FINANCIAL STABILITY REVIEW

March 2009

Reserve Bank

CONTENTS

Financial Stability Review enquiries

Media Office
Telephone: (612) 9551 9721 or 9551 9731
Facsimile: (612) 9551 8033
E-mail: rbainfo@rba.gov.au

The material in this *Financial Stability Review* was finalised on 25 March 2009.

The *Financial Stability Review* is published semi-annually in March and September.
It is available on the Reserve Bank's website (www.rba.gov.au).

The *Review* uses data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, which was initiated and is funded by the Australian Government Department of Families, Community Services and Indigenous Affairs (FaCSIA), and is managed by the Melbourne Institute of Applied Economic and Social Research (MIAESR). The findings and views reported in this publication should not be attributed to either FaCSIA or the MIAESR. For copyright and disclaimer notices relating to data in the *Review* see the Bank's website.

ISSN 1449-3896 (Print)
ISSN 1449-5260 (Online)

Overview

The global financial system has continued to experience significant stress. Confidence in many large global financial institutions has been fragile, investors have been highly risk averse, and banks, businesses and households have been looking to reduce their leverage and restructure their balance sheets. Not surprisingly in this environment, many major economies are contracting, credit growth has slowed, and lending standards have been tightened significantly in many countries.

A notable feature of the current crisis has been a marked increase in the price of risk, after risk had been underpriced in many markets for a number of years. This repricing of risk has resulted in large falls in the prices of many financial assets, often by considerably more than can be explained by changes in the expected underlying cash flows. A number of the major international banks have been particularly affected given that, over recent years, they had increased their holdings of securities with carrying values that are directly affected by market pricing of risk. While this worked to these banks' advantage when risk premiums were being compressed in earlier years, it has greatly amplified the scale of the current adjustment.

The difficulties in the global financial system have led to substantial public-sector support being provided to financial institutions and markets in a number of countries. These actions have helped support depositor confidence and have ensured that banks are able to tap capital markets to meet their funding needs. They have also helped improve the functioning of short-term money markets. Notwithstanding this, investors have remained concerned about the underlying balance-sheet strength of many banks. Credit spreads remain elevated, the market value of many banks' equity is significantly below book value, and there is continuing uncertainty about the quality and valuation of banks' assets. In this environment, banking systems in a number of countries are having difficulty playing their central role of intermediating between savers and borrowers. As a result, an adverse feedback loop has developed, with the troubles in the financial sector weighing on the real economy, which is in turn making it more difficult to solve the problems in the financial system.

There is a broad consensus that addressing these problems in the financial system is a prerequisite for a sustained recovery in the major economies. This is likely to require the de-risking of bank balance sheets, through the removal of troubled assets, and a bolstering of bank capital by the private and/or public sectors. Against this background, the recently announced US Government plan to support private-public investment funds to purchase troubled loans and securities, together with previously announced capital-injection programs, has received widespread market support. Despite this, it could be some time before it is clear whether these initiatives have been sufficient to put the financial sector on the path to recovery.

In contrast to the experience in many countries, the Australian banking system has performed well over recent times. The banks continue to report solid profits, albeit lower than in recent years, are soundly capitalised, and the larger banks have high credit ratings. The Australian

banks had not accumulated large holdings of high-risk securities, and their lending standards were not eased to the same extent as occurred in some other countries in the middle years of this decade. While loan arrears have risen from their unusually low levels of recent years, and a further increase is expected in the period ahead, the Australian banking system is considerably better placed to weather the current challenges than many other systems around the world.

Over recent months the Australian banks have found strong demand for debt issued under the Government guarantee arrangements. These arrangements were announced in mid October, after similar schemes were introduced in several other countries following the failure of Lehman Brothers. In addition, many Australian banks have raised additional capital from private shareholders. Together with a tightening in lending standards, a lengthening in the maturity of their liabilities, and increased holdings of liquid assets, this has helped strengthen their balance sheets.

Overall credit growth has slowed over the past year. This partly reflects a tightening of credit standards, particularly by those lenders – including some of the foreign and regional banks as well as the non-banks – that had been more aggressive in pursuing market share over recent years. However, much of this slowdown reflects reduced demand for credit, particularly by businesses, with the number of business loan applications falling considerably. Over recent times, many businesses have taken a more conservative approach to their finances, by paying down debt and raising equity. This is despite the business sector, as a whole, having entered the current period of financial turmoil with its balance sheet in good shape after a number of years of solid profit growth.

The household sector has also reduced its appetite for debt as it has reassessed the economic outlook. This is particularly noticeable in a marked drop in the value of margin loans outstanding, as well as a slowing in the growth of credit card debt and spending. In contrast, housing credit growth, while having slowed, is broadly in line with the longer-run growth of household income. More generally, households have responded to the combination of falling asset values, strong income growth over the past year, and lower interest rates, by significantly lifting their saving, and increasing their holdings of bank deposits. ✠

The Global Financial Environment

The financial systems of many countries are under more strain than they have been at any time since the 1930s. Confidence in financial institutions generally remains weak and risk aversion is very high. Governments in a number of countries have sought to stem the deterioration in confidence through guarantee arrangements, recapitalisations, and efforts to improve liquidity in markets and de-risk bank balance sheets. These responses have prevented widespread failures of financial institutions, and improved the functioning of short-term money markets, although the confidence which is the cornerstone of a well-functioning financial system is yet to be fully restored.

The current difficulties are impairing the normal functioning of the credit supply process, although business credit growth remained positive in most countries over recent months. While some tightening of credit conditions is to be expected given the deterioration in prospects for the world economy, the current difficulties in the global financial system have significantly increased the risk of a damaging feedback loop taking hold between the financial system and the real economy.

A central feature of the current environment is a marked increase in risk aversion and the price that investors demand for taking on a given risk. This follows many years in which risk aversion and the price of risk were very low. The initial catalyst for this adjustment was the emergence of losses on sub-prime loans in the United States, many of which were packaged into securities and bought by large international banks. Then, the failure of Lehman Brothers in September 2008 saw a further marked rise in risk aversion around the world as banks, businesses and households reassessed the structure of their own balance sheets, and the risks posed by the current degree of leverage. The recent weak economic data has seen this reassessment continue, with the global nature of the problems reinforcing the process.

Looking forward, reducing uncertainty and risk aversion are central to resolving the current problems. Recent announcements in the United States to remove risky assets from bank balance sheets have been helpful in this regard, although it will be some time before it is clear whether there has been a sustained improvement in confidence and the functioning of the financial system.

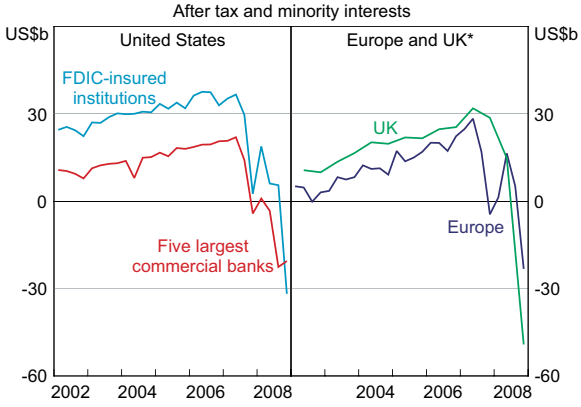
Profitability and Capital

The difficulties in the global banking system are clearly evident in recent bank profit announcements. In the United States, institutions insured by the Federal Deposit Insurance Corporation (FDIC) incurred a collective loss of US$32 billion in the December quarter, with one in three institutions reporting a loss. For the year as a whole, profits were down by around 90 per cent on the previous year. The losses have been most pronounced among the largest institutions, with the five largest US commercial banks incurring an aggregate loss of US$46 billion over the year to December (Graph 1). In Europe, the aggregate profit of the

Graph 1

Banks' Profits

After tax and minority interests



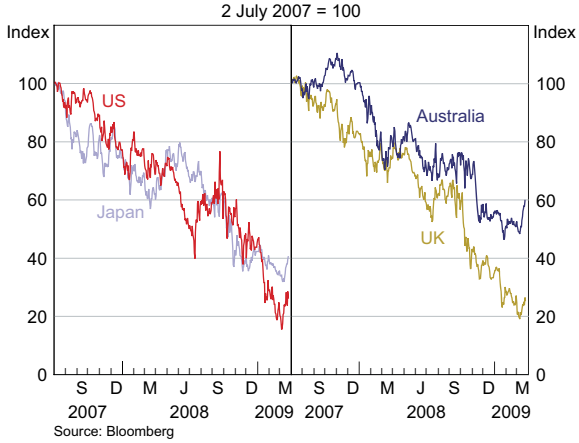
* 10 largest European and 5 largest UK banks

Sources: Bloomberg; FDIC; banks' annual and interim reports

Graph 2

Banks' Share Prices

2 July 2007 = 100

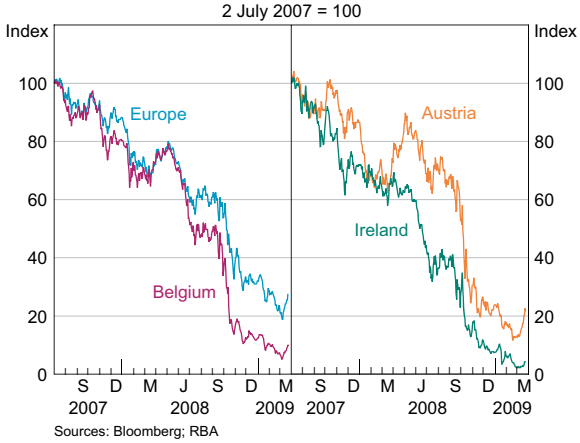


Source: Bloomberg

Graph 3

Banks' Share Prices

2 July 2007 = 100



Sources: Bloomberg; RBA

10 largest banks is expected to be essentially zero for the full year of 2008, while the five largest banks in the United Kingdom reported a net loss, including extraordinary items, of around £21 billion for the same period. In Japan, the largest banks are also expected to report losses in the December half.

Reflecting the difficult environment, bank share prices in a wide range of countries have fallen significantly over the past eighteen months. In the United States, United Kingdom and Europe, bank share price indices have declined by around 75 per cent since mid 2007, with falls in some European countries exceeding 90 per cent (Graph 2 and Graph 3). On top of the large falls in share prices, 17 of the 50 largest banks rated by Standard and Poor's have had their ratings downgraded since September 2008, and 20 are on negative outlook. Credit default swap (CDS) premiums for banks also remain elevated and, in some of the major countries, are above their levels following the failure of Lehman Brothers.

One notable aspect of the recent poor profit results for many of the world's largest banks is the disproportionate share of losses that have been accounted for by write-downs on securities, rather than higher loan provisions. For example, according to Bloomberg data, since mid 2007, approximately 60 per cent of the credit-related losses reported by the top 10 global banks have been accounted for by valuation losses on securities, even

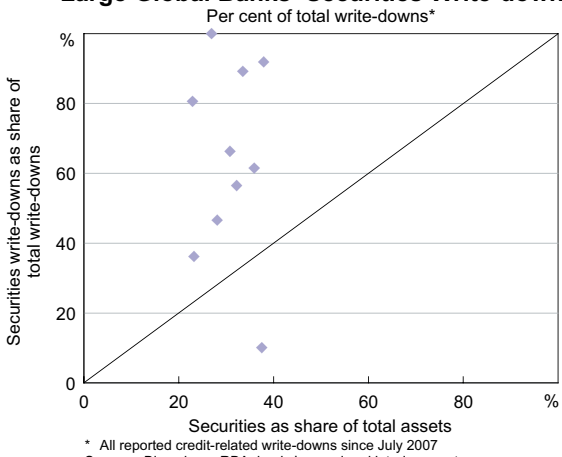
though securities accounted for only around 30 per cent of their total assets (Graph 4).

These large losses from securities reflect two interrelated factors. The first is that over the middle part of the current decade, when risk premiums were very low, many large global banks shifted their balance sheets towards holdings of securities, and away from loans. At the time, the increased holdings of securities contributed to the banks' reported profits, with declining risk premiums leading to mark-to-market accounting gains. Banks also earned significant fees from originating and structuring these securities and from active trading in them.

The second is the recent marked rises in the prices of risk and liquidity, particularly following the failure of Lehman Brothers. When these prices rise, the 'market' or 'fair' value of financial assets falls, even though the expected cash flows associated with the asset may have not changed. Indeed, over the past year it is difficult to explain movements in the prices of many financial assets simply by reference to changes in the expected underlying cash flows. It is now clear that many large financial institutions simply underestimated how far, and how quickly, the price of risk could change. As a consequence, they significantly underestimated the amount of capital that they needed to hold against a wide variety of assets and the risks that they were running as a result.

Graph 4

Large Global Banks' Securities Write-downs

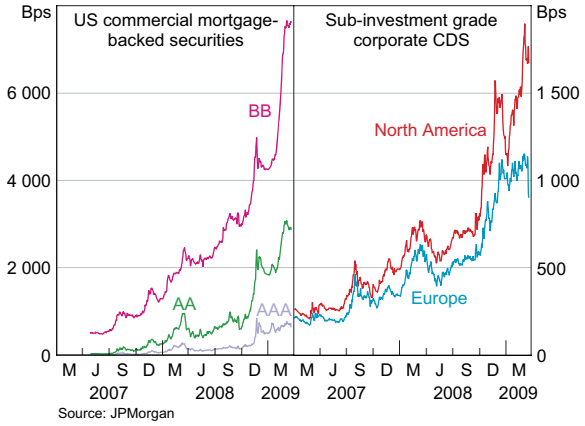


* All reported credit-related write-downs since July 2007

Sources: Bloomberg; RBA; banks' annual and interim reports

Graph 5

CMBS Spreads and Corporate CDS Premiums

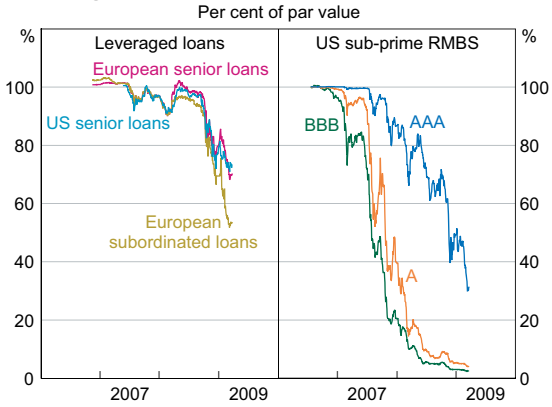


Source: JPMorgan

The deterioration in the economic environment, including the ratcheting up in risk aversion and uncertainty over the past six months, is evident in the prices of many financial assets, particularly those that are at the higher end of the risk distribution. For example, spreads on lower-rated US commercial mortgage-backed securities, and the price of default protection on sub-investment grade US and European credits are close to their highest recorded levels (Graph 5). These spreads had been increasing steadily after the emergence of the sub-prime problems, but then jumped considerably following the failure of Lehman Brothers, and have risen further this year as the weakness in the global economy has become apparent. A similar

Graph 6

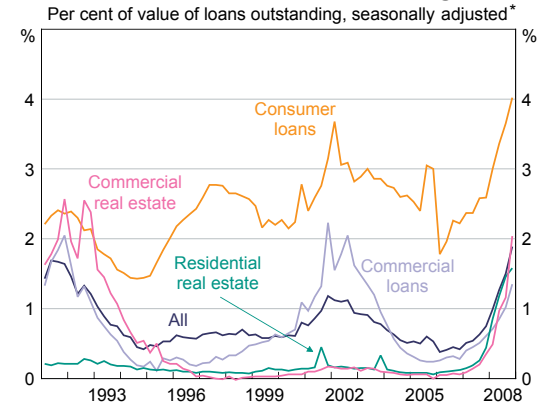
Leveraged Loan and Sub-prime RMBS Indices



Sources: JPMorgan; Markit

Graph 7

US Commercial Banks' Loan Charge-offs



* Annualised quarterly charge-offs
Source: Board of Governors of the Federal Reserve System

pattern is evident in the prices of loans associated with leveraged buyouts (so-called leveraged loans), and securities backed by US sub-prime residential loans (Graph 6). These securities have also been affected by the winding up of many structured investment vehicles (SIVs), which had previously been important sources of demand for them.

The marked cycles in the prices of risk and liquidity – and the immediate effect it has had on financial institutions' balance sheets – is one of the main reasons why the losses on sub-prime loans in the United States, which should have been able to be absorbed by the global financial system, have been so damaging. As risk premiums rise, asset values fall, banks look less stable, credit conditions tighten and spending by businesses and consumers declines, reinforcing the feedback loop from the financial sector to the real economy. Not surprisingly in the current environment, even healthy banks are looking to restrain balance-sheet growth and, in many cases, reduce the value of their risk-weighted assets.

In addition to losses on securities, loss rates on loans have also picked up noticeably. For US banks, write-offs increased significantly across the loan portfolio in 2008 (Graph 7). Although increases to date have been most pronounced on loans to households, write-offs have also increased considerably on loans to businesses, particularly in the commercial property sector, as economic and asset price weakness has spread. A similar trend is evident for UK banks, with write-offs for business loans more than doubling in the December quarter 2008.

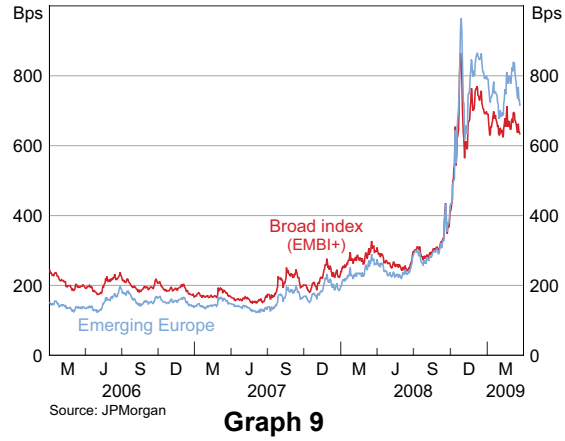
Another factor weighing on confidence recently, particularly for banks in Europe, is the deterioration in the outlook for the banking systems of 'emerging Europe', as many of these countries have large external financing requirements, including some unhedged currency exposures. The spread between emerging Europe sovereign debt and US Treasuries has risen from 2 per cent to 7 per cent since mid 2007, with the bulk of the increase occurring following the collapse of Lehman Brothers (Graph 8). Sentiment has been most affected for those euro area

banks with considerable exposures to the region – particularly some large Austrian banks with exposures that collectively amount to around two thirds of Austrian GDP – although the emergence of yet another area of potential difficulty for banking systems has weighed on confidence more broadly.

Working in the other direction, one factor that has recently been helping to support bank profitability is an increase in interest margins. With the intensity of competition having declined, and many banks seeking to restrain growth in their balance sheets, spreads between average borrowing and lending rates have tended to widen. Indeed, over recent weeks a number of large banks in the United States have cited the widening in interest margins as significantly boosting their profitability.

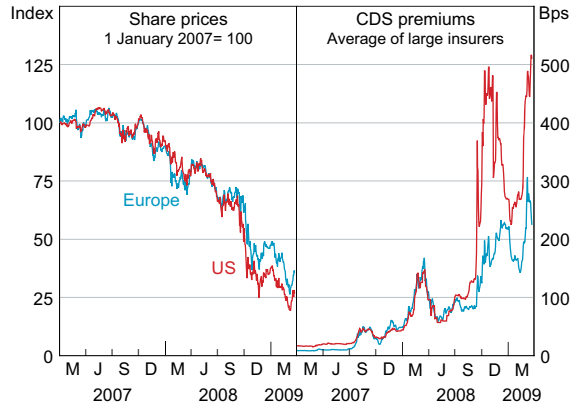
Other areas of the financial system are also under pressure. Several large insurers in the United States and Europe have reported losses in the second half of 2008, reflecting falls in the value of their bond and equity holdings. Share price indices of insurers have fallen by around 70 per cent since mid 2007, and CDS premiums have risen sharply, with US mortgage insurers among the most affected given strains in the US housing market (Graph 9). Hedge funds have experienced record losses of 18 per cent in 2008 and the size of the industry fell by US$525 billion over the second half of 2008 to

Graph 8
Emerging Market Sovereign Bond Spreads
To US government bonds



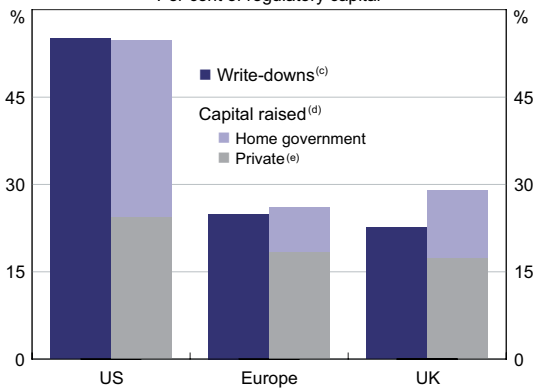
Source: JPMorgan

Graph 9
US and European Insurers



Sources: Bloomberg; RBA

Graph 10
Write-downs and Capital Raisings[a]
Per cent of regulatory capital[b]

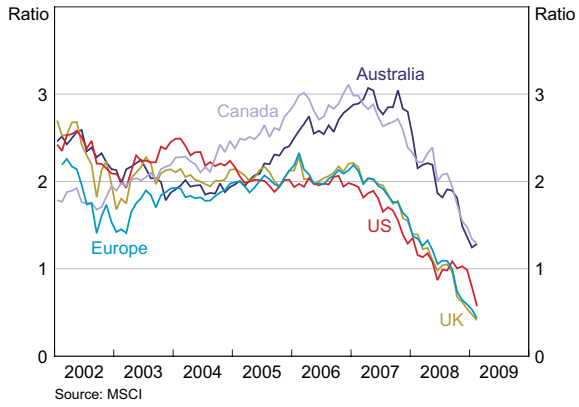


(a) Consists of the largest 5 US, 5 UK and 10 European banks
(b) Write-downs and capital raisings are since July 2007; regulatory capital is as at June 2007
(c) Recorded as quarterly or half-yearly results released
(d) Recorded as announced
(e) Includes public offerings, private placements and sovereign wealth funds
Sources: Bloomberg; company announcements

US$1.4 trillion, with redemption requests from investors adding pressure to sell assets in strained markets.

