the BCBS, on supervisory frameworks and approaches applying to SIFIs.
- In July, following industry feedback on earlier proposals and an initial impact assessment, the International Association of Insurance Supervisors released amended proposals for the design and calibration of a 'basic capital requirement' (BCR) for G-SIIs. A final proposal is due to be issued ahead of the November Summit,

with confidential reporting to supervisors to commence in 2015. The BCR will act as the foundation for the higher loss-absorbency requirement that will apply to G-SIIs, which is to be developed in 2015, based on 10 high-level principles released in September.

- The FSB and the International Organization of Securities Commissions (IOSCO) are continuing their work on developing methodologies for identifying non-bank non-insurer global SIFIs. Following industry feedback from a consultation earlier in the year, a second consultation document is planned for release around the end of the year.

Domestically, the CFR continues to work on examining Australia's resolution and crisis management arrangements. At its March 2014 meeting, the CFR adopted a formal crisis management training framework, which incorporates regular training exercises and testing of the CFR agencies' ability to respond and coordinate actions in a crisis situation. The first exercise under the new framework was a workshop in July to review and familiarise CFR agency staff with the detailed arrangements developed for responding to distress in a locally incorporated ADI. Crisis management arrangements encompassing the New Zealand operations of Australian banks are an ongoing focus of the work under the Trans-Tasman Banking Council, which met in July.

Shadow banking

The FSB and other standard-setting bodies continue to work on addressing the risks posed by shadow banking entities and activities such as money market funds (MMFs), finance companies and securities lending. As noted in the previous *Review*, many of the recommendations to reform the oversight and regulation of shadow banking have already been released by the FSB, the BCBS and IOSCO, with the focus now on implementation. Steps have been taken recently to monitor implementation, including through several peer reviews.

- The FSB has conducted an information-sharing exercise as part of its high-level framework for shadow banking entities released in 2013. The results of this process will inform an FSB peer review of implementation in 2015. The Bank provided information on Australia's relatively small shadow banking sector. (For a discussion of developments in Australia's shadow banking sector, see the chapter 'The Australian Financial System'.)
- IOSCO recently launched a peer review on the implementation of its 2012 recommendations relating to MMFs. Separately, in the United States, which has the largest MMF market, the Securities and Exchange Commission agreed in July to implement significant MMF reforms, in particular the requirement of a 'floating net asset value' structure for institutional prime MMFs. These reforms help to address the risks to US financial stability potentially arising from MMF investor runs. Requirements for enhanced diversification, disclosure and stress testing have also been strengthened.
- IOSCO has also initiated a peer review on the adoption of its recommendations, also released in 2012, for aligning incentives in securitisation, including risk retention requirements. The problems associated with complex securitisation products with misaligned incentives for issuers were highlighted internationally during the crisis. In a related development, a new BCBS-IOSCO taskforce, co-chaired by the Australian Securities and Investments Commission (ASIC), is examining global securitisation markets, with the aims of identifying obstacles to the development of sustainable securitisation and helping to develop simple and transparent securitisation structures.
- Domestically, in April, APRA proposed changes to its prudential framework for securitisation. The proposed framework is based on simple, low-risk structures that make it straightforward for ADIs to use securitisation as a funding tool and for capital relief. This, in turn, should help reduce industry complexity and improve ADI risk allocation and management.

Policy development work on shadow banking is continuing in several areas.

- In September, the FSB progressed elements of its framework to reduce risks arising from securities financing transactions (such as repurchase agreements), a key source of leverage for the shadow banking sector. These elements comprise: a revised regulatory framework on haircuts for non-centrally cleared securities financing transactions; and consultative proposals to be issued on numerical haircut floors that would apply to non-bank to non-bank transactions. The FSB is also developing standards and processes for global data collection and aggregation for securities financing transactions, which will be released for consultation before the Leaders' Summit.

  Related to this, at its September meeting the FSB also discussed a work plan to examine possible financial stability issues related to collateral re-use (so-called re-hypothecation) and potential harmonisation of regulatory approaches in this area.

- The BCBS is continuing its work on addressing the risks from banks' interactions with shadow banks. The BCBS' finalised framework for large exposures, discussed above, also applies to counterparties that are shadow banks.

The G20 and the FSB remain engaged on the potential for risk to flow to shadow banking, given the tightening of bank regulation. In this respect, the FSB's annual *Global Shadow Banking Monitoring Report* (next due for release in November) assists in monitoring developments, as do review processes in individual jurisdictions such as Australia, where the Bank provides an annual update on Australia's shadow banking sector to the CFR. Review and monitoring efforts are also occurring on a regional basis, with FSB Regional Consultative Groups for Asia and the Americas releasing reports in August on shadow banking in their regions. The Bank, along with the Treasury, contributed to the report for Asia.