Given current conditions, many banks around the world have been seeking to raise new capital to either cover losses or to strengthen their capital position. In the initial phase of the crisis, sovereign wealth funds and private investors were the main source of these funds, although more recently governments have become the main contributors (see below). Banks around the world are estimated to have raised around US$900 billion in new capital since mid 2007 – around half of which has been provided by governments – which is broadly comparable to write-downs over this period (Graph 10). Write-downs over this period have been largest in the United States, and for the largest five banks are equivalent to around half of the regulatory capital that they held in mid 2007.

Graph 11
Banks' Price-to-book-value Ratios



Source: MSCI

While capital ratios remain comfortably above regulatory minimums for almost all banks, investors remain wary about the possibility of further write-downs, and potential dilution from government equity injections. This wariness, and the earlier losses incurred by those injecting capital into banks, have made private investors very nervous about contributing further capital. The lack of confidence is reflected in sharemarket valuations, with the market value of many large banks in the United States, Europe and the United Kingdom at end February having fallen to around half the book valuation reported in their most recent financial statements (Graph 11).

Efforts to Restore Confidence

The difficulties facing the global financial system have led to unprecedented levels of public-sector support for financial markets and institutions.

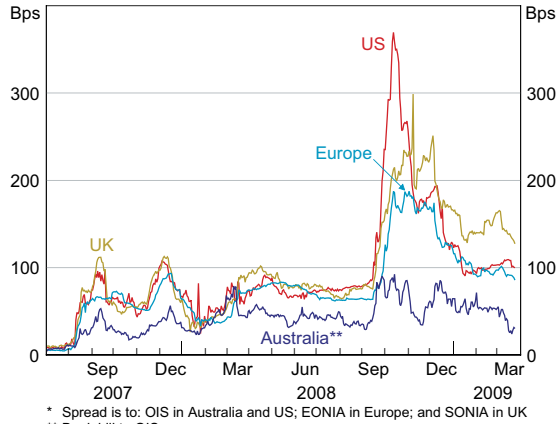
In the initial phase of the crisis, these efforts were largely concentrated on improving the liquidity of short-term money markets. As banks became reluctant to lend to one another, other than at very short terms, many central banks significantly expanded the scale of their money-market operations, widening the range of collateral that they accept and undertaking repurchase agreements over longer maturities. A number of central banks have also set up schemes to purchase outright, or assist banks to purchase, assets including asset-backed commercial paper (ABCP), commercial paper and selected short-term highly rated assets.

While these various actions have helped improve the functioning of short-term money markets, spreads on short-term bank paper remain elevated relative to their levels before the emergence of the sub-prime problems (Graph 12). For example, the cost of 3-month borrowing for US banks is currently around 100 basis points over the swap rate, down from over 350 basis

points in the wake of the Lehman Brothers collapse, but well above the 10 basis points prevailing in mid 2007. Spreads in Australia remain much lower than those in a number of other major countries, partly reflecting lesser concerns about counterparty risk.

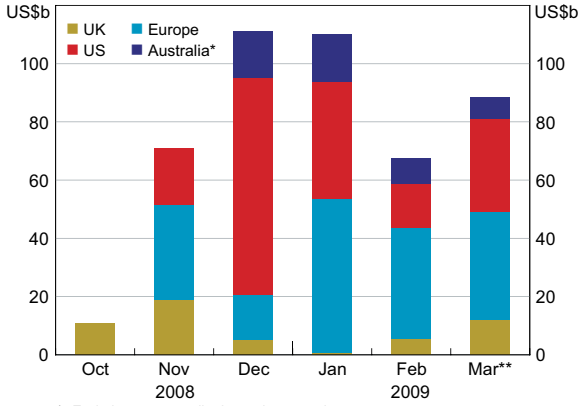
The scale of public-sector support was increased significantly in the wake of the failure of Lehman Brothers. In the immediate aftermath of the failure, confidence in many banks was shaken, so a number of governments increased caps on deposit insurance schemes to provide reassurance to depositors about the safety of bank deposits. The shock to confidence also saw investors become reluctant to buy long-term bank debt. In response, many governments moved to provide guarantees on wholesale funding by financial institutions. These moves followed the action taken by the Irish Government in late September 2008 to provide a guarantee on new and existing debt for Irish-based financial institutions. This decision had a cascading effect, as concerns arose about the ability of financial institutions that did not have access to guarantee arrangements to continue to access funding. In the weeks following the Irish announcement, governments in over a dozen countries, including Australia, followed suit with wholesale funding guarantee schemes, and bank issuance of guaranteed bonds under these schemes has been strong in a number of countries (Graph 13). (Further details on deposit and wholesale guarantee arrangements are discussed in the context of Australian arrangements in *Box A: Government Guarantees on Deposits and Wholesale Funding*.)

Graph 12
3-month LIBOR to Swap Spread*



* Spread is to: OIS in Australia and US; EONIA in Europe; and SONIA in UK
** Bank bill to OIS
Sources: Bloomberg; Tullett Prebon (Australia) Pty Ltd

Graph 13
Guaranteed Bond Issuance
By country of guaranteeing government



* Excludes some small private placement issuance
** Data up to 24 March 2009
Sources: RBA; Thomson Reuters

Another key element in the response to the crisis has been the injection of capital into financial institutions. In a number of cases – including the US housing agencies Fannie Mae and Freddie Mac, the insurer AIG and the European banks UBS, Fortis and Dexia – the capital support has been designed to deal with a problem in a specific institution. However, as the difficulties have become more pervasive a number of governments have announced broader schemes under which institutions can apply for support, with relatively standardised terms and conditions. The first of these was the US Troubled

Asset Relief Program (TARP), announced in early October 2008. Around US$240 billion of the TARP funds have been used for capital injections, mainly under the Capital Purchase Program, where institutions can apply to receive capital equivalent to between 1 and 3 per cent of their risk-weighted assets, up to a maximum of US$25 billion. In total, 520 institutions have received capital injections through this program. In February 2009, the US authorities announced a broader plan that includes: stress testing of major financial institutions and subsequent capital injections if required; actions to lower mortgage rates and prevent avoidable foreclosures in the mortgage market; and measures to de-risk bank balance sheets, further details of which were announced in late March.

In the United Kingdom, the Government has also set up a program to increase the capital of major banks. To date, Lloyds/HBOS and RBS have received injections under this scheme, although it is open to all UK incorporated banks with a substantial business in the United Kingdom, as well as to building societies. The form of the capital raising for Lloyds/HBOS and RBS was an initial investment of preference shares, and an underwriting of a rights issue. As the rights issues for these institutions were heavily undersubscribed, the UK Government took up large holdings of ordinary equity, which it has subsequently increased by converting the initial preference share investments into ordinary shares. As a result, the UK Government has effective control of these institutions with majority stakes and up to 75 per cent of voting rights. A number of European countries have also set up general schemes to recapitalise their banking systems, typically through the government purchasing some form of convertible notes or hybrid debt securities, rather than purchasing common equity.

Another element in governments' response has been the development of programs to reduce the risk on banks' balance sheets by either removing certain types of assets completely or providing insurance against losses on the assets. These programs also allow banks to report higher regulatory capital ratios as they reduce the bank's risk-weighted assets.

An early example of this approach was associated with the sale of Bear Stearns to JPMorgan in March 2008. This involved the sale of US$30 billion of Bear Stearns' assets to a special purpose vehicle largely funded by the US Federal Reserve, with the first US$1 billion of losses to be borne by JPMorgan. A broadly similar approach has been followed by the Swiss authorities in the case of UBS, with a pool of assets valued at US$39.1 billion having being sold to a special purpose vehicle, with the first US$4 billion of losses to be borne by UBS. In other cases, assets have remained on the bank's balance sheet, with the government providing insurance for a fee, typically paid for by the bank issuing some form of equity to the government. In the United Kingdom, for example, the Government has reached an agreement with RBS to guarantee £325 billion of assets for a fee of 2 per cent, and an agreement with Lloyds/HBOS to guarantee £260 billion of assets for a fee of 6 per cent. In both cases, the institution bears an initial loss, and 10 per cent of any remaining loss, and the fee was paid through issuance of a special class of shares. In the United States, broadly similar arrangements have been set up for Citibank and Bank of America.

More recently, the US authorities have announced details of the establishment of public-private investment funds (PPIFs) to facilitate the purchase of so called legacy loans and securities from US financial institutions, involving private investors bidding for the assets to assist with their price discovery. The purchase of the loans will involve a combination of equity financing, provided jointly by the US Treasury and private investors, which can be leveraged up to six times through the issuance of debt guaranteed by the FDIC. For the securities, one element involves

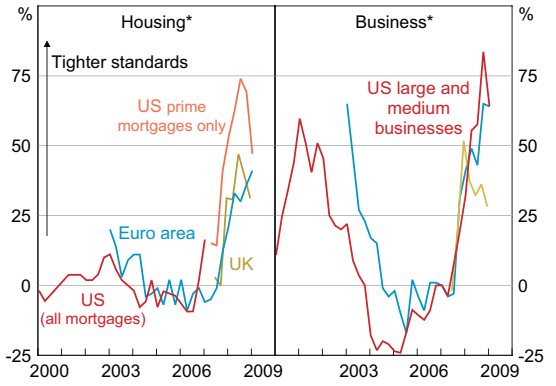
the expansion of an existing Federal Reserve program, under which the Fed provides loans for the purchase of newly securitised assets, to cover the purchase of certain existing mortgage-backed securities (MBS) and asset-backed securities. A second element of the securities program involves the PPIFs investing in certain MBS, funded by equal contributions from the US Treasury and private investors as well as the possibility of a loan from the US Treasury equivalent to 50 or 100 per cent of equity capital, subject to certain conditions. The total equity contributions from the US Treasury for the legacy loans and securities programs is expected to be between US$75 billion and US$100 billion and will be sourced from TARP funds.

The various measures discussed above have been effective in preventing widespread runs by bank depositors and bank collapses, and there has been a general improvement in sentiment over recent days. Despite this, there are ongoing concerns about the value of banks' assets, particularly given the decline in the prices of many securities and the deterioration in the world economy. Reducing uncertainty and risk aversion are central to resolving the current problems, with the sharp drop in confidence and the accompanying increase in the price of risk having a pervasive and debilitating effect on the financial system and the broader global economy. The task of developing and implementing a credible policy response has been complicated by the need to obtain broad political support for major initiatives, especially when they involve governments taking significant financial risks and/or controlling previously private businesses. While debate continues about the best way forward, there is a general consensus that banks' exposures to risky/troubled assets with highly uncertain future values need to be reduced, either through the sale of these assets or insurance arrangements. Without such action, it is likely that investors will continue to be wary about the future of the affected banks, and management's effort will be disproportionately devoted to managing these assets. There is also general agreement that troubled banks need to raise new equity. If balance sheets are 'cleaned up' through the disposal of risky assets there is some prospect of the private sector injecting the capital, but if this does not occur the public sector will need to do so.

Credit and Debt Markets

The difficulties being experienced in financial systems and the uncertainty about the global economy have seen banks in a range of countries tighten lending standards significantly. In the United States, for example, in the three months to January 2009, almost half of banks reported tighter lending standards for prime residential mortgages, and around two thirds for loans to large and medium businesses, even though standards have been tightening since at least 2007 (Graph 14). Banks have also been increasing risk margins applied to borrowers, in contrast to earlier in

Graph 14
Credit Standards



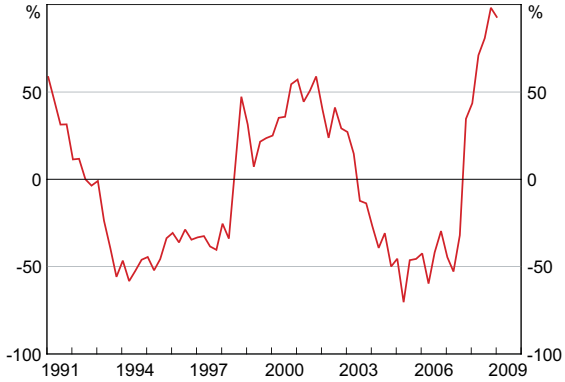
* Net percentage reporting tightening standards. US and Europe ask whether *lending standards* have changed. UK asks whether the *supply of credit* has changed. UK applies twice the weight to a 'considerably' answer relative to a 'somewhat' answer. US and Europe apply an equal weight

Sources: Bank of England; Board of Governors of the Federal Reserve System; ECB

Graph 15

Risk Spreads on Commercial Loans*

Net percentage of banks reporting increasing spreads for large firms



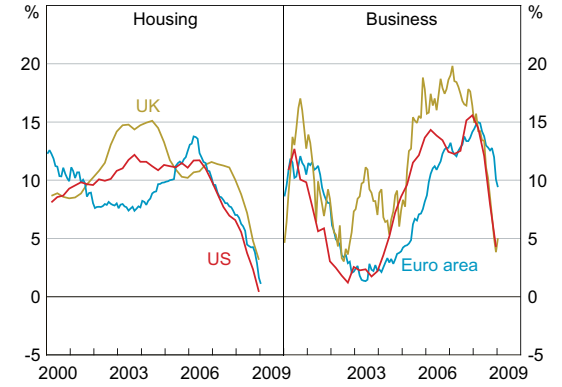
* Survey asks whether spreads of loan rates over cost of funds have tightened. Applies equal weight to 'considerably' answers and 'somewhat' answers.

Source: Board of Governors of the Federal Reserve System

Graph 16

Intermediated Credit Growth

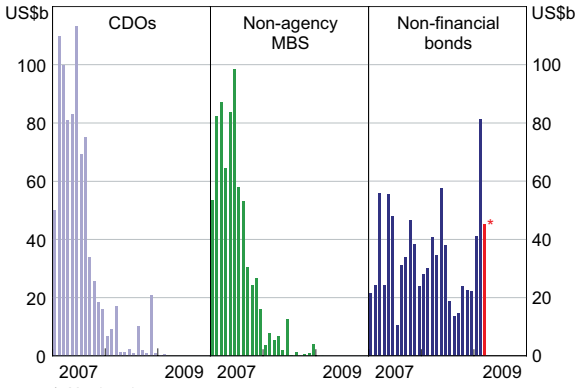
Year-ended percentage change



Sources: Bank of England; Board of Governors of the Federal Reserve System; ECB; RBA

Graph 17

Debt Issuance in the United States



* Month to date

Sources: JPMorgan; SIFMA; Thomson Reuters

the decade when they were reducing these margins (Graph 15). A similar tightening in credit standards is also evident in the United Kingdom and Europe, with the deterioration in the economic outlook, as well as the cost and availability of funds, cited as the major driving forces behind tightening conditions. An IMF survey of banks involved in trade finance suggests that costs have increased and conditions have been tightened on this type of finance, particularly for emerging markets.

Not surprisingly, credit growth has slowed in a range of countries (Graph 16). In the United States, the euro area and the United Kingdom, year-ended growth in housing credit has slowed to low single digits over the past year, with negative monthly growth rates having been recorded recently in some countries. Business credit growth has also slowed in recent months, although it typically remains positive. This follows a period of rapid business credit growth in the early phase of the crisis which partly reflected re-intermediation as conditions in capital markets tightened for many borrowers. The volume of trade credit provided by banks in emerging markets fell in late 2008, according to IMF data, consistent with reports that disruption to trade finance has played a role in the extremely sharp fall in global trade.

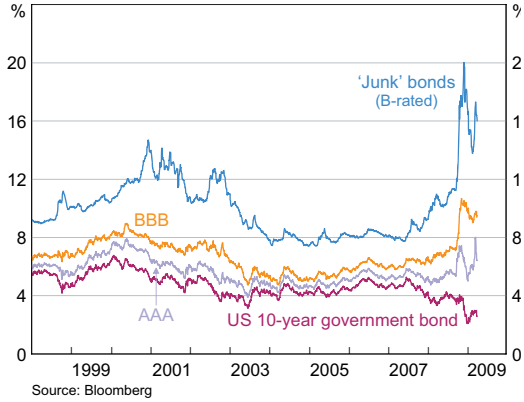
The increase in the price of risk and general risk aversion has also dampened fundraising activity in wholesale markets. In the US, for example, issuance of collateralised debt obligations (CDOs) and non-agency

MBS has been virtually non-existent as investors remain wary of complex structures or highly leveraged entities (Graph 17). Issuance of corporate bonds has been stronger in early 2009, as a narrowing in spreads from the late 2008 peaks and a sharp fall in the risk-free yield has been met with heavy issuance, predominantly from higher-rated borrowers (Graph 18).

The slowing in the pace of credit growth and, in some markets, debt issuance reflects both supply and demand factors. Banks and investors are clearly more risk averse than they were previously and are seeking to deleverage. They are demanding more in compensation for the risks that they are willing to accept when extending funding. However, just as banks and investors have become more risk averse, so too have households and businesses, and there has also been a marked reduction in the demand for debt given the uncertain environment. The more risk-averse attitudes of lenders and borrowers is evident in a sharp reduction in global leveraged buyout (LBO) activity, which totalled US$129 billion in 2008, down from US$746 billion in 2007, with activity in the December quarter the lowest for the decade (Graph 19).

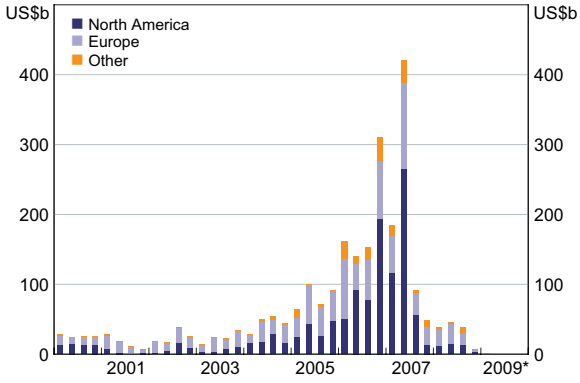
A notable feature of the current environment is that the difficulties in financial systems have meant that the monetary policy transmission mechanism has become much less effective in some countries. While central banks have lowered policy interest rates significantly, a widening in risk

Graph 18
US Corporate Bond Yields
7-10 years maturity



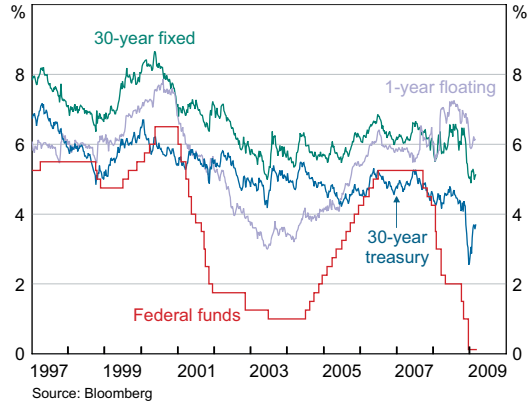
Source: Bloomberg

Graph 19
Global LBO Activity
Announced and completed



* Deals announced to date
Source: Thomson Reuters

Graph 20
US Mortgage Interest Rates
Weekly



Source: Bloomberg

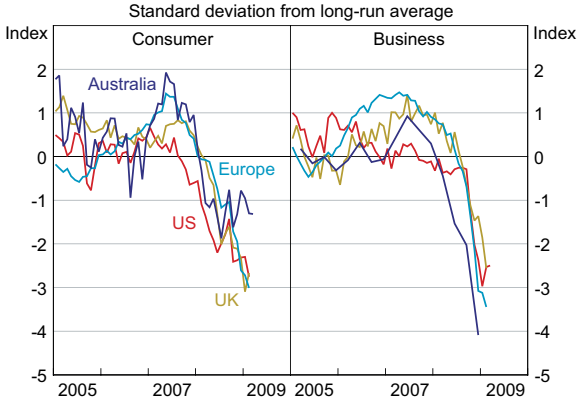
spreads has limited the extent to which reductions have been passed onto many lending rates. In the United States, while the federal funds rate has been reduced by around 5 percentage points since mid 2007, the 1-year mortgage rate is broadly unchanged (Graph 20). At the longer end, spreads between 30-year fixed mortgage rates and government bond rates also widened over the past year, although this has been reversed quite recently. Similarly, in the United Kingdom, rates on new 3-year fixed housing loans have declined by around 160 basis points since late 2007, compared with a fall of around 240 basis points in the equivalent government bond yield, and variable rates have fallen by significantly less than the fall in the policy rate.

With interest rates now at, or close to, zero in a number of major countries, some central banks have begun to augment existing open market operations by purchasing assets outright without conducting offsetting operations to limit the rise in central bank reserves. For example, in January 2009, the Federal Reserve began buying agency-guaranteed MBS outright to bring down mortgage rates. And in March 2009, the Bank of England began purchasing high-quality assets such as government bonds, and allowing the resulting cash to remain in the system, with the aim of boosting broad measures of money and credit and, in due course, the rate of nominal spending. The Swiss National Bank has also recently announced measures to boost liquidity that include purchases of private-sector bonds.

Financial Condition of the Household and Business Sectors

A striking feature of the current crisis has been the large fall in household and business confidence in a wide range of countries. While confidence had already been declining since mid 2007, it took a further step down following the failure of Lehman Brothers and the period of intense financial volatility in late 2008 (Graph 21). As a result, both households and businesses have curtailed spending, adding to the contractionary forces in the global economy (Graph 22). The decline in confidence has also been associated with a reassessment of the structure of balance sheets, with many households and businesses attempting to reduce their leverage as asset prices decline and risk aversion rises. While these measures are sensible from the perspective of an individual household or firm, collectively these actions are serving to further dampen economic growth,

Graph 21
Confidence
Standard deviation from long-run average



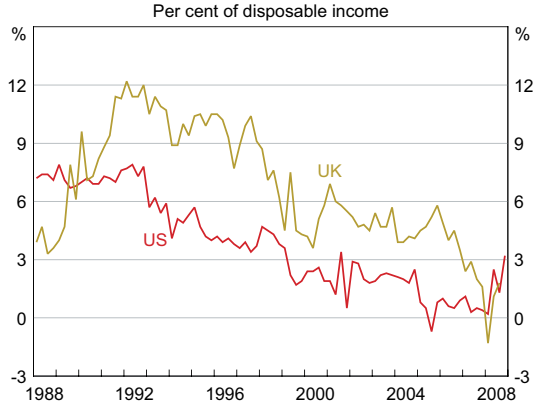
Sources: Bloomberg; RBA; Thomson Reuters

reinforcing the damaging feedback loop between the financial sector and the real economy.

An important factor weighing on household and business sector balance sheets has been falls in property prices in a number of countries. Since their peak, house prices have fallen by around 10 to 25 per cent in the United States (depending on the measure used) and by almost 20 per cent in the United Kingdom (Graph 23). There has also been a significant downturn in commercial property prices, particularly in the United Kingdom, where capital values are around 40 per cent below the peak. This, in turn, is reinforcing the adverse credit supply loop, by reducing collateral values against which borrowers can secure their loans.

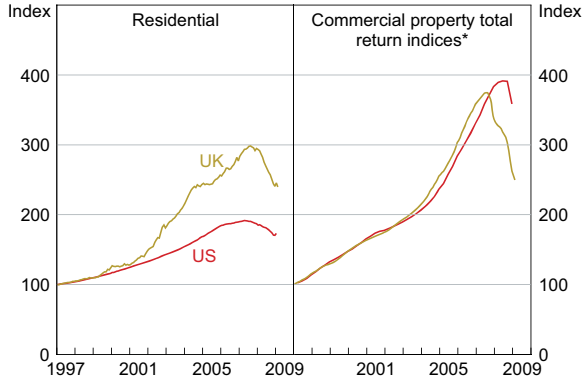
In this environment of weaker incomes and asset values, the proportions of household and business borrowers having difficulty making debt payments have increased. Though the initial rise in US housing loan arrears mainly reflected sub-prime mortgages – particularly adjustable-rate mortgages as interest rates rose from initial low rates – arrears rates across all mortgages have continued to rise (Graph 24). In the December quarter 2008, around 5 per cent of prime loans were 30 or more days in arrears, while the comparable figure for adjustable rate sub-prime mortgages was nearly 25 per cent.

Graph 22
Household Savings
Per cent of disposable income



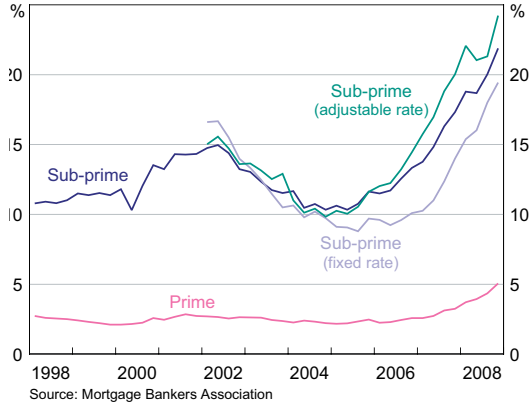
Sources: Bureau of Economic Analysis; Office for National Statistics

Graph 23
Property Price Indicators
31 December 1996 = 100



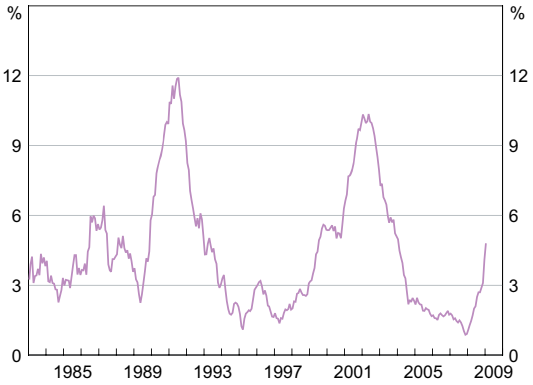
* Includes income and capital returns
Sources: FHFA; Halifax; IPD; NCREIF

Graph 24
US Mortgage Delinquency Rates
30+ days past due, per cent of outstandings



Source: Mortgage Bankers Association

Graph 25
Moody's Global Speculative-grade Default Rate



Source: Moody's

In the United Kingdom, mortgage arrears have also moved higher, with 3.8 per cent of prime securitised loans in arrears by 30 or more days as at January 2009, up by 1.6 percentage points over the year.

Indicators of financial difficulty have also moved higher among corporations. For example, Moody's global speculative-grade corporate default rate increased sharply over the past year, although at 5.2 per cent in February 2009, it remains below the levels reached in previous recessions (Graph 25). Given the tight financing conditions, indebted firms with refinancing needs are under particular scrutiny, with weakness in sharemarkets and investor sentiment limiting the availability of access to equity finance.

The Australian Financial System

The Australian financial system has weathered the current challenges better than many other financial systems. Unlike in a number of other countries, the Australian banking sector continues to report solid profits, has little exposure to high-risk securities, and the largest banks have maintained their high credit ratings. The system is soundly capitalised and the banks have been able to raise additional equity from the private sector at only modest discounts to prevailing prices. The introduction of the Australian Government Guarantee Scheme for Wholesale Funding and Large Deposits has also helped shore up banks' access to funding, and banks have recently taken the opportunity to lengthen the maturity profile of their liabilities.

Notwithstanding this positive assessment, the banking system is facing a more difficult environment than it has for some years. While the overall level of profitability is high, it has declined recently and problem loans have increased from the very low levels of recent years. Banks' lending growth has also slowed recently, although banks generally continue to make credit available to good quality borrowers, albeit on less accommodating terms than in the recent past.

Profits, Capital and Liquidity of the Banking System

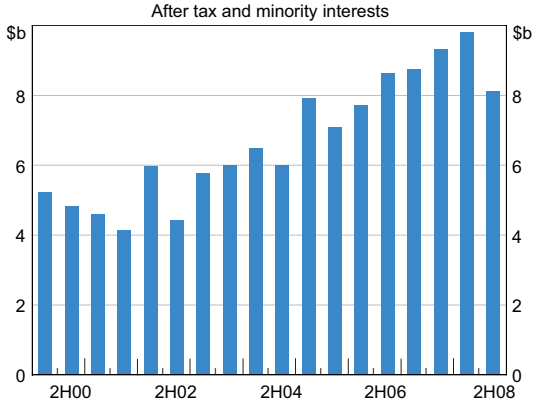
Profits

In contrast to the banking systems of many other countries, the Australian banking system continues to earn solid profits. In aggregate, the five largest banks recorded headline profits after tax and minority interests of around $8 billion over the latest half year (to September for four of these banks and to December for the other), which represents an annualised post-tax return on equity of 15 per cent (Graph 26 and Table 1). Although this was a strong outcome, profits were around 13 per cent lower than over the same period a year earlier.

Graph 26

Five Largest Banks' Profits*

After tax and minority interests



* Second half figures are for the half year to December for CBA and half year to September for the other banks. From 2006, data are on an IFRS basis; prior years are on an AGAAP basis.

Sources: Banks' annual and interim reports

Table 1: Banks' Latest Half Year Profit Results[a]
Consolidated, five largest banks

	2007 $b	2008 $b	Per cent of average assets[b]
Income			
Net interest income	16.9	19.5	1.8
Net income from wealth management	3.3	1.2	0.1
Other non-interest income	7.6	7.8	0.7
Expenses			
Operating expenses	12.9	13.8	1.3
Bad and doubtful debts	1.4	5.3	0.5
Profit			
Net profit before tax	13.6	9.4	0.9
Net profit after tax and minority interests	9.3	8.1	0.7

(a) Half year to September for ANZ Banking Group, National Australia Bank, St George Bank and Westpac Banking Corporation; half year to December for Commonwealth Bank of Australia
(b) Annualised half-year results
Sources: Banks' annual and interim reports

There are a number of interrelated factors that have contributed to the relatively strong performance of the Australian banking system. One is that Australian banks typically have only limited direct exposures to the types of securities – such as CDOs and US sub-prime residential mortgage-backed securities – that have led to significant losses for many banks abroad. A corollary of this is that Australian banks' balance sheets remain heavily weighted towards domestic loans, particularly to the historically low-risk household sector. With strong growth in domestic lending over the past decade or so outpacing growth in domestic savings, Australian banks have experienced solid profit growth and, unlike many banks around the world, have not been in the position of having to invest surplus domestic savings outside the home market, where experience suggests that it is often hard to earn the same risk-adjusted return as on domestic assets. As discussed below, while the arrears rate on the banks' loan portfolios has risen recently, it remains lower than in many other countries, particularly on housing loans. This reflects several factors, including:

- Lending standards were not eased to the same extent as elsewhere. For example, the non-conforming housing loan market in Australia (the closest equivalent to the sub-prime market in the United States) accounted for only around 1 per cent of the mortgage market in mid 2007, compared to around 13 per cent in the United States. Moreover, 'negative amortisation' loans, where the balance could rise at first, became common in the United States but have not been part of the Australian mortgage market.
- The level of interest rates in Australia did not reach the very low levels experienced in some other countries where low rates made it possible for many borrowers with limited repayment ability to obtain loans. Moreover, the period of particularly

rapid continual increases in Australian house prices had come to an end by late 2003, with some households having subsequently already been through a period of balance-sheet adjustment.

- All Australian mortgages are 'full recourse' following a court repossession action, and households generally understand that they cannot just hand in the keys to the lender to extinguish the debt. This reduces their incentive to take out loans that cannot be repaid unless housing prices increase substantially, as well as lenders' incentives to offer such loans. In contrast, in many US states, lenders can foreclose quite quickly and without court action, so they have not tended to incur the expense of suing for any shortfall, even where this is legally possible.
- The legal environment in Australia places a stronger obligation on lenders to make responsible lending decisions than is the case in the United States. In particular, the Australian Uniform Consumer Credit Code (which has been in operation since 1996) means that courts can set aside mortgage agreements where the lender could reasonably have known that the borrower would not be able to repay the loan without causing substantial hardship.

Another factor that has contributed to the resilience of the Australian banking sector is that the domestic regulatory framework has performed well. By international standards, the Australian Prudential Regulation Authority (APRA) has been relatively proactive in its approach to prudential regulation, conducting several stress tests of authorised deposit-taking institutions' (ADIs') housing loan portfolios and strengthening the capital requirements for higher-risk housing loans. As an example, in 2004, APRA introduced higher risk weights on non-standard loans such as those with low documentation.

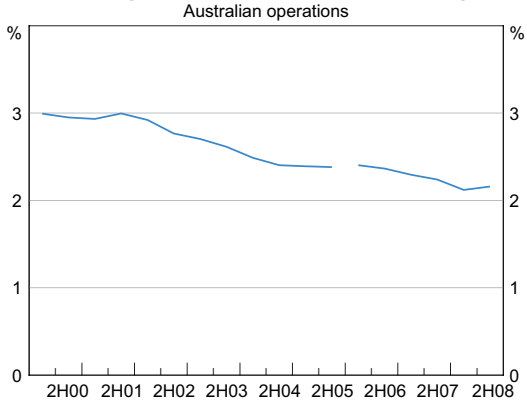
Reflecting the Australian banks' focus on domestic lending, the sector's relatively strong performance continues to be underpinned by growth in net interest income. For the five largest banks, net interest income increased by 15 per cent over the past year as a result of the ongoing expansion of banks' balance sheets (see below). After a decade of sustained downward pressure, the interest rate margin that the five largest banks earned on their domestic lending was broadly unchanged over the past year, at around 2.2 per cent (Graph 27).

In contrast to the increase in aggregate net interest income, the five largest banks' headline income from their wealth management operations declined markedly over the past year, largely reflecting the downturn in the local and global equity markets. More than two thirds of the fall was

Graph 27

Five Largest Banks' Net Interest Margin*

Australian operations



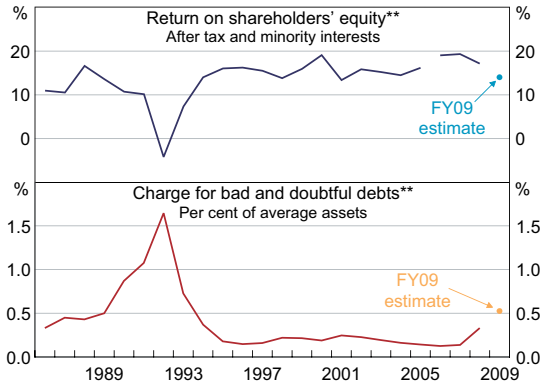
* Second half figures are for the half year to December for CBA and half year to September for the other banks. From 2006 data are on an IFRS basis; prior years are on an AGAAP basis.

Sources: RBA; banks' annual and interim reports

accounted for by net losses on investment assets held in one bank's life insurance business, though these losses are ultimately borne by policy holders rather than shareholders of the bank. When this bank is excluded, wealth management income was around 25 per cent lower in the latest half year than for the same period one year previously.

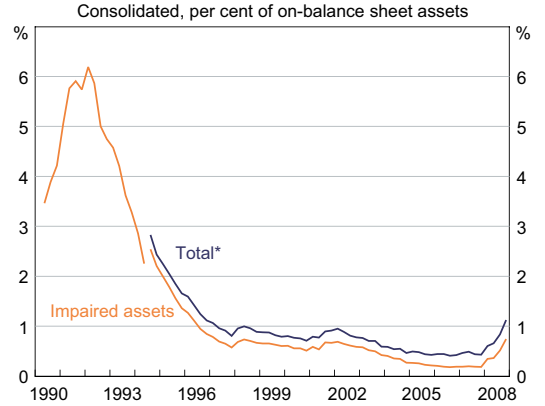
Notwithstanding weaker wealth management income, the recent decline in bank profits has been mainly due to a rise in provisioning charges. The five largest banks reported charges for bad and doubtful debts of $5.3 billion over the latest half year, compared to $1.4 billion in the same period a year earlier. Banks' trading updates and analysts' expectations suggest that the charges for bad and doubtful debts are likely to rise further, to be equivalent to around 0.5 per cent of their assets for the 2009 financial year (Graph 28). This is up from the unusually low charges over recent years – when both specific and general provisions fell to very low levels – but well below the expense for bad and doubtful debts incurred in the early 1990s. This recent rise in the bad debts expense partly reflects an increase in the provisions that banks hold against a general deterioration in their loan portfolios, such as that arising from the downturn in economic conditions, both in Australia and overseas. It also reflects higher individual provisions, including against exposures to highly leveraged companies that have experienced difficulties in the current environment. Provisioning expenses have also increased at the regional banks, with these banks reporting a $360 million rise in provisioning charges over the past year.

Graph 28
Five Largest Banks' Profitability*



* Four largest banks only prior to 1993 and in 2009
** From 2006 data are on an IFRS basis; prior years are on an AGAAP basis
Sources: Credit Suisse; UBS; banks' annual and interim reports and trading updates

Graph 29
Banks' Non-performing Assets
Consolidated, per cent of on-balance sheet assets



* Includes 90+ days past-due items that are well secured
Source: APRA

These higher charges are likely to see the banking system's aggregate post-tax profits decline in the near term, with analysts generally anticipating that aggregate profits for the largest banks will be around 10 per cent lower in the 2009 financial year than in 2008. If this were to occur, the post-tax return on equity would be around 14 per cent which, while lower than the average return over the past decade, would still be higher than that being earned in many other banking systems around the world.

The higher provisioning charges reflect a rise in banks' non-performing assets, with the ratio of non-performing assets to total on-balance sheet assets standing at around 1 per cent as at December 2008, compared to 0.4 per cent a year earlier (Graph 29). This ratio is now marginally higher than that recorded in the 2001 downturn, but well below the early 1990s peak of over 6 per cent. Of these non-performing assets, around one third are classified as 'past due' but not impaired, meaning that the outstanding amount is well covered by the value of collateral, though repayments are overdue by at least 90 days.

The rise in non-performing loans has been evident across each of the main segments of the domestic loan portfolio, though it has been most pronounced in lending to businesses, with the non-performing business loan ratio increasing from 0.6 per cent to 2.1 per cent over the year to December 2008 (Graph 30). This increase partly reflects the general downturn in economic conditions, but it is also due to a small number of exposures to highly geared companies with complicated financial structures and/or exposures to the commercial property sector.

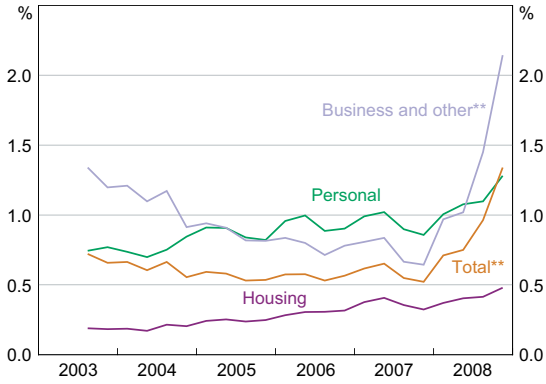
In banks' commercial property loan portfolios, the impaired assets ratio stood at 3.3 per cent as at December 2008, compared to around 1½ per cent in early 2008 (Graph 31). This ratio is now higher than it has been for around a decade or so, but is much lower than the levels reached in the early 1990s. Much of the recent rise is accounted for by loans for retail property and, to a lesser extent, residential development, with only a small rise in the arrears rate on loans for office property.

In the mortgage and personal loan portfolios – which together account for over half of on-balance sheet loans – non-performing loan ratios have also risen, but remain low by the standards of many other countries. As at December 2008, non-performing housing loans accounted for 0.48 per cent of Australian banks' outstanding on-balance sheet housing loans, compared to 0.32 per cent a year earlier. Housing loan arrears

Graph 30

Banks' Non-performing Loans*

Domestic books, per cent of outstandings by loan type

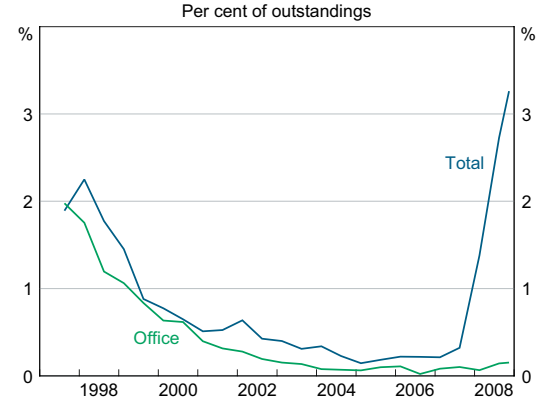


* Includes 'impaired' loans and 90+ days past-due items that are well secured
** Includes lending to non-ADI financial businesses, bill acceptances and debt securities
Source: APRA

Graph 31

Commercial Property Impaired Assets*

Per cent of outstandings

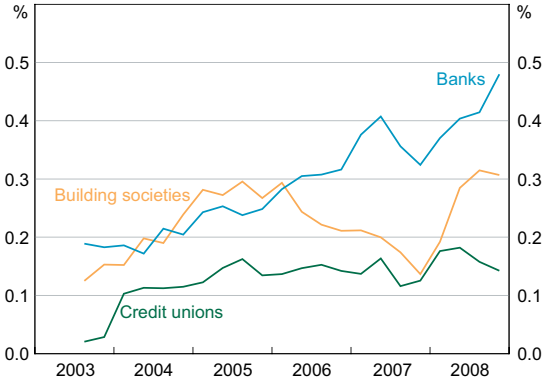


* Consolidated, Australian operations. December 2008 data are preliminary, and are based on a sample of 27 banks that cover around 99 per cent of outstandings.
Sources: APRA; RBA

Graph 32

Non-performing Housing Loans*

Domestic books, per cent of outstandings



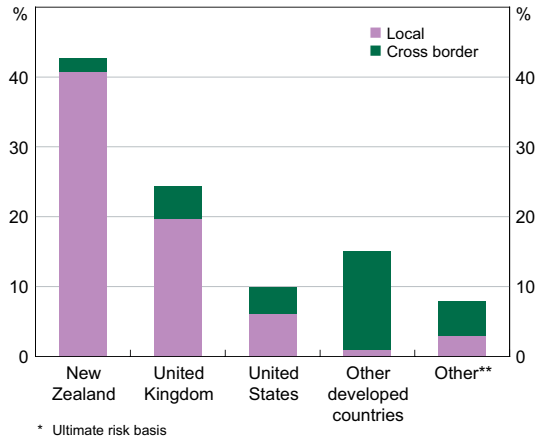
* Includes 'impaired' loans and 90+ days past-due items that are well secured

Source: APRA

Graph 33

Australian-owned Banks' Foreign Exposures*

Per cent of total, December 2008



* Ultimate risk basis

** Claims on developing countries, international organisations, offshore centres, and unallocated claims

Source: APRA

rates for Australian credit unions and building societies are lower than for banks and are around the same levels as in 2005 (Graph 32).

Looking ahead, the main downside risk to the performance of banks' housing portfolios is from a rise in unemployment as the economy slows, with the recent declines in interest rates having helped to alleviate debt-servicing pressures. Notwithstanding this, in previous credit cycles it has typically been business and commercial property loans that have posed the greater risk to asset quality.

An issue that has also drawn some attention recently is the Australian banks' exposures arising from their overseas assets, particularly in New Zealand and the United Kingdom, where economic conditions have weakened significantly. As at December 2008, the Australian banks' overseas exposures accounted for around 30 per cent of their total assets, with New Zealand and the United Kingdom together accounting for about two thirds of these foreign exposures (Graph 33). The recent deterioration in conditions in these two countries, including falls in house prices, has been associated with a sharp decline in lending growth, and an increase in non-performing loans and provisions.

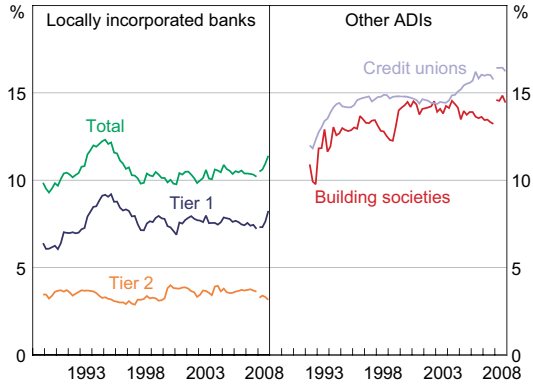
As noted above, one of the other factors that has held Australian banks in good stead during the market turmoil is that they have not typically relied on income from trading activities or securities holdings to support their profitability. For the five largest banks, this form of income accounted for only around 5 per cent of total income in the years immediately preceding the onset of the market turmoil, with this share falling to around 2 per cent in the latest half year. In contrast, large global banks were earning as much as one third of their income from market-related activities prior to mid 2007. Consistent with the Australian banks' low exposure to

market risk, the value-at-risk – an estimate of the potential loss, at a given confidence level, over a specified time horizon – for the five largest banks was equivalent to only 0.05 per cent of shareholders' funds in the latest year.