Over-the-counter (OTC) derivatives markets and financial market infrastructures

In April, the FSB released its latest progress report on the implementation of OTC derivatives market reforms agreed by the G20. The FSB noted that there had been continued progress in implementing these reforms. Most jurisdictions have made necessary changes to legislative frameworks and are developing or bringing into force detailed rules where required. Market participants' use of centralised infrastructure continues to increase, and jurisdictions (including, since April, the European Union) have further encouraged this by proposing or implementing central clearing requirements. Within this overall picture of progress, results are still uneven across particular reforms. Broadly, there are clear signs of progress in the implementation of trade reporting, capital requirements and central clearing. However, implementation of reforms to promote trading on exchanges or electronic trading platforms is taking longer.

More generally, the cross-border issues arising from these reforms continue to require attention. As discussed in the previous *Review*, a G20 goal is to allow OTC derivatives market regulators to defer to each other when it is justified by the quality of their regulatory and enforcement regimes. While some progress has been made in this area, further work on equivalence and substituted compliance assessments is needed. To encourage progress, in September the FSB published a report on jurisdictions' current processes for deferring in this way. As well as publicising cases where further progress could be made, this report helps jurisdictions understand what their counterparts require to assess a regime as equivalent. Also in September, the OTC Derivatives Regulators Group, which brings together relevant regulators from several jurisdictions, including Australia, issued a further report on addressing cross-border implementation issues. For the Leaders' Summit, the group will also report on how it intends to resolve

remaining issues together with a timetable for implementing the solutions.

In Australia, authorities continue to implement OTC derivatives market reforms, with necessary consultation between agencies often conducted through the CFR.

- In their third report on the Australian OTC derivatives market, published in April 2014, the regulators (APRA, ASIC and the Bank) recommended introducing mandatory clearing requirements for Australian dollar-denominated interest rate derivatives between internationally active dealers. This recommendation in part reflects that the Australian dollar interest rate derivatives market is the largest and most systemically important component of the OTC derivatives market in Australia and that it could also be subject to mandatory clearing requirements in other jurisdictions in the future. The government has since consulted on proposals consistent with these recommendations. This consultation builds on earlier proposals by the government, based on regulators' recommendations in 2013, to impose a similar mandatory clearing requirement on interest rate derivatives denominated in US dollars, euro, British pounds and Japanese yen. As discussed in the chapter 'The Australian Financial System', even without a mandatory clearing requirement in Australia, most new interdealer interest rate derivatives trades are already being centrally cleared. This reflects that pricing and liquidity are more favourable where trades are centrally cleared, in part because mandates are already in place in some other jurisdictions.
- Another focus of the April 2014 report was whether a mandatory clearing requirement should be extended to smaller ('non-dealer') participants in the Australian OTC derivatives market. In their report, the regulators noted that even though requiring central clearing by non-dealers might help reduce systemic risk, the benefits may not outweigh the costs. Accordingly, they recommended that mandatory central clearing of OTC derivatives should not be extended to non-dealers at present, but committed to keep the matter under review.
- Requirements to report OTC derivatives transactions continue to be phased in. As of April, all financial entities with greater than $50 billion notional principal of OTC derivatives outstanding have been required to report transactions to trade repositories. Smaller financial entities will start reporting in 2015. In addition, in September DTCC Data Repository (Singapore) (DDRS) became the first trade repository to be licensed to operate in Australia. Under the licensing regime, DDRS is overseen by ASIC and subject to stringent standards based on the *Principles for Financial Market Infrastructures* (PFMIs). However, ASIC is also placing a high degree of reliance on the Monetary Authority of Singapore, which is DDRS' home supervisor.

Standard-setting bodies have also recently finalised elements of international policy work relevant to OTC derivatives markets.

- In April, the BCBS issued a final standard for capital requirements for bank exposures to central counterparties (CCPs). This framework supports broader policy efforts advanced by the G20 and the FSB, particularly those noted earlier promoting central clearing of standardised OTC derivatives contracts. The final standard includes, among other requirements, a single approach for calculating capital requirements for a bank's exposure arising from its contributions to the mutualised default fund of a qualifying CCP and an explicit cap on the capital charges applicable to those exposures. The standard will take effect from 2017 (interim requirements released earlier will continue to apply until that time).
- In September, IOSCO launched a consultation on risk mitigation standards for non-centrally cleared OTC derivatives. While a key plank of G20 reforms has been to encourage central clearing of standardised OTC derivatives, a substantial proportion of OTC derivatives are not standardised and hence not suitable for central

clearing. The proposed standards complement the BCBS-IOSCO margin requirements framework for non-centrally cleared derivatives released in September 2013. The proposed standards aim to promote legal certainty and facilitate timely resolution of disputes between counterparties by, among other things, establishing requirements around the timely confirmation of trades, as well as the process of valuing and reconciling trades between two counterparties. The consultation closes in mid October.