Capital and Liquidity

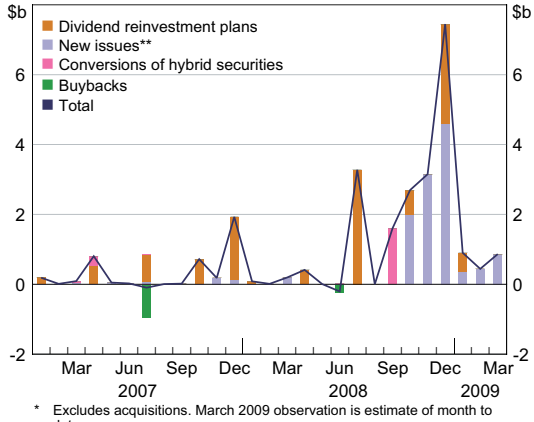
The Australian banking system remains soundly capitalised, with the aggregate capital ratio increasing by nearly 80 basis points, to 11.4 per cent, over the six months to December 2008 (Graph 34). This increase was largely accounted for by issuance of common equity, with the Tier 1 capital ratio increasing from 7.3 per cent to 8.2 per cent. The same general pattern is evident in the ratio of common equity to assets – a more straightforward measure of leverage – which has increased from 3½ per cent to 4 per cent over the past six months. The credit union and building society sectors are also well capitalised, with aggregate capital ratios of 16¼ and 14½ per cent. The recent increases in banks' capital ratios reflect market-wide pressures to increase capital, rather than any change in APRA's prudential requirements.[1]

Graph 34
Capital Ratios*



* Per cent of risk-weighted assets; break in March 2008 due to the introduction of Basel II for most ADIs
Source: APRA

Graph 35
Equity Raisings*
Five largest banks



* Excludes acquisitions. March 2009 observation is estimate of month to date.
** Includes new placements and employee share purchase plans.
Sources: ASX; banks' websites

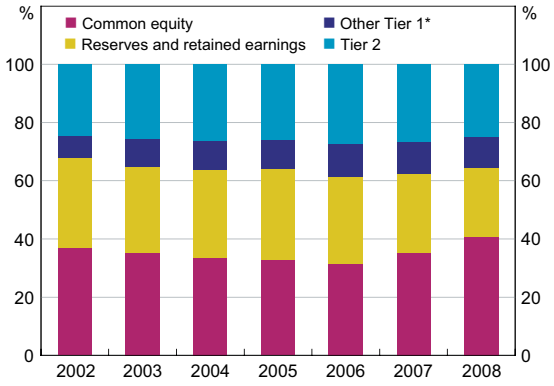
Unlike many of their international peers, the largest Australian banks have been able to raise the additional Tier 1 capital from private shareholders, rather than the Government, and have done so at only a modest discount to prevailing market prices. In the second half of 2008, the four largest banks issued a combined $18 billion of equity capital, with most of the recent raisings having taken the form of new issues of ordinary shares. This is in contrast to previous years when the major banks tended to rely more heavily on dividend reinvestment plans (Graph 35). The regional banks have also issued capital recently, raising a combined $1.3 billon of equity since mid 2008. These raisings have seen the share of banking system capital accounted for by common equity rise to around 40 per cent over 2008, after this share had generally fallen over recent years (Graph 36).

1 *See Laker, JF (2009), 'APRA: The Year Ahead', speech to the Australian British Chamber of Commerce, Sydney, 26 February.*

Graph 36

Components of Banks' Capital

Share of total capital before deductions, as at December



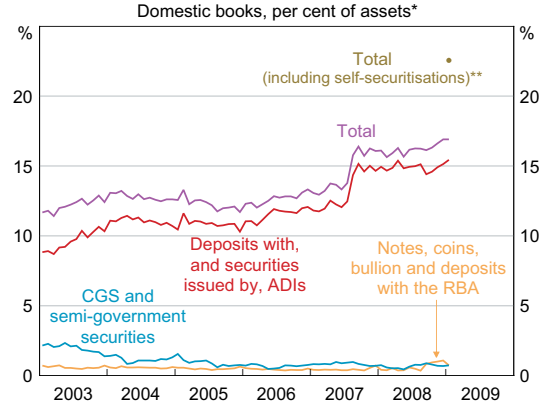
* Includes non-cumulative irredeemable preference shares and other Tier 1 capital instruments approved by APRA

Source: APRA

Graph 37

Banks' Liquid Assets

Domestic books, per cent of assets*



* Excludes non-resident assets

** Estimate for January 2009

Sources: APRA; RBA

It is also worth noting that APRA has adopted a conservative approach to the implementation of the Basel II Capital Adequacy Framework, especially regarding the risk weights that apply to residential mortgages and equity investments. For example, industry estimates suggest that the Tier 1 capital ratios of the four largest banks would be between 1½ and 3 percentage points higher if they were calculated under the UK Financial Services Authority's capital framework.

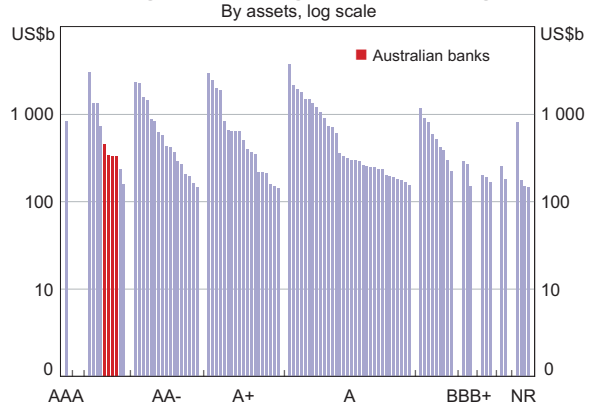
Another notable development since mid 2007 has been a marked rise in the banking system's holdings of liquid assets. Since the onset of the market turmoil, banks' holdings of liquid assets (including cash, deposits and highly rated securities) have increased by around 75 per cent, reflecting a more cautious approach to liquidity management in the challenging environment. This has seen the ratio of liquid assets to total domestic assets increase from around 13 per cent in mid 2007, to around 17 per cent as at January 2009, the highest share in over a decade (Graph 37). Given the very limited supply of liquid assets other than those issued by banks themselves, the higher holdings of liquid assets have largely taken the form of short-term paper issued by other banks. In addition to higher holdings of traditionally liquid assets, the banks have 'self securitised' around $135 billion of residential mortgages, with these eligible for repurchase agreements with the RBA.

Financial Markets' Assessment

Reflecting their relatively strong performance and solid capital positions, the largest Australian banks continue to be viewed favourably by rating agencies. Each of the four largest Australian banks is rated AA by Standard & Poor's (S&P), with these ratings having been unchanged since they were upgraded in early 2007 (Table 2). Given that many international banks have been downgraded

recently, only seven of the other top 100 global banking groups have an equivalent or higher rating from S&P (Graph 38).

Graph 38
Credit Ratings of the Largest 100 Banking Groups*
By assets, log scale



* Holding company ratings; predominantly Standard & Poor's
Sources: Bloomberg; *The Banker*

While S&P and Fitch maintain the major banks on a stable outlook, Moody's recently placed these banks on a negative outlook, but indicated that "…even in a severe downside scenario we would expect Australia's major banks to remain solidly positioned within the Aa rating band." The only Australian-owned bank to have had its rating downgraded since mid 2008 is Suncorp-Metway, with S&P reassessing the bank to be of 'strategic' rather than 'core' importance to the overall group. Recent takeovers have seen the ratings of both St George and BankWest raised to match their acquirers, Westpac and Commonwealth Bank.

Table 2: Long-term Ratings of Australian Banks[(a)]
As at 24 March 2009

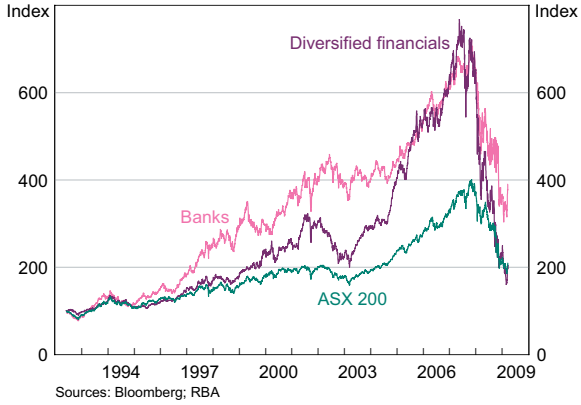
	Outlook	Current	Last change	
			Direction	Date
Adelaide Bank	Stable	BBB+	↑	October 2004
AMP Bank	Stable	A	↑	April 2008
ANZ Banking Group	Stable	AA	↑	February 2007
Arab Bank Australia	Stable	A-	--	January 2007
Bank of Queensland	Stable	BBB+	↑	April 2005
BankWest	Stable	AA	↑	December 2008
Bendigo and Adelaide Bank	Stable	BBB+	↑	February 2005
Citigroup	Negative	A+	↓	December 2008
Commonwealth Bank of Australia	Stable	AA	↑	February 2007
Elders Rural Bank	Negative	BBB	↑	August 2007
HSBC Bank Australia	Negative	AA	↑	July 2006
ING Bank (Australia)	Negative	AA	↑	August 2005
Macquarie Bank	Negative	A	--	November 1994
Members Equity Bank	Negative	BBB	↑	August 2006
National Australia Bank	Stable	AA	↑	February 2007
Rabobank	Stable	AAA	↑	August 1998
St George Bank	Stable	AA	↑	November 2008
Suncorp-Metway	Stable	A	↓	January 2009
Westpac Banking Corporation	Stable	AA	↑	February 2007

(a) Includes all Australian-owned banks, and foreign-owned banks operating in Australia that have an issuer rating from Standard & Poor's
Source: Standard & Poor's

Graph 39

Share Prices

1 June 1992 = 100

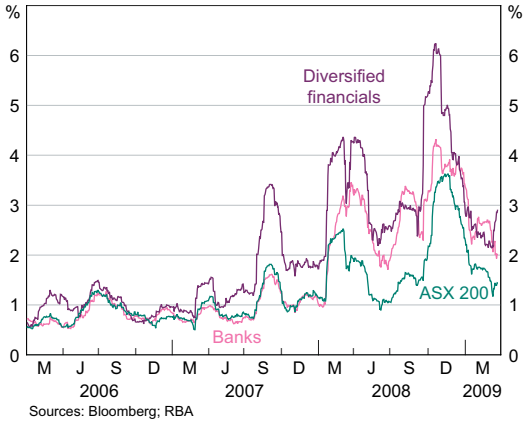


Sources: Bloomberg; RBA

Graph 40

Share Market Volatility

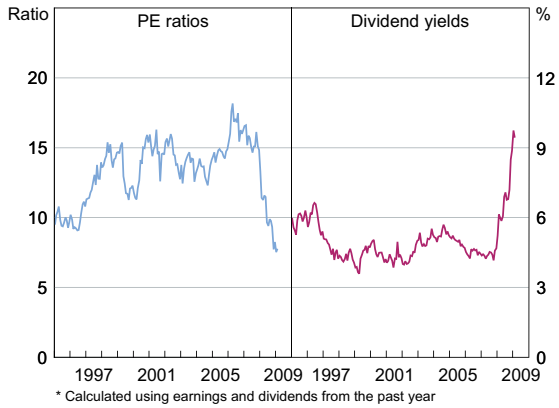
Rolling 30-day standard deviation



Sources: Bloomberg; RBA

Graph 41

Banks' PE Ratios and Dividend Yields*



* Calculated using earnings and dividends from the past year

Source: Thomson Reuters

Notwithstanding this generally favourable assessment, the index of Australian banks' share prices has fallen by 46 per cent from its November 2007 peak (Graph 39). Similarly, CDS premiums – the price paid by investors to insure debt – for Australian banks remain elevated. The cost of insuring the senior debt of the four largest Australian banks is currently around $200 per $10 000, compared to $5–$10 in the years preceding the financial turmoil.

The fall in banks' share prices is similar to that in the broader market, but considerably less than the falls in the banking share price indices in many other countries; the banking sectors in the United States, United Kingdom and Europe have all recorded declines of around 75 per cent from their peaks. Reflecting this, Australia's four largest banks are all currently ranked in the largest 30 banks in the industrialised countries when measured by market capitalisation, with the largest currently ranked ninth.

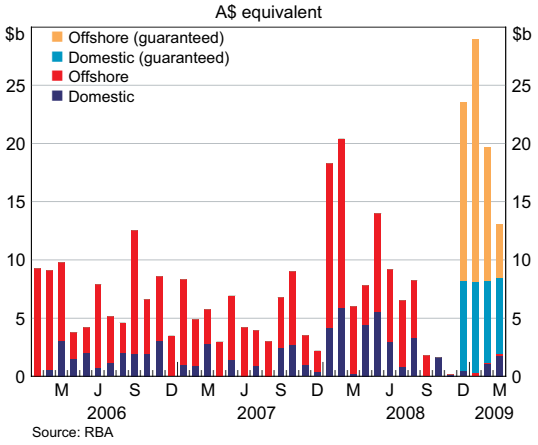
Despite the falls in share prices, volatility has declined recently for both banks and the market as a whole, though it remains above pre-crisis levels (Graph 40). The daily movement in the Australian share market since July 2007 has averaged just under 2 per cent, compared to an average of 0.8 per cent over the previous 10 years. The volatility of banks' share prices is also lower than it was late last year, but remains above that for the market as a whole.

The movements in banks' share prices over the past year or so has seen significant changes in market-based

valuation measures, with the price/earnings ratio for the banking sector falling to around 8 as at end February, less than half the 2006 peak (Graph 41). Similarly, dividend yields for Australian banks are around 9.4 per cent, compared to a 10-year average of 4.9 per cent, consistent with recent indications that dividends are likely to be lower in the period ahead.

Guarantee Arrangements

Graph 42
Banks' Bond Issuance
A$ equivalent



Source: RBA

As discussed in *The Global Financial Environment* chapter, the bout of heightened risk aversion that swept through global capital markets in the latter part of 2008 led to pressure on the availability and cost of funding for banks around the world. The collapse of Lehman Brothers in September precipitated a period of extreme uncertainty about the health of the global financial system, and the increase in risk aversion led to the virtual closure of global capital markets. Despite their ongoing good performance, the Australian banks were not immune from these developments, with investors becoming reluctant to buy long-term bank debt and some depositors also showing signs of nervousness. In response to this extraordinary environment, and following moves by the Irish Government in late September, many governments announced that they would strengthen their deposit protection arrangements and provide guarantees of banks' wholesale debt. In line with these developments, the Australian Government also moved to reassure depositors and investors in October by announcing guarantee arrangements for deposits and wholesale funding. These arrangements have been successful in sustaining depositor confidence and in ensuring that Australian banks have continued access to capital market funding.

The guarantee arrangements for wholesale funding became fully operational on 28 November 2008, with the Government announcing that the arrangements would remain in place until 'market conditions normalise.' Access to the scheme is on a voluntary basis, with institutions able to apply to have each line of securities guaranteed for a fee (see *Box A: Government Guarantees on Deposits and Wholesale Funding*). Since these arrangements have been in place, Australian banks have issued $85 billion of long-term debt, with $81 billion of this having been issued under the guarantee scheme (Graph 42 and Table 3). This compares with just $3½ billion of term debt that was issued over the three months to November 2008. Around two thirds of the guaranteed bonds have been issued offshore, mainly in the US private placement market and, more recently, in the Japanese 'Samurai' market. In total, nine banks have issued long-term debt under the guarantee program.

Table 3: Guaranteed Liabilities

	Daily average value[a]			Value as at
	Dec 08[b]	Jan 09	Feb 09	24 Mar 09
	$b	$b	$b	$b
Deposits	18.1	19.2	19.3	--
Short-term wholesale	15.4	19.4	22.4	18.9
Long-term wholesale	8.6	35.9	60.4	81.2
Total	**42.1**	**74.5**	**102.2**	--
Memo: Fees paid ($m)	*32.7*	*51.3*	*63.2*	--

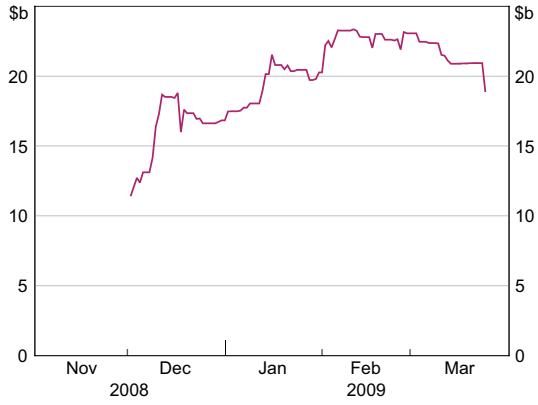
(a) Components may not add to the total due to rounding
(b) This includes 28–30 November, as the Deed of Guarantee became operative on 28 November

Source: Australian Government Guarantee Scheme Administrator

Banks have also issued guaranteed short-term paper, but the volumes have been much lower than for term debt. Currently, the value of guaranteed short-term debt outstanding is estimated to be around $19 billion, which is equivalent to 5½ per cent of total short-term bank debt outstanding (Graph 43). After strong issuance in the early stages of the guarantee arrangements, the value of outstanding short-term debt has drifted down over the past couple of months. In contrast to long-term debt, most guaranteed short-term paper has been issued in the domestic market.

In setting the premiums on the guarantee, the Government considered a range of factors, including the international experience and the need to ensure that the guarantee arrangements did not continue indefinitely. In particular, the premiums were set at a level that was between the then current market price – which was viewed as the product of very stressed conditions – and the price that is likely to prevail when more normal market conditions return. Institutions pay the guarantee fees on the average daily value of guaranteed liabilities over the preceding month and, on this basis, have paid total fees of $147 million since the scheme was introduced.

Graph 43
Guaranteed Short-term Liabilities



Sources: Austraclear; Australian Government Guarantee Scheme Administrator

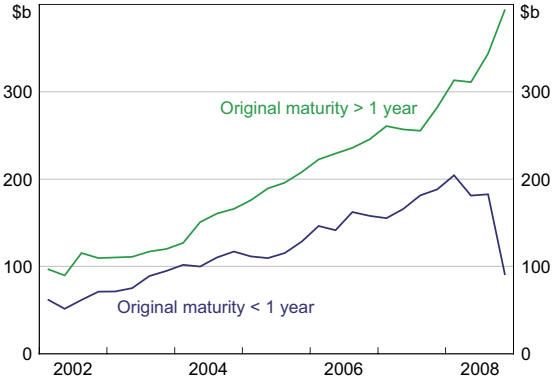
The recent pattern of capital market issuance has seen the banking system reduce its reliance on short-term capital market funding, after a number of banks had shortened the maturity of their liabilities in the early stages of the market turmoil. Over the year to December 2008 (the latest available aggregate data), the value of banks' outstanding securities with an original maturity less than one year that are held outside of the domestic banking sector fell by around $95 billion, with their share of total outstandings declining by over 20 percentage points, to just under 20 per cent (Graph 44). Since

the guarantee was announced, banks have issued the vast majority of their debt at terms of 3 to 5 years, with the average maturity of outstanding bonds increasing slightly over recent months.

The other aspect of the guarantee arrangements is the guarantee on deposits. For amounts of up to $1 million there is no fee for the guarantee, and for amounts above $1 million the guarantee only applies if the ADI pays the relevant fee. For large deposits, institutions are typically offering the guarantee on an 'opt in' basis to customers, though there has been relatively little demand for this guarantee, with the guarantee fee being paid on around $19 billion of deposits in February 2009.

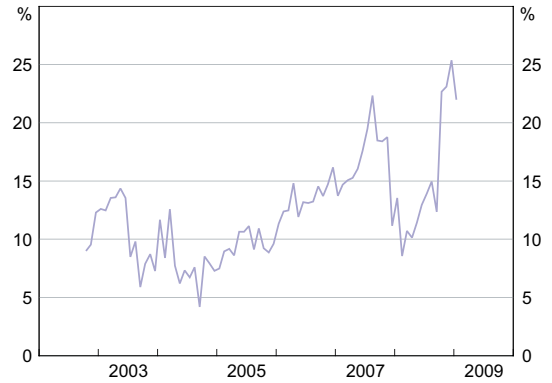
The deposit guarantee has been important in helping reassure depositors, after there were signs of nervousness following the collapse of Lehman Brothers. This nervousness was evident in the increased demand for banknotes late last year, as well as in changes in deposit flows within the ADI sector, with the largest banks gaining market share in the period preceding the guarantee announcement and some smaller institutions losing market share.

Graph 44
Banks' Non-intermediated Debt*



* Net of domestic interbank holdings
Source: APRA

Graph 45
ADI Deposits*
Six-month-ended annualised percentage change



* Seasonally adjusted and adjusted for changes in reporting. Excludes foreign currency and intra-group deposits and certificates of deposit
Sources: APRA; RBA

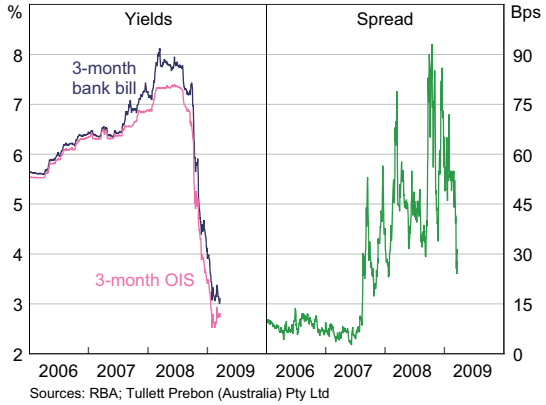
With the safety of deposits no longer a notable concern for the public, the period since the introduction of the guarantee has seen continued strong deposit growth for the ADI sector as a whole, and a number of the smaller institutions have regained some of the market share that they had ceded to the major banks. Over the six months to January 2009, total deposits in ADIs increased at an annualised rate of more than 20 per cent, around the fastest rate for many years (Graph 45). Both household and business deposit flows have been above average, with growth in term deposits particularly strong. This reflects both supply and demand factors. As discussed below, banks have been competing more vigorously for deposit funding, and increased risk aversion on the part of investors has increased demand. The latest Westpac and Melbourne Institute Survey of Consumer Sentiment, for instance, showed that around one third of surveyed households viewed bank deposits as the 'wisest place for savings', which is around the highest share in over 15 years.