- Following an earlier consultation, the FSB released a report in September on how information from trade repositories could be aggregated and shared. Such data can be used by authorities to monitor global trends in OTC derivatives markets, and in particular the risks arising from these markets.

In May 2014, a taskforce established by IOSCO and the Committee on Payment and Settlement Systems – since renamed the Committee on Payments and Market Infrastructures – released a report on jurisdictions progress in implementing the PFMIs. The PFMIs were issued in 2012 by the two standard-setting bodies to update, harmonise and strengthen the pre-existing standards for financial market infrastructures, particularly in light of their increasing use in the context of the reforms noted above. The taskforce, on which the Bank is represented, was established to help ensure the consistent implementation of the PFMIs across its member jurisdictions. In its progress report, the taskforce assessed further steps taken by 28 jurisdictions to incorporate the PFMIs within their respective regulatory frameworks. It concluded that implementation was well advanced for the regulatory frameworks for CCPs, trade repositories and payment systems. Several jurisdictions (including Australia) had completed their implementation measures. The taskforce has now commenced a more detailed assessment of the implementation of the PFMIs, focusing initially on CCPs and trade repositories in the three largest jurisdictions (the United States, the European Union and Japan). The taskforce aims to complete assessments of all three jurisdictions ahead of the G20 Summit in November.

Other developments

International bodies continue to work on regulatory issues beyond the core areas noted above, both to address gaps revealed by the crisis, and as part of ongoing efforts to enhance regulatory frameworks and arrangements.

Work has been ongoing to review and reform financial benchmarks following concerns about their integrity.

- Through an Official Sector Steering Group (OSSG), of which the Bank is a member, the FSB has been examining the setting of interbank and other financial benchmark rates. The OSSG assessed the feasibility and viability of existing and alternative benchmark rates, taking into consideration input from a related group of private sector participants. Based on this work, the FSB released a report in July which sets out proposals and timelines for the reform and strengthening of existing major interest rate benchmarks (LIBOR, EURIBOR and TIBOR) and for additional work to develop and introduce alternative risk-free benchmarks. The Bank also co-chairs a group looking at foreign exchange benchmarks: the FSB will release a report with recommendations by the end of September.
- As part of the FSB's work, an IOSCO group (co-chaired by ASIC) has been reviewing the implementation of IOSCO's *Principles for Financial Benchmarks* by the administrators of the three major interest rate benchmarks. In July, IOSCO released its review report which found that all three administrators had made significant progress in implementing the majority of IOSCO's principles, which cover overall oversight, governance, transparency and accountability. This has improved the quality and integrity of the benchmarks. IOSCO did note, however, that further work was needed in the areas of benchmark design, data sufficiency and transparency of benchmark determinations.

Over the past six months, efforts have continued to reduce the mechanistic reliance on credit rating agency (CRA) ratings.

- In May, the FSB released a peer review of members' progress in implementing the FSB's *Principles for Reducing Reliance on CRA Ratings*. While some progress has been made, challenges remain. In particular, identifying alternative standards for assessing creditworthiness has proven difficult, as has the removal of ratings from international risk-based prudential frameworks for banks and insurers. The report recommends that national authorities continue to work with market participants to strengthen internal credit assessment processes and develop alternative measures of creditworthiness, so that CRA ratings are only one input into credit assessments.
- In June, IOSCO released for consultation *Good Practices on Reducing Reliance on CRAs in Asset Management*. While acknowledging that external credit ratings are useful inputs into internal credit assessments, the report outlines practices which encourage internal credit assessments that are not solely based on external credit ratings. These practices include: internally assessing the credit quality of financial instruments; and understanding the methodologies used to obtain the external credit rating. Regulators could also encourage investment managers to disclose how external credit ratings are used in internal credit assessments.

In October, the FSB, in collaboration with the International Monetary Fund and the Organisation for Economic Co-operation and Development, is expected to report on the cross-border consistency and global financial stability implications of planned or implemented domestic structural banking reforms such as the 'ring-fencing' proposals by some jurisdictions. Many of these measures seek to address the domestic 'too big to fail' problem, but can also affect financial institutions and markets in other countries.

At its September meeting, the FSB agreed that it will prepare from 2015 a consolidated annual report to the G20 on the implementation of the reforms and their effects. This will help improve accessibility and comparability of information and thereby promote timely and consistent implementation of agreed reforms. The FSB and international standard-setting bodies will also publish information in 2015 summarising their processes for policy development and implementation reviews. This should enhance transparency and improve the public understanding of the work of these bodies, and how they go about executing their mandates.

In recent months, the FSB has been reviewing the structure of its representation, and proposals are being developed that, in part, respond to the increasingly important role of emerging markets in the global economy and the financial system. Australian authorities, including the Bank, provided input to the review, and the FSB's proposed approach was discussed at both the FSB and G20 meetings in September; a report is due to the Leaders' Summit.

Other Domestic Regulatory Developments

Financial System Inquiry

The *Interim Report* of the Financial System Inquiry – the first comprehensive review of the Australian financial system in 17 years – was released in mid July. A broad range of policy options were put forward, with the efficacy of the consumer disclosure regime and the superannuation system in focus. The *Interim Report* gave broad support for the existing regulatory architecture and it acknowledged the effectiveness of existing coordination arrangements under the CFR. However, it did highlight some areas for improvement, including some potential measures to promote increased coordination among regulators. In addition, the *Interim Report* raised the option of formalising the role of the CFR within statute, as well as expanding its membership and responsibilities. Several options were raised to mitigate systemic risk and address any perceptions that some entities are 'too big to fail', including strengthening resolution and pre-planning arrangements to handle financial

distress, and separating or 'ring-fencing' certain aspects of banks' businesses.

To complement its comprehensive initial submission to the Inquiry, the Bank provided a targeted *Supplementary Submission*, focusing on the issues raised in the *Interim Report* that directly relate to financial stability and the responsibilities of the Bank. It gave broad support for a number of the themes raised in the *Interim Report*, including the call for strong, independent and accountable regulators and the consideration of impediments to the provision of small business finance. The *Supplementary Submission* also emphasised the following points.

- Reforms over the past decade or so have been effective in improving competition and efficiency in payment systems. The Bank's current approach to payment system regulation, as overseen by the Payments System Board, remains appropriate. However, there may be scope to clarify how purchased payment facilities are regulated.
- The CFR has worked well and cooperatively under its existing informal arrangements and charter. If there is appetite to formalise arrangements and/or increase the responsibility of the CFR, care should be taken to ensure that the existing powers and independence of each member agency are not eroded, and that the emphasis on cooperation remains.
- Any proposed new measures to enhance system stability should account for the work already underway – globally and domestically – to improve the resilience of the financial system. This is a challenging area for policy development; hence, care should be taken in implementing new policies and consideration given to how these changes may interact with pre-existing policies.
- Superannuation assets should be managed in the best interests of members. Measures to lower costs and fees, optimise liquidity management and limit leverage should be considered.
- The supply of mortgage finance in Australia is ample. Therefore, any proposed policies that could further increase that supply should be subject to rigorous analysis of their costs, benefits to consumers and risks to financial stability.

The Inquiry will provide a final report to the Treasurer by November.

Other developments

Following feedback on earlier proposals, APRA released its planned supervisory framework for financial conglomerate ('Level 3') groups in August. This framework draws on the Joint Forum's revised *Principles for the Supervision of Financial Conglomerates* released in September 2012, and will provide APRA with a better understanding of the risks to which APRA-regulated institutions within Level 3 groups are exposed, particularly from non-APRA-regulated activities. APRA responded to issues raised by industry on all four components of the framework: group governance, risk exposures, risk management and capital adequacy. APRA listed eight conglomerate groups which will become subject to the Level 3 framework when it is implemented. However, these groups, which control around 80 per cent of the assets of all APRA-regulated institutions, will not need additional capital to meet the planned new requirements. The framework will be finalised by APRA after the government responds to the recommendations of the Financial System Inquiry.

As discussed in 'The Australian Financial System' chapter, APRA recently released for consultation a draft *Prudential Practice Guide – Residential Mortgage Lending*. Since residential mortgages make up a significant proportion of Australian banks' credit exposures, monitoring housing lending standards is an important part of APRA's supervisory role. In its draft document, APRA has provided guidance on risk management practices for housing lending, including: addressing the risks associated with residential mortgage lending in the bank's risk management framework; considering loan origination channels and their associated risks; ensuring portfolio limits for riskier loans are observed; valuing underlying collateral in an appropriate way; and undertaking robust stress testing.

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HILDA

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