Funding Conditions

While the guarantee arrangements have facilitated access to capital markets, spreads on wholesale funding remain well above pre-crisis levels, although lower than in late 2008. In the domestic money market, the spread between the yield on three-month bank bills and the overnight index swap rate for the same maturity reached a peak of around 90 basis points in October, after averaging around 45 basis points over the preceding couple of months, and around 10 basis points prior to the onset of the market turmoil (Graph 46). More recently, this spread has narrowed significantly to currently be around 30 basis points.

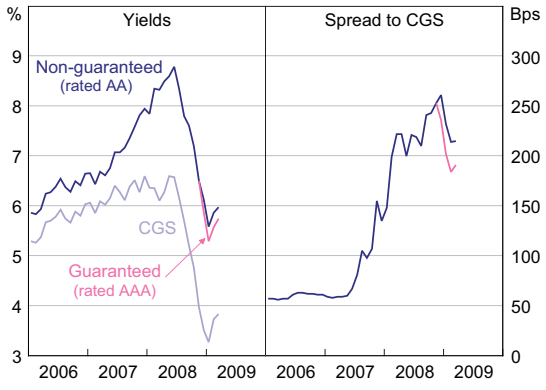
Spreads on term debt also widened further towards the end of last year, with the spread between five-year domestically issued bonds and Commonwealth Goverment Securities (CGS) increasing to over 250 basis points, compared with around 200 basis points in mid 2008 and around 60 basis points prior to the onset of the market turmoil. Despite the higher spreads, declines in long-term interest rates have meant that bank bond yields are currently around 300 basis points lower than in mid 2008. The spreads on offshore funding also widened markedly, with the effective Australian dollar spread widening by around the same amount as domestic spreads (after taking into account the cost of swapping the debt back into Australian dollars). So far this year, spreads have narrowed a little, with domestic unguaranteed bonds currently trading in secondary markets at a weighted-average spread to CGS of around 215 basis points, and guaranteed bonds trading at spreads of 190 basis points (including the guarantee fee; Graph 47).

Graph 46
Short-term Interest Rates



Sources: RBA; Tullett Prebon (Australia) Pty Ltd

Graph 47
Major Banks' Bond Pricing*
5-year domestically issued debt, monthly



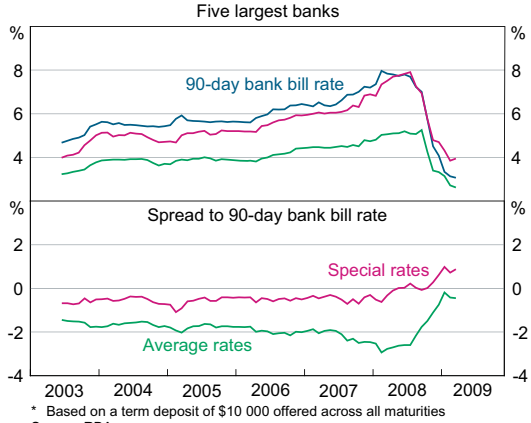
* Includes fee for guaranteed issues
Sources: Bloomberg; RBA; UBS AG, Australia Branch

Recent developments have also had an effect on competition in the deposit market, as banks have been seeking to increase their share of funding sourced from deposits. This overall strong competition for deposits has seen a significant increase in deposit rates relative to short-term money market rates (Graph 48).

While banks have been able to tap capital markets and attract strong inflows of new deposits, conditions

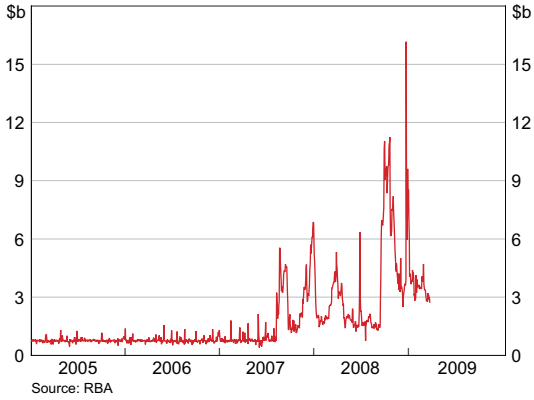
in the asset-backed commercial paper (ABCP) and residential mortgage-backed securities (RMBS) markets remain difficult. As discussed in detail in previous *Reviews*, ABCP markets around the world were the first to be affected by the repricing of risk, and these markets have remained strained. As at December 2008, the outstanding value of ABCP issued by Australian entities (on and offshore) was around $40 billion, 45 per cent lower than its peak in mid 2007. It is estimated that the spread on domestic ABCP over the bank bill rate is currently around 65 basis points, whereas it had been possible to issue ABCP at spreads of around 5 basis points prior to mid 2007. Conditions in the RMBS market also continue to be very difficult, with spreads remaining uneconomic for most issuers. RMBS issuance had averaged just $2½ billion per quarter since mid 2007, compared to a quarterly average of $15 billion over the previous two years. Of the issuance that has taken place since end October, the bulk has been purchased by the Australian Office of Financial Management (AOFM) (see *Developments in the Financial System Architecture* chapter).

Graph 48
Term Deposit Rates*
Five largest banks



* Based on a term deposit of $10 000 offered across all maturities
Source: RBA

Graph 49
Exchange Settlement Balances



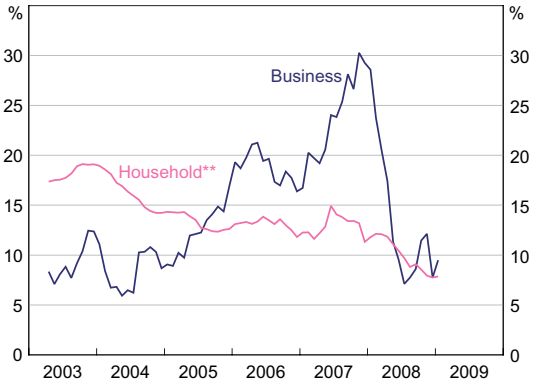
Source: RBA

To assist in the smooth functioning of markets, the RBA has adopted various measures in response to the difficult conditions over the past year. One of these was to significantly increase the supply of Exchange Settlement balances, with these balances peaking in December, partly in response to increased demand for settlement balances around year end (Graph 49). In addition, the RBA has enhanced the flexibility of its domestic liquidity operations by accepting a wider range of securities for repurchase agreements, and conducting repurchase agreements for longer terms.

Lending Growth and Credit Conditions

Domestic credit growth has moderated over the past six months, reflecting a combination of demand and supply factors. As discussed in more detail in the *Household and Business Balance Sheets* chapter, businesses and households are taking a more cautious approach to gearing in the current environment and have reduced their demand for new borrowing. At the same time, there has been some tightening in the terms and conditions on which credit is available, although this is not an unexpected development at this stage of the credit cycle.

Graph 50
Bank Credit*
Six-month-ended annualised percentage change



* Seasonally adjusted and adjusted for some series breaks
** Including securitisation
Sources: APRA; RBA

Bank business credit increased at an annualised rate of 9½ per cent over the six months to January 2009, although growth has slowed more recently as new lending has been offset by loan repayments (Graph 50). These outcomes follow the very strong growth in business credit over the second half of 2007 when capital markets dried up and companies increasingly turned to banks for funding.

As financial conditions have tightened, there has been an easing of the very strong competition that was evident in some areas of the business loan market in the middle years of this decade. Industry liaison suggests that banks have sought to restore credit standards somewhat, including by increasing their risk margins and strengthening non-price conditions such as collateral requirements and loan covenants. Indications are that this has been more pronounced for larger-value loans than for smaller business loans. By industry, conditions have tightened appreciably for commercial property, reflecting the high degree of uncertainty about asset quality and valuations.

The strong competition in the middle years of the decade had been underpinned by the activities of some newer entrants into the market, including foreign-owned banks. These banks had, as a group, been expanding their business lending at an above-average pace for several years and made notable gains in their share of the large-value segment of the market. While, in aggregate, foreign-owned banks continued to extend credit to domestic borrowers over the past six months, the pace of expansion is noticeably slower than had previously been the case. At the same time, credit extended by the five largest banks has increased at a slightly faster pace than total business credit over the past six months (Graph 51).

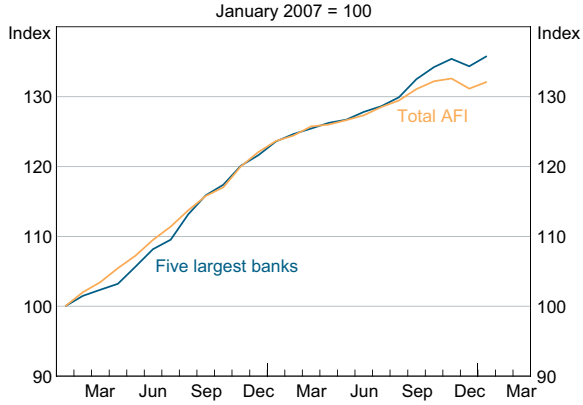
The available evidence also suggests that, despite the tightening in conditions, banks have continued to lend to the commercial property sector. According to APRA data, banks' outstanding exposures to Australian commercial property increased by nearly $9 billion, or 5 per cent, over the December quarter. Information from the syndicated loan market also suggests

that most property companies that had large refinancing requirements during 2008 were generally able to rollover their debt, albeit on less accommodating terms than in the recent past (Graph 52).

Not unexpectedly, the growth of banks' lending to households has also moderated recently, with household credit (including loans no longer held on banks' balance sheets because they have been securitised) growing at an annualised rate of around 8 per cent over the six months to January 2009, compared to 10 per cent over the previous six months. This is a faster rate than the overall growth in household borrowing, reflecting the fact that banks have increased their market share in home loan originations since the turmoil began.

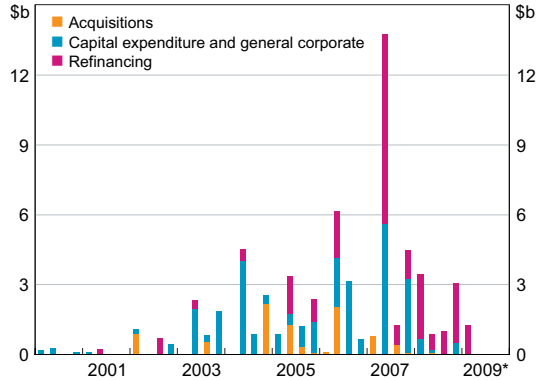
On the demand side, households are taking a more conservative approach to their finances and, in aggregate, have increased savings and reduced their appetite for new borrowing. On the supply side, lenders have recently unwound some of the easing in lending standards that occurred in previous years, particularly for higher-risk borrowers. Many lenders have reduced their maximum loan-to-valuation ratios (LVRs), with most of the largest lenders reportedly no longer offering 100 per cent LVR loans. Most lenders are also applying tighter criteria for low-doc loans, including increased documentation requirements and risk margins. There are also signs that banks are paying closer attention to the pricing of full-doc home loans, with at least one major bank reducing the typical 'discount' that it offers below the advertised standard variable rate on average-sized full-doc loans to 50 basis points, from 70 basis points.

Graph 51
Business Credit*
January 2007 = 100



* Seasonally adjusted and adjusted for some series breaks
Sources: APRA; RBA

Graph 52
Syndicated Loan Approvals – Real Estate



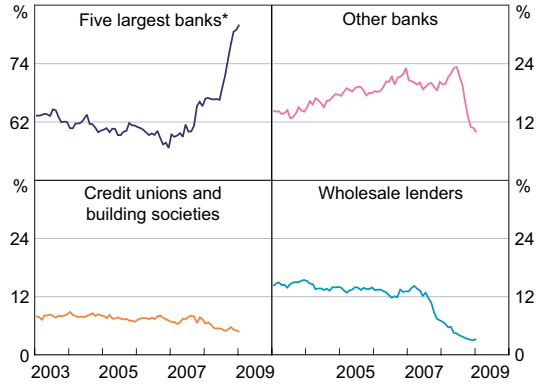
* March quarter observation is quarter to date
Source: Thomson Reuters

These developments have occurred against a backdrop of significant changes in market shares and the nature of competition in the mortgage market. Most notably, lenders that had previously relied heavily on securitisation for funding have been significantly affected by the strains in the RMBS market. The share of owner-occupier loan approvals accounted for by wholesale lenders fell to around 3 per cent in January 2009, from around 12 per cent in mid 2007. The smaller Australian-owned banks, foreign banks, as well as credit unions and building societies have also lost some market share over

Graph 53

Share of Owner-occupier Loan Approvals

By lender, seasonally adjusted



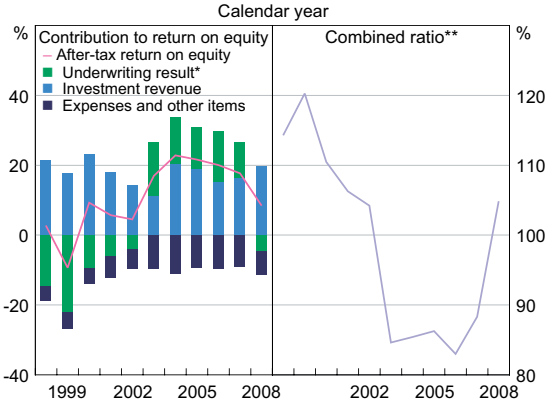
* Includes BankWest from January 2009

Sources: ABS; APRA; RBA

Graph 54

Performance of General Insurers

Calendar year



* Premium revenue (net of reinsurance expense) minus claims and underwriting expenses

** Claims and underwriting expenses as a per cent of premium revenue (net of reinsurance expense)

Source: APRA

the past year or so. In contrast, the five largest Australian banks have increased their share of new owner-occupier loans to 82 per cent in January 2009, a 20 percentage point increase from mid 2007 (Graph 53).

General Insurers

The Australian general insurance industry reported aggregate post-tax profits of $2.2 billion in 2008, which translated into an aggregate post-tax return on equity of around 8½ per cent (Graph 54). While this was lower than the returns recorded during the previous few years, it continued the run of solid industry profits since the turn of the decade.

The downward pressure on insurers' profits over the past year largely reflects more difficult underwriting conditions. Aggregate claims (net of reinsurance and other recoveries) paid by Australian insurers increased by 33 per cent over 2008, compared with an average annual rise of 3 per cent over the previous three years. The factors that contributed to this outcome included a number of significant weather-related events as well as an increase in the size and frequency of smaller claim events in a number of classes of business. At the same time, industry net premium revenue – gross premium revenue less reinsurance expenses – increased by around 4 per cent in 2008. This compares to an annual average rise of around 2 per cent over the past few years, with the pick-up in growth reflecting premium rate rises for both commercial and personal lines of insurance. Nonetheless, the industry's underwriting result was the weakest for a number of years, with the aggregate combined ratio – claims and underwriting expenses relative to net premium revenue – increasing by 17 percentage points, to 105 per cent. This is the highest level since 2002 and indicates that, in aggregate, insurers recorded a loss on their underwriting business over the past year.

With underwriting results weaker than for some time, Australian insurers' profits in 2008 were mainly from returns on invested premiums. Unlike many of their international peers,

Australian insurers have been relatively insulated from the decline in the equity market over the past year, with only around 7½ per cent of their financial assets held directly in equities at the beginning of the year. Around three quarters of their financial assets are held in fixed-income securities, so insurers have generally benefited from price gains on these holdings. Consistent with this conservative investment mix, Australian insurers have not reported any direct exposure to US sub-prime mortgage assets and associated structured investments.

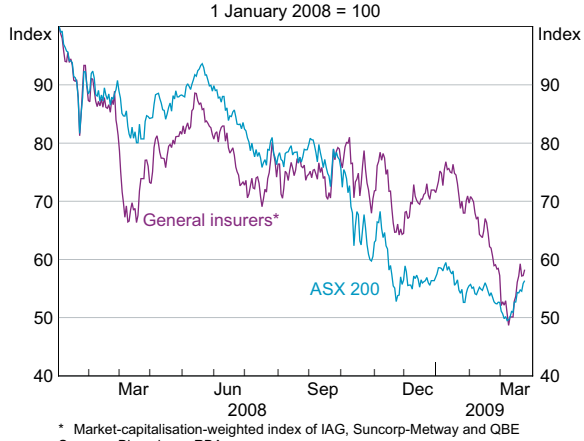
Despite having faced more difficult operating conditions in 2008, the aggregate capital position of the general insurance industry remains sound, with insurers holding capital of around twice the regulatory minimum as at mid 2008 (the latest available aggregate data). Several of the large insurers have also raised capital, including IAG and QBE which have raised around $2.5 billion in recent months.

Rating agencies continue to hold a generally favourable view of the Australian insurance industry. The four largest general insurers are all rated A+ or higher by S&P, with Suncorp's general insurance division retaining its A+ rating despite the downgrade of its banking operations (Table 4). In addition, the rating agencies' outlooks on these four insurers are stable, in contrast to the negative outlooks assigned to many of their international peers. Share prices of the largest listed Australian insurers are, however, around 40 per cent lower than at the beginning of 2008, and had until recently fallen sharply in 2009, partly reflecting the expected impact on profits of the Victorian bushfires, and some profit results having been lower than the market expected (Graph 55). Notwithstanding this, the share price performance of Australian insurers compares favourably with other international markets; for example, the US insurance index has fallen by around 70 per cent over the past year, and the European insurance index has fallen by more than 60 per cent.

Graph 55

General Insurers' Share Prices

1 January 2008 = 100



* Market-capitalisation-weighted index of IAG, Suncorp-Metway and QBE
Sources: Bloomberg; RBA

Table 4: Financial Strength Ratings of Selected Large Insurers

As at 24 March 2009

	Current	Outlook
Allianz Insurance Australia	AA-	Stable
Insurance Australia Group	AA-	Stable
QBE Insurance Australia	A+	Stable
Suncorp-Metway Insurance	A+	Stable

Source: Standard & Poor's

Over the past year, Australian general insurers ceded around one quarter of gross premium revenue to reinsurers, and several of the larger Australian insurers have recently sought to strengthen their reinsurance arrangements for 2009. This has generally involved the lowering of retention limits – the maximum amount that an insurer is liable to pay for a single event before the rest is passed on to reinsurers. For some insurers, it has also involved the purchasing of aggregate cover, which protects them against large losses from the accumulation of smaller individual events.

The majority of this reinsurance cover is placed with the large global reinsurers. The global reinsurance industry had experienced several years of strong profitability in the middle years of this decade, though more recently several reinsurers have reported large investment losses as the market turmoil spread from structured finance-related assets, where reinsurers had relatively low exposures, to bonds and equity securities. On the underwriting side, reinsurers have also had to absorb large claims, including those associated with hurricanes Ike and Gustav in the United States. This has placed some pressure on reinsurers' balance sheets, though evidence from the 2009 reinsurance renewal period suggests that premium rates have risen. Notwithstanding some high-profile downgrades, the majority of large reinsurance companies are rated A or higher by S&P.

As discussed in the previous *Review*, developments in global housing markets have focused attention on the lenders' mortgage insurance (LMI) sector. Mortgage insurance provides protection for lenders against borrower default, and is also a form of credit enhancement in the RMBS market. In Australia, the largest non-captive LMIs are QBE and Genworth, and these insurers have continued to report solid profits during 2008, though claims have recently risen a little. In contrast, US mortgage insurers have reported large losses over the past year or so, as house prices there have fallen and defaults have risen significantly. Despite the relatively good performance of the Australian housing market, the poor outcomes in the United States have had implications for the Australian LMI industry, as until recently the largest insurers were both owned by US mortgage insurers. While the sale of PMI's Australian division to QBE in September last year distanced part of the Australian LMI industry from the difficulties experienced by US mortgage insurers, large losses at the US parent of Genworth saw its credit rating downgraded, which has affected the credit rating of Genworth's local operations.

Not surprisingly, the largest Australian mortgage insurers have recently tightened their underwriting standards. This has occurred against the backdrop of tightened lending standards at banks, and has generally involved increased documentation requirements on low-doc loans and a reduction in the maximum LVRs on loans that insurers are willing to cover.

Managed Funds

The turbulence in financial markets over the past year or so has had a marked impact on the performance of the funds management industry. On a consolidated basis, the industry's assets under management fell by around 14 per cent over the year to December 2008, to stand at $1.2 trillion (Table 5). The recent falls have been broadly based across all fund types.

Table 5: Funds under Management
Consolidated, December 2008

	Level	Share of total	Six-month-ended annualised percentage change	
			Jun 2008	Dec 2008
	$b	Per cent	Per cent	Per cent
Superannuation funds	717.6	59.9	–7.2	–18.6
Life insurers[a]	164.9	13.8	–20.5	–18.7
Public unit trusts	255.4	21.3	–16.8	–14.1
Other managed funds[b]	59.3	5.0	4.7	–11.2
Total	**1,197.2**	**100.0**	**–10.8**	**–17.4**
Of which:				
All superannuation assets[c]	852.0	71.2	–12.1	–18.7

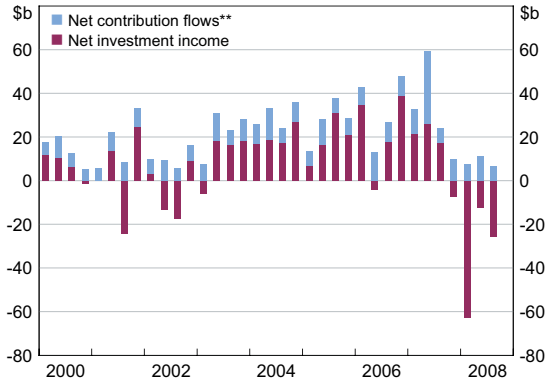
(a) Includes superannuation funds held in the statutory funds of life insurers
(b) Cash management trusts, common funds and friendly societies
(c) Superannuation funds plus an estimate of the superannuation assets held in the statutory funds of life insurers
Sources: ABS; RBA

Superannuation Funds

According to ABS data, superannuation funds' (consolidated) assets under management fell by 14 per cent over the year to December 2008, compared with a decade-average annual growth rate of around 16 per cent. This fall primarily reflects lower valuations on investment assets during 2008, with APRA data showing that superannuation funds recorded aggregate losses on their investment portfolios of around $100 billion in the first nine months of 2008 (Graph 56). While aggregate APRA data on returns for the December quarter are not yet available, industry data show that superannuation funds have recorded further losses since the end of the September reporting period. Inflows of new funds have also been significantly lower than in recent years, as market-linked assets have become less attractive to many investors. In the September quarter, net inflows into superannuation funds were $6.9 billion, compared with a quarterly average of around $9 billion between 2002 and mid 2007.

With around half of superannuation funds' assets held in domestic equities and units in trusts as at June 2007, the downturn in equity markets has had a significant effect on the superannuation industry. Since the onset of the market turmoil, allocations to domestic equities and

Graph 56
Superannuation Funds' Financial Performance*
Quarterly



* From December 2004, data cover entities with at least $50 million in assets
** Total contributions received by funds plus net rollovers minus benefit payments
Source: APRA

units in trusts have fallen to around 42 per cent of assets under management, while holdings of cash and deposits have increased to around 18 per cent of assets, their highest share in at least 20 years (Table 6).

Table 6: Superannuation Funds' Assets
Unconsolidated[a], December 2008

	Level	Share of total	Six-month-ended annualised percentage change	
			Jun 2008	Dec 2008
	$b	Per cent	Per cent	Per cent
Cash and deposits	154.9	17.8	14.7	19.9
Loans and placements	7.9	0.9	8.9	4.0
Short-term securities	37.7	4.3	3.9	-7.5
Long-term securities	48.2	5.5	-12.6	-16.5
Equities	238.9	27.5	-18.4	-38.1
Units in trusts	130.4	15.0	-19.1	-24.4
Other assets in Australia[b]	91.9	10.6	34.4	5.8
Assets overseas	158.6	18.3	-16.9	-22.8
Total	**868.4**	**100.0**	**-9.2**	**-18.9**

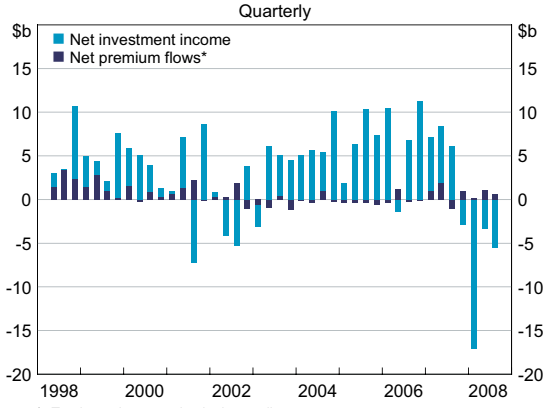
(a) Not adjusted for cross-investments with other managed fund sectors
(b) Includes non-financial assets

Source: ABS

Life Insurers

According to ABS data, life insurers' (consolidated) assets declined by 20 per cent over 2008, after having increased at an average annual rate of around 4 per cent over the previous decade. Superannuation assets continue to account for around 90 per cent of life insurers' total assets, and investment returns on these funds have typically accounted for a significant share of life insurers' asset growth. In previous years, this reflected the strong growth of the equity market, as around three quarters of life insurers' assets are held in equities and units in trusts. However, over the year to September 2008 (the latest available aggregate data), the exposure to declining equity markets contributed to the industry recording around $30 billion in investment losses, with further losses likely to be reported in more recent quarters (Graph 57). While income derived from ordinary 'risk' business remained positive in 2008, the majority of life insurers' revenue is sourced from superannuation, meaning that the overall performance of the industry will remain closely tied to developments in this sector. Notwithstanding large investment losses, the aggregate capital position

Graph 57
Life Insurers' Financial Performance
Quarterly



* Total premiums received minus policy payments
Source: APRA

of the life insurance industry remained sound as at end September, with insurers holding capital of around 1½ times the minimum requirement.

Public Unit Trusts and Other Managed Funds

Outside of superannuation funds and life offices, the majority of funds under management are invested in public unit trusts. On a consolidated basis, assets of public unit trusts declined by around 16 per cent in 2008 (Table 7). The declines in asset values have been broadly based across the various types of public unit trusts, with most asset classes having experienced price falls since the onset of the market turmoil. The fall has been largest for unlisted equity trusts, whose assets under management declined by 38 per cent over the year to December 2008.

One sector that has been particularly affected by recent developments is the mortgage trust industry. While many of these funds had been experiencing outflows over the first three quarters of 2008, redemptions accelerated in September and October in the wake of the general retreat from risk taking and the guarantee arrangements on deposits. Given the illiquidity of the trusts' underlying assets, most responded by suspending redemptions. Following these redemption freezes, ASIC introduced provisions allowing members to apply to withdraw funds on hardship grounds, including if they would be unable to meet immediate living or medical expenses. As at late December, around 500 applications had been received. Some of the suspended trusts have also begun to offer withdrawals, with funds generally being made available on a pro-rata basis.

Table 7: Public Unit Trusts' Assets
Unconsolidated[(a)], December 2008

			Six-month-ended annualised percentage change	
	Level	Share of total	Jun 2008	Dec 2008
	$b	Per cent	Per cent	Per cent
Listed property trusts	125.8	44.4	–1.4	0.9
Listed equity trusts	51.4	18.2	–6.4	–5.5
Unlisted equity trusts	75.7	26.8	–37.0	–38.4
Other trusts	30.2	10.7	–15.9	–18.9
Total	**283.0**	**100.0**	**–17.4**	**–15.6**

(a) Not adjusted for cross-investments with other managed fund sectors
Source: ABS

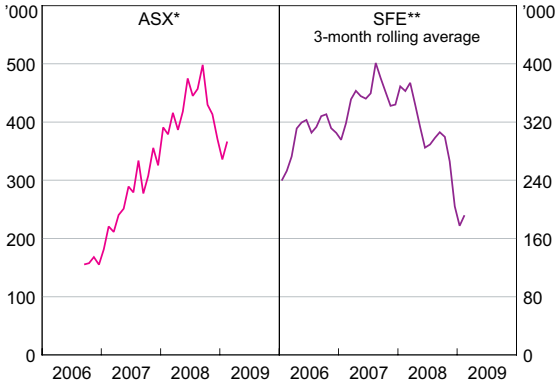
Market Infrastructure

A noteworthy feature of the recent difficult environment is that the infrastructure supporting Australia's financial markets has continued to function effectively. Australian equity market trading volumes rose to record levels in late 2008, reaching a peak of around 500 000 trades per day in October, though volumes have declined somewhat since then (Graph 58). Turnover on the Sydney Futures Exchange (SFE) has also declined recently, to around 180 000 trades per day, compared to a peak of 400 000 in late 2007. The default of Lehman Brothers was handled without significant disruption, high-value settlements have continued to operate efficiently, and the central counterparties servicing the equity and exchange-traded derivatives markets have increased margin requirements and undertaken closer monitoring of participants.

Graph 58

Market Turnover

Daily average number of trades



* Includes equities, interest rate and warrant trades
** All contracts
Source: ASX

In RITS, the real-time high-value payments system operated by the Reserve Bank, there has been an observed improvement in the timeliness of settlement, notwithstanding an increased focus by market participants on counterparty risk. As an illustration of the improvement, since mid September 2008 half of the daily payments (by value) have typically been completed by 2:00 pm, whereas in the year to mid September 2008 it typically took until 2:30 pm to complete half the payments (Table 8). The improvement is also evident in average queue times in RITS which have declined significantly for many banks (Graph 59). An important factor in explaining the continued smooth operation of Australia's high-value payment system is the increase in Exchange Settlement balances at the Reserve Bank. With additional balances in the system, banks have been able to make payments earlier in the day without fear that there would be a shortage of liquidity later in the day.

Table 8: RITS Throughput

Time by which each percentage of total value is settled

	25 per cent	50 per cent	75 per cent
Jul 06 – Jul 07	12:00	14:45	16:15
Aug 07 – 12 Sep 08	11:45	14:30	16:00
15 Sep 08 – Oct 08	11:30	14:00	16:00
Nov 08 – Feb 09	11:45	14:00	15:45

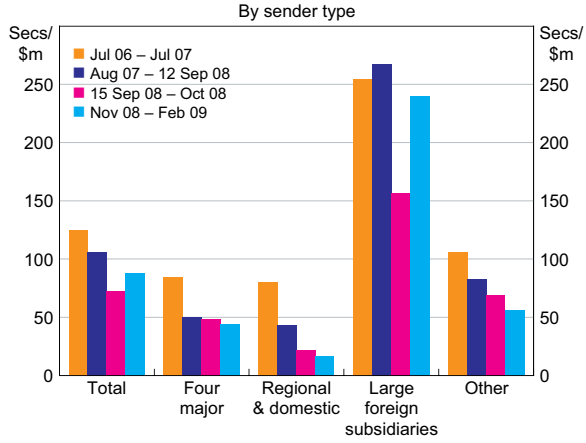
Source: RBA

Foreign exchange-related settlements through the Continuous Linked Settlement Bank (CLS) have also proceeded smoothly over recent months, despite some operational challenges associated with the failure of Lehman Brothers. An increased focus on counterparty credit risk has underscored the rationale for having introduced a payment-versus-payment (PvP) settlement system for the foreign exchange market. In offering PvP settlement, CLS is specifically designed to manage the risk that one party might pay away the currency it is selling and, due to the failure of its counterparty, not receive in return the currency it is purchasing.

Two key components of the financial infrastructure are the central counterparties operated by the Australian Securities Exchange (ASX): the Australian Clearing House (ACH) which clears trades for the equity market, including ASX options; and the Sydney Futures Exchange Clearing Corporation (SFECC), which clears futures trades. Although Lehman Brothers was not a direct

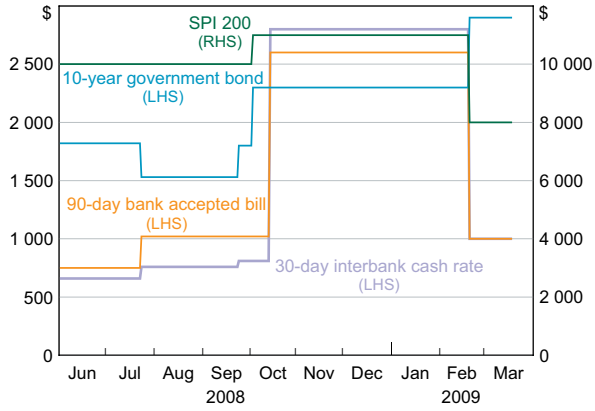
participant in the Australian central counterparties operated by the ASX, a number of participants had provided it with clearing services, and the central counterparties assisted in the close out or transfer of these firms' Lehman Brothers-related open derivatives positions, avoiding significant disruption to the market. In the cash equities market, Lehman Brothers' third party clearers honoured any unsettled trades, although there was a brief period of increased settlement fails reflecting a delay in the release of Lehman's securities owing to legal uncertainties. Overall, the rate of fails on equities settlements in Australia remains very low, although failure rates did increase temporarily after the ban on short selling was introduced, as some securities lenders became reluctant to lend securities.

Graph 59
RITS Queue Times*
By sender type



* Excluding batch settlements
Source: RBA

Graph 60
SFE Futures Initial Margin
Per contract



Source: ASX

Finally, in response to the increased volatility, Australia's two central counterparties have increased margin requirements, as well as increasing their surveillance of participants. In several cases, the changes in initial margins have been sizeable, leading to a large increase in margin funds held by the central counterparties. For instance, on 15 October the initial margin rate for the 90-day bank bill futures was increased from $1 020 to $2 600 and the rate on 30-day interbank cash rate futures contracts from $810 to $2 800 (Graph 60). This added $760 million to the pool of initial margin held by SFECC. The combination of significant initial margin adjustments during the period and an increase in participants' open positions led to a more than doubling in the amount of collateral held by SFECC between June and December 2008 (from $3 billion to $6.8 billion). Moreover, the increased volatility has meant that it has not been uncommon for participants' initial margins on derivatives to be eroded rapidly and, as a result, intraday margins have been called more regularly, for both SFECC and ACH.

Box A: Government Guarantees on Deposits and Wholesale Funding

On 12 October 2008, the Australian Government announced guarantee arrangements for deposits and wholesale borrowing, following similar announcements in some other countries. Further details of these arrangements – including the announcement of a guarantee fee on large deposits – were released on 24 October following advice from the Council of Financial Regulators. These arrangements were designed to support confidence of depositors in authorised deposit-taking institutions (ADIs) and to help ensure that these institutions continued to have access to capital markets and were not disadvantaged compared to banks in other countries where guarantee arrangements had been announced.

Guarantee on Deposits

The guarantee on deposits is provided under two schemes, the Financial Claims Scheme and the Australian Government Guarantee Scheme for Large Deposits and Wholesale Funding (the Guarantee Scheme).

Under the Financial Claims Scheme, total deposit balances up to and including $1 million per customer held in eligible ADIs – Australian-owned ADIs and Australian-incorporated ADIs which are subsidiaries of foreign-owned banks – are automatically guaranteed by the Australian Government without charge. The Financial Claims Scheme is estimated to cover the entire deposit balances of over 99 per cent of depositors (by number) with eligible ADIs, as most depositors have relatively small balances.

For customers with total deposit balances over $1 million at a single eligible ADI, the ADI can access a government guarantee for that portion of the balance over $1 million through the Guarantee Scheme. To do so, the ADI must apply to the Scheme Administrator (that is, the Reserve Bank of Australia as agent for the Government). The ADI application must include details of the accounts on which the guarantee may be made available, and an undertaking to meet other conditions, including the payment of a risk-based monthly fee by the ADI on the amounts guaranteed. This fee is the same as that applying to wholesale funding (see below). Customers are not obliged to have the guarantee apply to the portion of their total deposit balances over $1 million, and the fee only applies to the amount of each customer's total deposits above $1 million that is guaranteed. In most cases, ADIs recover the fee from depositors.

Deposits with foreign bank branches are not guaranteed under the Financial Claims Scheme, given that branches are not locally incorporated entities and independently capitalised in Australia, but are instead part of the foreign bank incorporated overseas. Foreign bank branches are eligible to participate in the Guarantee Scheme, though there is no fee-free threshold and additional conditions apply. For example, approval requires an attestation that the parent bank is meeting prudential requirements in its home jurisdiction, and there are limits on the term and quantity of guaranteed liabilities based on the branch's liabilities outstanding prior to the

Guarantee Scheme's introduction. The foreign bank branch must also undertake that the funds will not be used to directly support the parent bank.

The Financial Claims Scheme became effective on 18 October and the Guarantee Scheme became operational on 28 November. A temporary guarantee had applied from 12 October, while the relevant legislation was being passed for the Financial Claims Scheme and the rules and operational infrastructure of the Guarantee Scheme were being established. Deposit guarantee arrangements will remain in place until 12 October 2011, ahead of which the Government intends to consider subsequent arrangements. The Government noted in its announcement that the Guarantee Scheme would be reviewed on an ongoing basis and revised if necessary.

Wholesale Funding Guarantee

Eligible ADIs are also able to apply to have their new and/or existing eligible wholesale funding securities guaranteed, for a fee, under the Guarantee Scheme. The guarantee for wholesale funding will operate until market conditions normalise and is subject to the same review procedures as for deposits. As with the guarantee for large deposits, access to the Guarantee Scheme is voluntary and subject to an approval process. A fee is payable on all guaranteed liabilities, with the fee levied monthly. While the same fee applies regardless of the term of the security, fees vary with the credit rating of the ADI (Table A1).

Table A1: Fees on the Guarantee Scheme for Large Deposits and Wholesale Funding

Credit Rating	Fee per annum
AAA to AA–	70 basis points (0.7 per cent)
A+ to A–	100 basis points (1.0 per cent)
BBB+ and below and Unrated	150 basis points (1.5 per cent)

Source: Australian Government Guarantee Scheme Administrator

Only senior unsecured debt instruments of a non-complex nature issued by ADIs are eligible for the guarantee. Eligible ADIs can choose to apply for the Government guarantee for particular securities, or programs, and have other securities unguaranteed. For short-term liabilities, eligible instruments are bank bills, certificates of deposit (including transferable deposits), commercial paper and certain debentures, with maturities up to 15 months. For long-term liabilities with terms to maturity of 15 months up to 60 months, eligible instruments are bonds, notes and certain debentures. Foreign bank branch access to the Guarantee Scheme for wholesale funding involves the same additional conditions and restrictions as outlined for deposits.

International Comparison of Developments in Guarantee Arrangements

Explicit deposit insurance schemes have been common overseas for many years. Faced with the situation of heightened uncertainty and declining confidence in late September/early October 2008, a number of governments around the world responded by increasing the monetary cap on the amount of deposits guaranteed under such schemes (Table A2). For example, in the United States, the cap on insured deposits with eligible institutions was increased temporarily from US$100 000 to US$250 000, while the minimum cap required in European Union (EU) countries was increased from €20 000 to €50 000. Some EU countries including Austria, Denmark, Germany and Ireland went further by providing a guarantee over all deposits, introducing unlimited caps. Most countries that introduced unlimited caps nominated a set period for the arrangements to apply, typically around two years.

Table A2: Changes in Selected Countries' Deposit Guarantee Arrangements

	Previous Limit	Current Limit	Termination Date
Australia	—	Unlimited: first $1 million is free, then voluntary access via Guarantee Scheme	11 October 2011
Austria	€20 000	Unlimited	31 December 2009
Belgium	€20 000	€100 000	
Denmark	DKK300 000	Unlimited	30 September 2010
Finland	€25 000	€50 000	
Germany	€20 000	Unlimited	
Greece	€20 000	€100 000	8 October 2011
Hong Kong	HKD100 000	Unlimited	31 December 2010
Ireland	€20 000	Unlimited	30 September 2010
Netherlands	€38 000	€100 000	
New Zealand	—	NZ$1 million	12 October 2010
Singapore	SGD20 000	Unlimited	31 December 2010
Spain	€20 000	€100 000	
Sweden	SEK250 000	SEK500 000	
Switzerland	CHF30 000	CHF100 000	
United Kingdom	£31 700	£50 000	
United States	US$100 000	US$250 000	31 December 2009

Source: BIS

Around the same time as they extended deposit protection arrangements, many governments also provided guarantees over wholesale funding, partly in response to

the Irish Government's decision to do so. The details of the individual schemes vary considerably across countries, although the EU countries agreed to common principles so the approaches they have adopted are fairly similar. While most governments, both within the EU and outside, that provided support to wholesale funding markets did so by allowing private financial institutions to issue government-guaranteed debt, the approach taken in Austria and France differed in that a separate state-controlled agency was established to raise funding, which is then available to be on-lent to eligible private financial institutions.

The fees charged for the government guarantees on wholesale funding are typically based on the credit rating of the issuer (Australia, Canada and New Zealand), or credit default swap premiums (France, the Netherlands, Spain and the United Kingdom). In contrast, in the United States the fee charged is dependent on the term of the instrument but not the rating of the issuer. The fee structure adopted in the Netherlands and New Zealand also depends partly on the term of issuance. In a number of countries, including Canada, New Zealand and the United Kingdom, the fee has been revised lower from initial settings, while in the United States it has been revised higher.

Most governments other than Australia's nominated a set deadline for the availability of the guarantee. While the EU guidelines permit schemes that accept applications for up to two years, the EU countries generally set an application deadline of the end of 2009. In Canada, the United Kingdom and United States, considerably shorter periods were set, though in each case the application cut-off date has since been extended, to the end of October 2009 in the United States and to the end of December 2009 in Canada and the United Kingdom. The instruments eligible for the guarantees generally were limited to a maturity of up to three or five years.

As in Australia, governments have typically restricted the offer of a guarantee to senior unsecured debt instruments that are non-complex in nature. They have also restricted the guarantee to debt issued by certain financial institutions. For example, in Ireland, the Netherlands and the United Kingdom, the guarantee is only available to those institutions that have a significant presence in those countries' financial systems. In the United Kingdom, eligibility is also dependent on an institution having raised, or planning to raise, Tier 1 capital by a certain amount, either by government subscription or from other sources. ✠

Household and Business Balance Sheets

Over the past year the household sector, in aggregate, has faced the conflicting forces of continued strength in incomes and a significant fall in measured wealth. The effect of the latter, combined with increased uncertainty regarding the macroeconomic outlook, has seen households take a more conservative approach to their finances. A number of indicators point to a marked decline in households' appetite for borrowing, although housing credit continues to grow at a reasonable pace. Over the past year there have been some signs of increased household financial difficulties, although loan arrears rates remain relatively low.

Similarly, businesses have recently become more risk averse, with many companies seeking to de-risk their balance sheets by repaying debt, or by delaying further borrowing and investment decisions in the face of an uncertain economic outlook. Nonetheless, many businesses' balance sheets remain well placed to deal with the current difficulties, after a long period of strong profit growth. While credit conditions have tightened and competition for business lending has diminished, credit is still generally available, although risk margins and collateral requirements have been tightened.

Household Sector

Household disposable income grew strongly over the year to the December quarter 2008, increasing by 14 per cent in nominal terms (before interest payments). Even after allowing for the effects of inflation, household income increased by almost 10 per cent, well above the historical average (Table 9). An important factor underpinning this outcome was a large increase in government transfer payments, which grew by nearly 40 per cent over the year, contributing around 5 percentage points to the increase in aggregate income over that period. Disposable incomes have also been boosted by tax cuts that came into effect in the second half of 2008, with total tax payable by the household sector declining by 3 per cent over the past year. In contrast,

Table 9: Real Household Disposable Income[(a)]
Year-ended percentage change

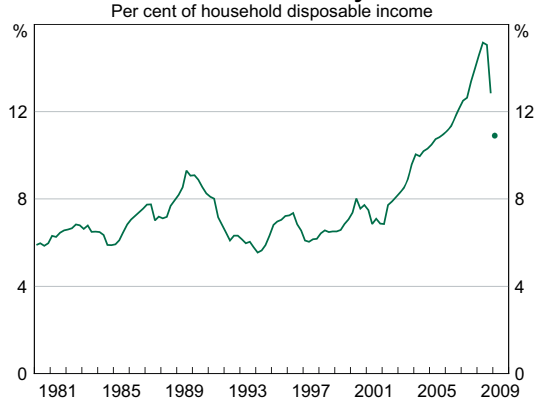
	Average		
	Dec 1980–Dec 1995	Dec 1995–Dec 2007	Dec 2008
Real disposable income before interest	2.7	4.2	9.7
Of which:			
Compensation of employees	2.2	4.0	3.7
Government transfer payments	4.2	3.5	39.6
Income tax and other payables	2.6	4.0	–3.1

(a) Excludes unincorporated enterprises
Sources: ABS; RBA

Graph 61

Household Interest Payments*

Per cent of household disposable income

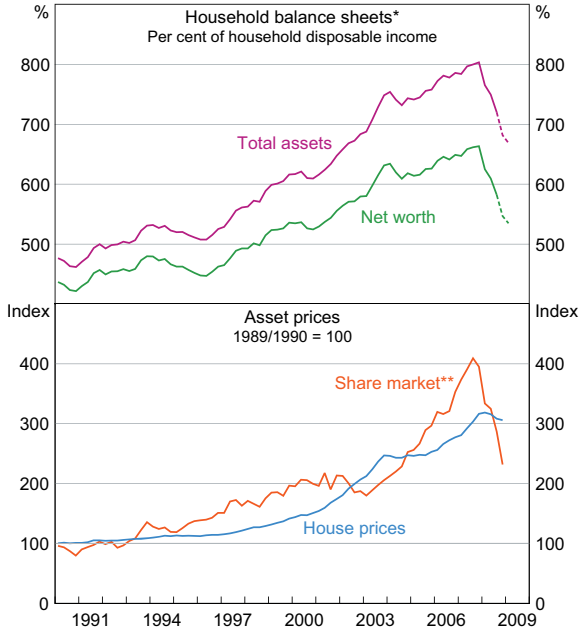


* Includes the imputed financial intermediation service charge; income is after tax and before the deduction of interest payments. Estimate for March quarter 2009.

Sources: ABS; RBA

Graph 62

Household Balance Sheets and Asset Prices



* Income is after tax and before the deduction of interest payments; includes income and financial assets of unincorporated enterprises. Estimates for December quarter 2008 and March quarter 2009.

** All Ordinaries Index to March 2000, then S&P/ASX 200 Index.

Sources: ABS; RBA; Thomson Reuters

growth in employment income slowed over the course of 2008, to be slightly below its longer-run average.

The finances of some households have also been strengthened recently by a large decline in interest payments. At the aggregate level, the ratio of interest payments to household disposable income is likely to fall from its peak of over 15 per cent to around 11 per cent in the March quarter 2009; a further decline should occur in the June quarter as the full effect of earlier falls in interest rates flows through (Graph 61). This will bring the interest-payment ratio back to levels last seen around 2003/04. Many households' real disposable incomes have also recently been boosted by falling petrol prices.

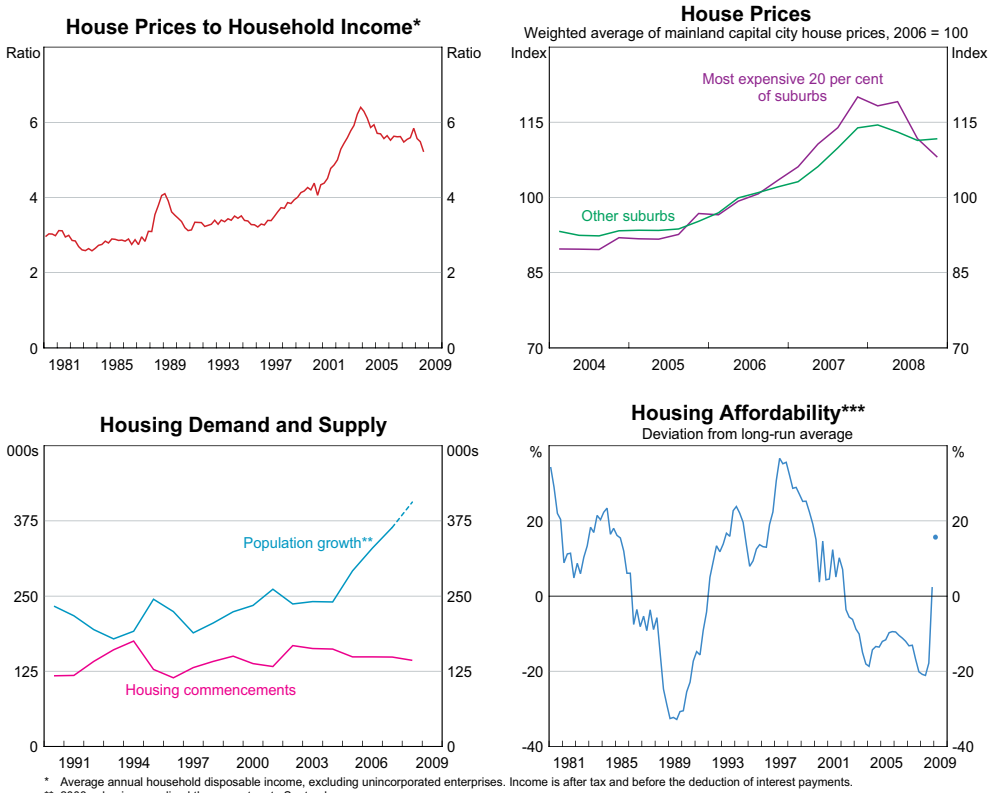
In contrast to the robust growth in household income over 2008, household net worth is estimated to have fallen by around 10 per cent, the largest annual decline in several decades. After peaking at more than 6½ times household disposable income in late 2007, net worth is now closer to 5 times income, around the same as in 2000 (Graph 62). The decline in the value of households' financial and housing assets has resulted in aggregate household gearing ratios moving higher over the year, despite credit growth slowing considerably.

Overall, the Australian housing market has held up better than those in many other countries over the past year. Nationwide indices show a decline in house prices in Australia of around 4 per cent since their peak in March 2008, compared with declines from their peaks of around 10 to 25 per cent in the United States (depending on the measure used) and almost 20 per cent in the

United Kingdom. In Australia, the recent weakness has been most evident at the top end of the market, with prices in less expensive suburbs broadly unchanged over the latter part of 2008, after having declined over the previous year (Graph 63).

While further softness in the Australian housing market is possible, the market does not appear to have the same vulnerabilities that have been evident in some other countries. Importantly, the adjustment in the housing market – after a number of years of very large price gains – started at the end of 2003 and thus was well advanced before the onset of the current financial crisis. Reflecting this, the ratio of house prices to household income has declined noticeably from its peak in late 2003. While this ratio remains higher than was the case in previous decades, this is at least partly explained by a number of structural factors, including the transition to an environment of lower inflation and thus lower nominal interest rates. In addition, Australia did not see the very marked decline in mortgage lending standards that occurred in other countries, particularly the United States, and the related negative impact on house prices resulting from a surge in loan foreclosures and a large amount of housing stock coming onto the market. Also differentiating the housing market in Australia from that of the United States is that the demand for new housing in Australia has outstripped net new additions to the housing stock over much of the past decade, suggesting there is substantial underlying excess demand for housing. Finally,

Graph 63



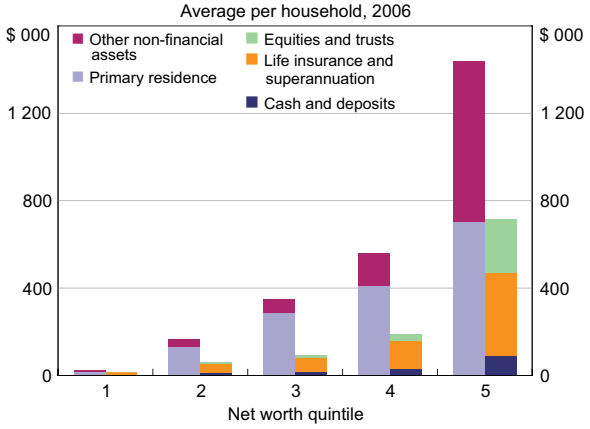
* Average annual household disposable income, excluding unincorporated enterprises. Income is after tax and before the deduction of interest payments.
** 2008 value is annualised three quarters to September.
*** Index constructed as the ratio of average household disposable income to the required monthly repayment for the median priced home financed with a 25-year loan assuming an 80 per cent LVR at the full-doc prime mortgage rate. Estimate for March quarter 2009.

Sources: ABS; APM; RBA; REIA

housing affordability has increased considerably over recent months as interest rates have fallen, with the cost of borrowing now similar to rental payments in some situations, after many years when renting was much cheaper than buying.

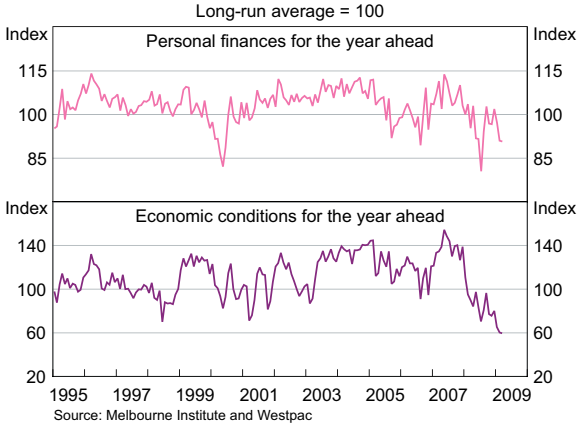
While the value of the household sector's housing assets has declined only slightly over the past year, the value of financial assets has fallen significantly, mainly due to sharp falls in equity prices – which are currently around 50 per cent lower than their peak in November 2007. According to HILDA data for 2006 (the most recent data available), the wealthiest 20 per cent of households held around two thirds of aggregate household financial assets, with these households consequently the most directly affected by the decline in the equity market (Graph 64). The majority of these high net-worth households were still in the workforce, and so are likely to have other sources of income to offset the decline in the value of their financial assets. A little under 25 per cent were retirees, however, of whom around 60 per cent were not receiving any benefits or pensions from the government in 2006. For this group, the decline in wealth has likely resulted in a large fall in available income.

Graph 64
Household Assets
Average per household, 2006



Source: HILDA Release 7.0

Graph 65
Consumer Sentiment
Long-run average = 100



Source: Melbourne Institute and Westpac

As has been the case globally, declines in household wealth and increased uncertainty about the economy have dented consumer confidence, although the decline in confidence in Australia is less than that in a number of other countries. Households are less optimistic about their personal finances than they have been for most of the past decade or so, and sentiment about general economic conditions over the year ahead has deteriorated significantly (Graph 65).

This marked change in sentiment has seen the household sector take a more conservative approach to its finances over the past year. This is illustrated by the fact that the proportion of households who nominate paying down debt as the wisest use of savings has reached its highest level for over 10 years (Graph 66). Similarly, spending on credit cards has slowed sharply, to be up only 1 per cent over the year to January 2009. In contrast,

spending on debit cards was up by more than 15 per cent over the same period (Graph 67).

Partly reflecting this change in attitudes, there was a substantial increase in household saving in the December quarter, with the ratio of net saving to disposable income at 8.5 per cent, compared with almost no net saving a year earlier (Graph 68). Although the most recent outcome was influenced by the large increase in government transfer payments, it is nonetheless a marked change in household behaviour, particularly from that of the first half of this decade, when the household saving rate was negative. Further, since June 2008, households have returned to their longer-run behaviour of net injections of housing equity, whereas they had been withdrawing equity from their homes in the period between late 2001 and mid 2008.

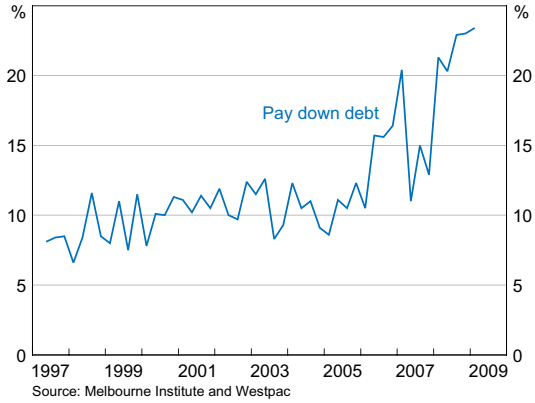
Households' more conservative approach to their finances has seen a substantial slowdown in the pace of household credit growth. After many years of growth in household credit significantly outpacing nominal income growth, it is now running at a slower pace than nominal income, with outstanding credit increasing at an annualised pace of around 4 per cent over the six months to January (Graph 69).

This slowdown in credit growth has been less marked for housing credit than for other types of credit, with the outstanding value of housing loans increasing at an annualised pace of 6.4 per cent over the six months to January. In recent months there has been a pick-up in new loan

Graph 66

Wisest Place for Savings

Per cent of respondents

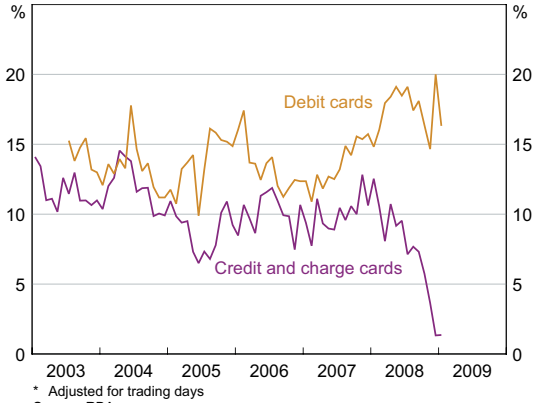


Source: Melbourne Institute and Westpac

Graph 67

Spending Using Credit and Debit Cards

Year-ended percentage change*



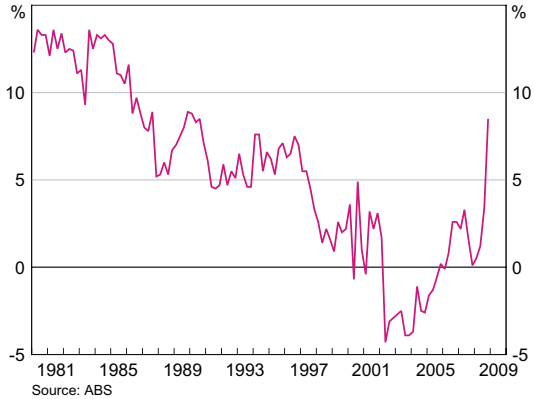
* Adjusted for trading days

Source: RBA

Graph 68

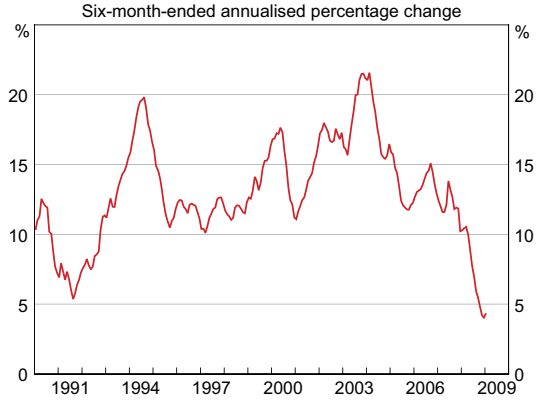
Household Saving Ratio

Household saving as a per cent of household disposable income



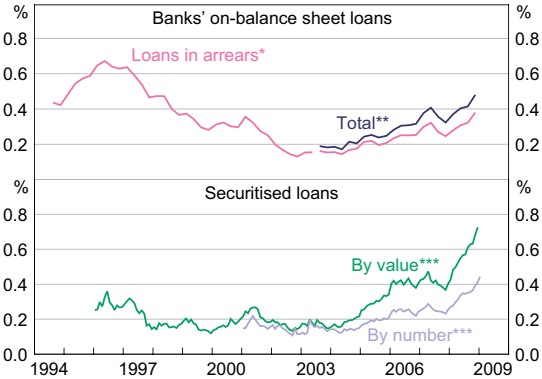
Source: ABS

Graph 69
Household Credit
Six-month-ended annualised percentage change



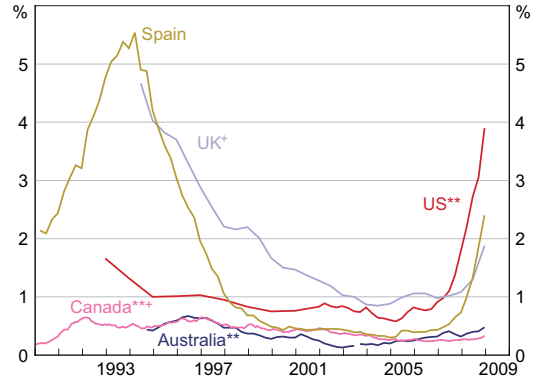
Source: RBA

Graph 70
Non-performing Housing Loans
Per cent of outstandings



* Loans that are 90+ days past due but otherwise well secured by collateral
** Includes 'impaired' loans that are in arrears and not well secured by collateral
*** Full-doc and low-doc loans securitised by all lenders, 90+ days past due
Sources: APRA; Perpetual; RBA; Standard & Poor's

Graph 71
Non-performing Housing Loans
Per cent of loans*



* Per cent of loans by value. Includes 'impaired' loans unless otherwise stated. For Australia, only includes loans 90+ days in arrears prior to September 2003.
** Banks only.
\+ Per cent of loans by number that are 90+ days in arrears.
Sources: APRA; Bank of Spain; Canadian Bankers' Association; Council of Mortgage Lenders; FDIC

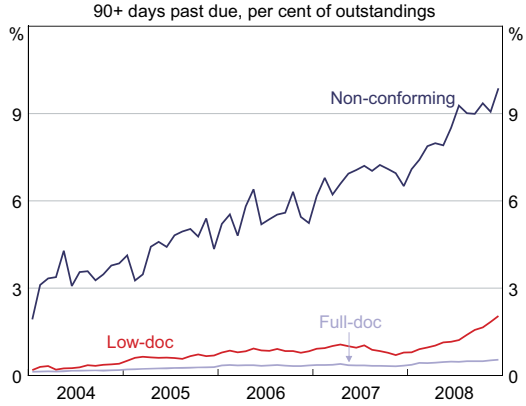
approvals, as households respond to lower interest rates and increased government support to first-home buyers. Countering this, many households have increased their principal repayments as required interest payments have declined with lower mortgage rates. In contrast to housing credit, there has been a marked reduction in the stock of margin loans outstanding, reflecting both the poor performance of the stock market and the desire by households to de-risk their balance sheets. As at December 2008, total margin debt outstanding was $21 billion – equivalent to around 2 per cent of household credit – down 44 per cent from a year ago.

Overall, arrears rates on housing loans remain relatively low, although they have increased from the unusually low levels of the middle part of this decade. For housing loans on banks' domestic books (which account for more than three quarters of housing credit), the proportion of loans that were non performing in December 2008 was 0.48 per cent, up 16 basis points over the previous 12 months (Graph 70). Arrears rates on prime securitised loans have also increased over the year, to stand at 0.73 per cent in December 2008. These figures are much lower than in a number of other countries for which comparable data are available, although the Australian experience is broadly equivalent to that in Canada (Graph 71).

The arrears rate on securitised low-documentation loans (where borrowers can provide less evidence

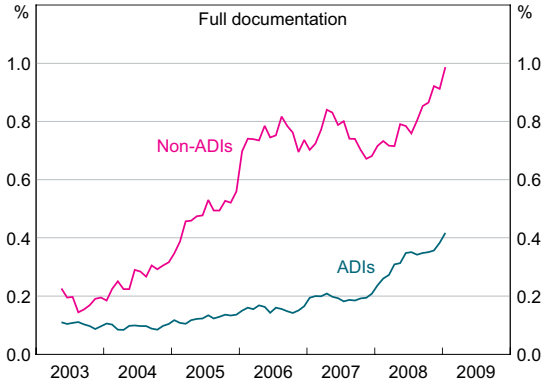
of debt-servicing ability than normal) has increased noticeably over the past year, up 126 basis points to be 2.0 per cent in December (Graph 72).[2] For non-conforming loans – made to borrowers with impaired credit histories or who do not otherwise meet the credit standards of traditional lenders – the arrears rate was 9.86 per cent in December, having increased by more than 3 percentage points over the past year. It is important to note, however, that non-conforming loans account for only around 0.5 per cent of the total value of outstanding housing loans in Australia, with this share having declined from around 1 per cent over the past couple of years.

Graph 72
Housing Loan Arrears by Loan Type*
90+ days past due, per cent of outstandings



* Securitised loans
Sources: Perpetual; RBA; Standard & Poor's

Graph 73
Housing Loan Arrears by Lender Type*
90+ days past due, per cent of outstandings



* Securitised loans
Sources: Perpetual; RBA

Across all housing loans in Australia, it is estimated that around 20 000 borrowers were 90 or more days behind on their mortgage repayments in December 2008, compared with an estimate of 13 000 the previous December.

As well as differences in arrears rates across loan types, arrears rates also reflect differences in credit standards across lenders. For example, the arrears rate of full-documentation loans originated by non-bank lenders is higher and has increased by more than that for equivalent loans originated by banks and other ADIs (Graph 73).

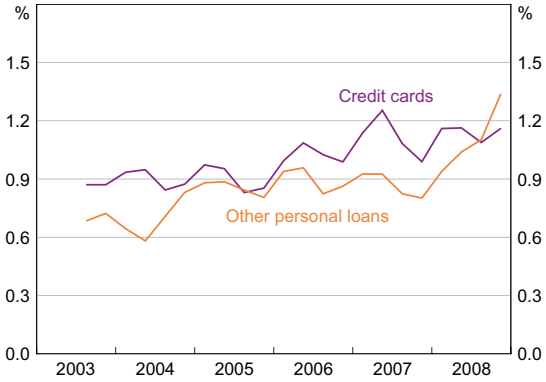
The emergence of non-traditional lenders and the availability of loans on more generous terms are illustrations of the significant structural changes that took place in the Australian housing finance market over the past decade. These changes have meant that for any given set of economic and financial conditions, the arrears rate is likely to be somewhat higher than once would have been the case. In addition to these effects, the recent increases in arrears also reflect cyclical elements. Declines in house prices in some locations in the past few years and softer labour market conditions have contributed to higher arrears rates, as have earlier increases in interest rates, though interest rates have subsequently fallen.

2 *Part of the recent increase in the arrears rate for securitised loans is due to technical factors. The arrears rate on these loans in earlier years is likely to have been held down by strong growth of such loans, as only mortgages not in arrears are securitised. With new securitisations having all but dried up recently, this effect has reversed.*

Graph 74

Banks' Non-performing Personal Loans*

Per cent of outstandings by loan type

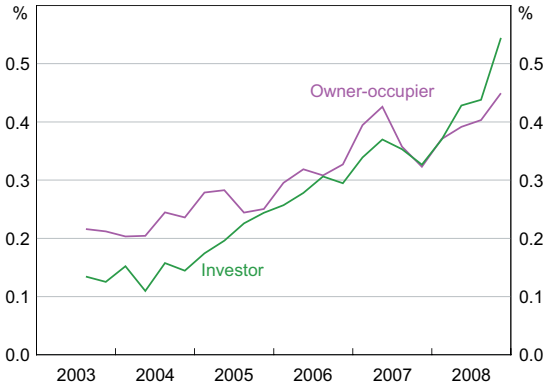


* Includes 'impaired' loans and 90+ days past-due items that are well secured
Source: APRA

Graph 75

Non-performing Housing Loans by Borrower*

Domestic books, per cent of outstandings by borrower type



* Includes 'impaired' loans and 90+ days past-due items that are well secured
Source: APRA

In contrast to housing loans, the arrears rate on credit cards has been little changed over 2008, at around 1.1 per cent, though it has drifted slightly higher over recent years. Arrears on other personal loans, however, have increased notably, up by 54 basis points over the year to December 2008 to stand at 1.34 per cent (Graph 74). This increase is, in part, due to pressures on households with margin loans following the very large declines in equity prices, with the number of margin calls having increased sharply in the December quarter.

Households with particularly large housing loans, or those with high loan-to-valuation ratios, are, on average, more likely to be experiencing difficulties (Table 10). This is consistent with the fact that the arrears rate for investor loans now exceeds that for owner-occupier loans; available evidence indicates that investor loans tend to have higher gearing, and be for larger amounts, than owner-occupier loans (Graph 75).

Loan arrears have increased in all states over the past year, though they remain much higher in NSW than elsewhere, and particularly in regions in western Sydney (Graph 76). Whereas the arrears rate in Western Australia had been markedly lower than the rest

Table 10: Housing Loan Arrears by Loan Characteristic[(a)]

Per cent of outstandings, January 2009

	Loan-to-valuation ratio at time of loan approval				
Loan size	0 to 60	60 to 75	75 to 85	85 to 95	95 +
Less than $250 000	0.1	0.3	0.5	0.9	1.4
$250 000–$500 000	0.2	0.3	0.7	1.4	1.7
More than $500 000	0.4	0.9	1.7	2.5	n.a.

(a) Securitised loans 90+ days past due; includes self-securitisations; only loans reporting approval LVR are included
Sources: Perpetual; RBA

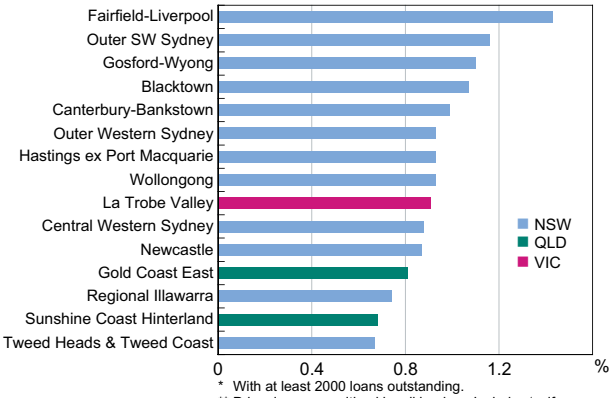
of the country for a number of years, since the end of 2007 the number of households in arrears has increased substantially, to be currently around that of most other states. Recent developments in Western Australia have some parallels with those seen in western Sydney earlier in the decade. In both episodes, rapidly rising housing prices induced home buyers to borrow more and, increasingly, to use low-doc and other non-standard loan products to do so, with a relatively high share of the lending undertaken by non-bank lenders. As prices subsequently declined, borrowers who bought near the top of the cycle have seen their home equity erode, although the incidence of negative equity remains fairly limited.

In line with the deterioration in loan performance in Western Australia, the number of applications for property possessions in this state increased noticeably over 2008 (Graph 77). Possession applications have also increased in Queensland in the past year, but are broadly unchanged in New South Wales and Victoria, after substantial increases between 2004 and 2006. Similarly, the number of applications for the early release of superannuation benefits has been little changed over the past year, although the number of personal administrations (including bankruptcies) increased by 12 per cent over the year to December.

Graph 76

Housing Loan Arrears by Region*

90+ days past due, per cent of outstandings, January 2009**

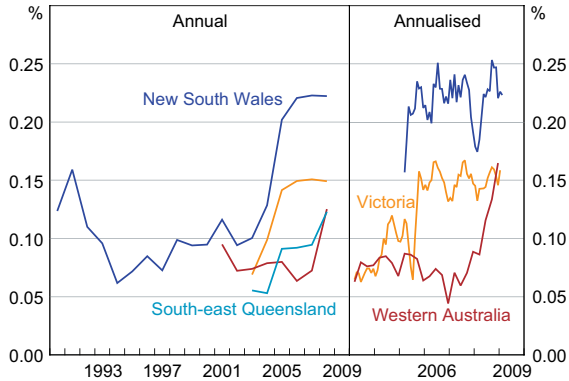


* With at least 2000 loans outstanding.
** Prime loans securitised by all lenders. Includes 'self-securitisations'.
Sources: ABS; Perpetual; RBA

Graph 77

Applications for Property Possession*

Per cent of dwelling stock



* Includes applications for possession of some commercial, as well as residential, properties
Sources: ABS; state Supreme Courts

Business Sector

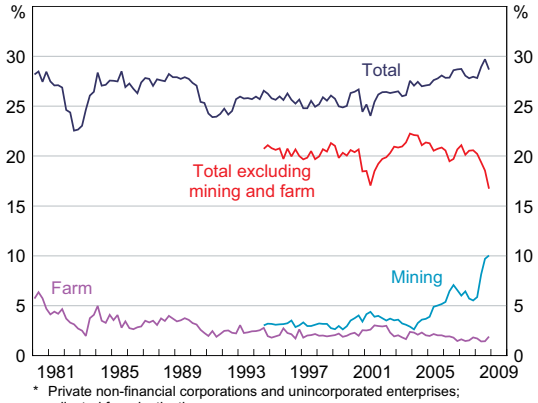
Like the household sector, the Australian business sector has responded to the more difficult financial and macroeconomic environment by taking a more cautious approach to finances. For some firms, the increase in risk aversion has led them to reduce leverage by repaying debt and raising equity, while others are reassessing their spending plans, particularly as growth in profitability slows. The desire to reduce leverage is also being influenced by concerns that, at some point in the future, financial conditions may become tougher still, making it more difficult to rollover maturing debt. This is occurring despite the fact that Australian banks are generally continuing to provide credit to good quality borrowers, and that balance sheets in large parts of the business sector have been in good shape over recent years.

The long-run expansion of the Australian economy has seen profits account for a historically high share of GDP for much of the past decade, with both mining and non-mining sectors experiencing consistent profit growth (Graph 78). However, as the economy has slowed over the course of 2008, profits in the non-mining sector (excluding the farm sector) have weakened, to be 12 per cent lower in the year to December. For mining companies, in contrast, profits remained very strong for most of 2008, though growth slowed in the December quarter in response to substantial declines in income from commodity sales. Although some parts of the mining sector are currently hedged against commodity price falls through fixed-price contracts lasting into the first half of this year, these firms will also become exposed to lower prices as contracts come up for renegotiation.

Graph 78

Business Profits*

Per cent of GDP



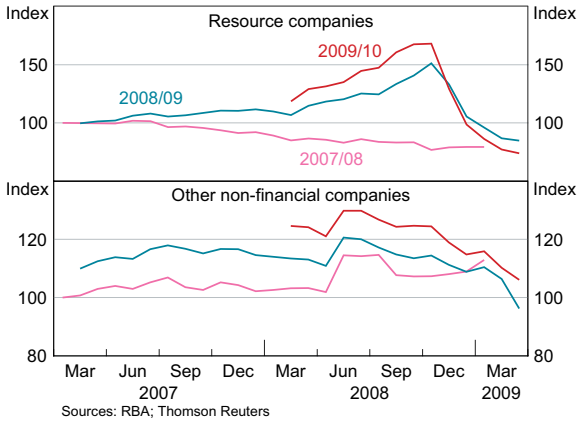
* Private non-financial corporations and unincorporated enterprises; adjusted for privatisations

Sources: ABS; RBA

Graph 79

Analysts' Earnings Expectations

ASX 200 companies, Jan 2007 forecast of 2007/08 earnings = 100



Sources: RBA; Thomson Reuters

The changed conditions for both mining and non-mining firms were reflected in profit results in the most recent corporate reporting season. While resource firms' underlying earnings in the December 2008 half were up by around 15 per cent on the December 2007 half, this compared with average growth of 38 per cent between 2003 and 2007. For non-resource firms, underlying

profits declined 13 per cent, compared with average growth of 16 per cent over the longer period. Forward earnings expectations have also been revised down substantially in recent months. Forecasts for mining company profits for the 2008/09 financial year are currently around 30 per cent lower than those made in June 2008, while those for the 2009/10 financial year are 50 per cent lower (Graph 79). For non-mining companies, full-year earnings are expected to be lower than last year, though a resumption of profit growth is currently forecast in subsequent years.

On top of the slowdown in underlying earnings, many companies' headline profits have been negatively affected by downward asset revaluations and investment losses. These write-downs, together with uncertainty regarding the economic environment, have seen many businesses seeking to deleverage their balance sheets. However, for a small number of particularly highly geared companies, attempts to wind back debt have not been sufficient to offset write-downs in the book value of their equity, which has resulted in increases in gearing ratios; infrastructure and utility firms are particularly prevalent among this group. The effect of this has been a further slight widening in the distribution of gearing among large listed firms – these unintentional increases are in contrast to the deliberate increases in gearing of some parts of the corporate sector over recent years (Graph 80).

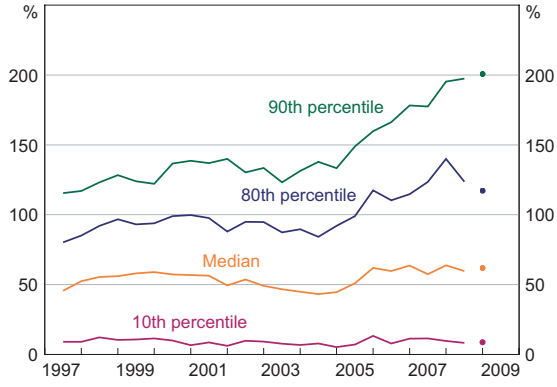
For companies outside this most highly geared group, asset write-downs have been largely offset by a scaling back in debt and/or new equity raisings, with the result that gearing levels for these companies have increased only slightly. Overall, the aggregate measure of gearing of listed companies is little changed in the past six months (Graph 81).

Both before and after the announcement of their financial results, a number of companies undertook equity raisings to bolster their balance sheets. Despite falling equity prices, more than $8 billion of new equity has been raised by the non-financial sector over the past three months, compared with a quarterly average over the past four years of $5.5 billion (Graph 82).

Graph 80

Distribution of Company Gearing Ratios*

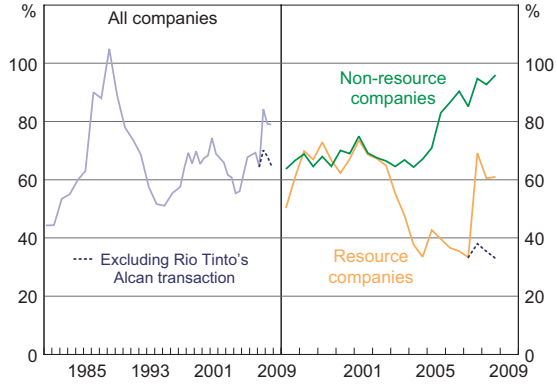
Largest 250 non-financial companies ranked by total assets**



* Gross debt/shareholders' equity; book value; excludes foreign companies and listed property trusts
** Latest observation includes only companies that had reported to December 2008
Sources: Aspect Huntley; RBA

Graph 81

Listed Non-financial Companies' Gearing Ratios*

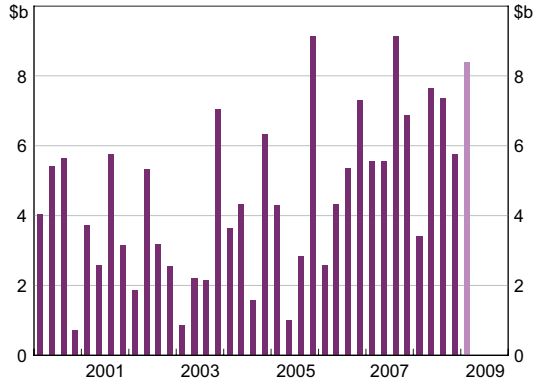


* Gross debt/shareholders' equity; book value; excludes foreign companies and listed property trusts
Sources: Aspect Huntley; RBA

Graph 82

Net Equity Raisings

Listed non-financial companies, quarterly*



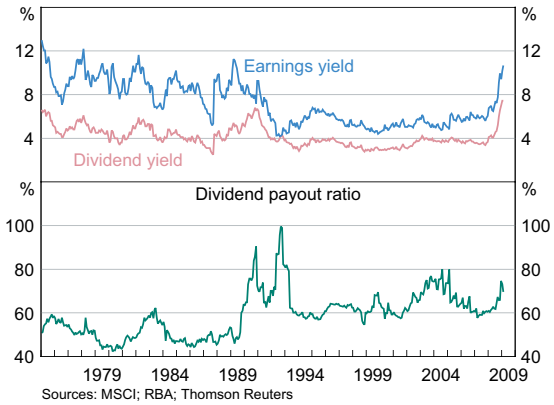
* March 2009 is an estimate based on raisings by large companies

Sources: ASX; Thomson Reuters

Graph 83

Listed Company Earnings and Dividends

MSCI Australia Index

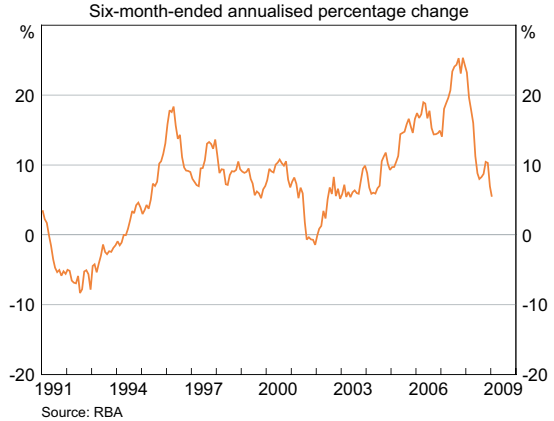


Sources: MSCI; RBA; Thomson Reuters

Graph 84

Business Credit

Six-month-ended annualised percentage change



Source: RBA

Further, because companies are seeking to preserve capital at present, buyback activity has been subdued.

Some companies have also sought to build capital by scaling back dividend payments, with around half of the recently reporting ASX 200 companies having announced a cut in dividends; one quarter of all firms announced a cut of more than 50 per cent. However, these companies are mostly relatively small, and the aggregate value of dividends to be paid following the December 2008 reporting season is estimated to be 3 per cent higher than for December 2007. In part, the corporate sector's ability, in aggregate, to leave dividend payments unchanged is a reflection of the sector's relatively conservative dividend payout policy between 2003 and 2007. Although earnings for ASX listed companies grew strongly for much of this period, this was not fully matched by growth in dividends, and the dividend payout ratio declined from around 75 per cent to 60 per cent in the four years to end 2007. The last few months have again seen the dividend payout ratio increase as companies have sought to minimise dividend reductions while profits have slowed (Graph 83).

The changed environment has seen a slowing in business credit growth; in the six months to January business credit grew by 5.7 per cent in annualised terms (Graph 84). With business confidence having fallen to around its lowest levels for nearly 20 years, much of the slowdown in business borrowing is due to firms

looking to deleverage their balance sheets in the current period of uncertainty (Graph 85). Reflecting this, liaison with lenders suggests that there has been a large decline in the number of new business loan applications over recent months. However, as discussed in the chapter on *The Australian Financial System*, credit conditions have also tightened with lenders increasing risk margins. Notwithstanding this, most borrowers have still been able to refinance maturing debt as needed. As an illustration, large borrowers in the commercial property sector – a sector that has reportedly found it particularly difficult to source funds – have had $5.3 billion of new syndicated loans approved since end-June 2008, more than offsetting the $3.4 billion of maturities over that period.

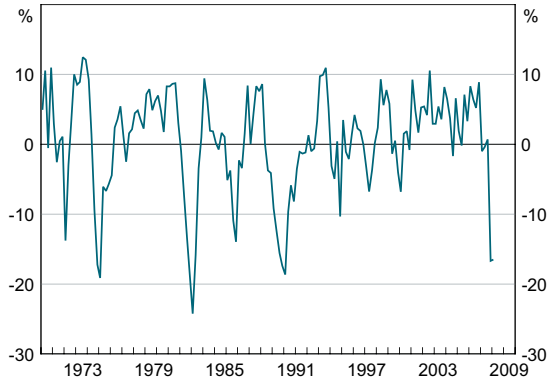
One factor that has mitigated lenders' increased risk margins is the recent substantial easing of monetary policy. Average interest rates on outstanding loans are estimated to have fallen by around 230 basis points for small businesses and 370 basis points for large businesses since their peak in mid-2008, and are currently at their the lowest rates for many years (Graph 86).

Despite this easing in business interest rates, the slowdown in business earnings over the past year has strained some firms' cashflows. This has contributed to an increase in the share of business loans on banks' balance sheets that are classified as non-performing (Graph 87). To date, however, there has been only a

Graph 85

Expected Business Conditions

Composite index, deviation from long-run average

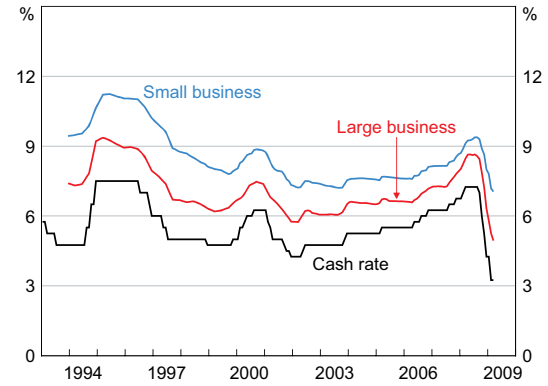


Source: ACCI and Westpac

Graph 86

Business Interest Rates

Weighted average rate on outstanding loans

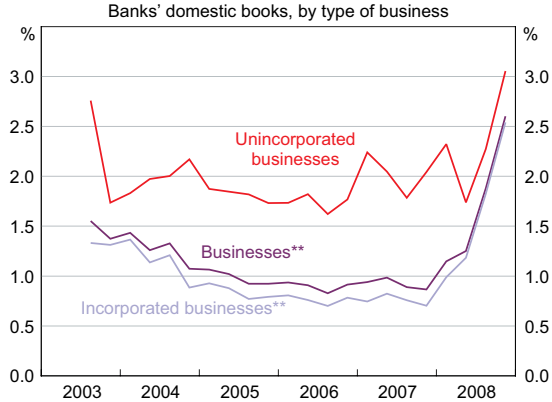


Sources: APRA; RBA

Graph 87

Non-performing Business Assets*

Banks' domestic books, by type of business



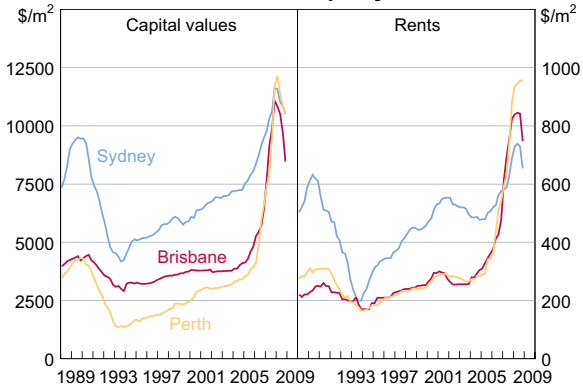
* Includes 'impaired' loans and 90+ days past-due items that are well secured
** Includes bill acceptances and debt securities
Source: APRA

modest increase in the extent of more severe corporate distress, with business failures as a share of the number of all incorporated businesses increasing by only 4 basis points over the year to January, to stand at 0.16 per cent.

Within the business sector, impairment rates on commercial property loans have increased much more than for business loans in general. While economic conditions have clearly been behind some of this deterioration, it is also the case that some firms' business models left them more exposed to a downturn.

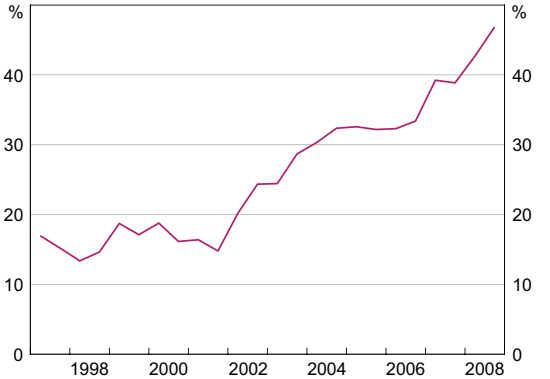
Until recently, strong demand for space and a lack of vacant supply had led to several years of rapid growth in commercial property construction, especially in the office markets in Perth and Brisbane. This combination of additional supply and decreased occupancy demand due to a slowing economy has recently resulted in a softening in rents and valuations in these two cities, with this turnaround likely to continue as projects under construction are completed and demand from tenants slows further (Graph 88). Prices have also softened in other markets, although the earlier run-up in prices and construction was much less than in Brisbane and Perth. The uncertainties regarding rental incomes and asset valuations have contributed to the slowdown in growth in bank lending for commercial property, after a number of years where this grew much faster than business lending in general.

Graph 88
Office Property



Sources: Jones Lang LaSalle; RBA

Graph 89
Listed Property Trust Gearing Ratio*



* Gross debt/total assets; book value; latest observation includes only companies that reported to December 2008

Sources: Aspect Huntley; RBA; company reports

One notable characteristic of the current episode is the increase in leverage of some property trusts. For listed property trusts (LPTs) – also known as Australian Real Estate Investment Trusts (A-REITs) – the ratio of aggregate debt to assets has more than doubled over the past 10 years, and the gearing of unlisted property trusts has also increased over this period (Graph 89). The risks of this model have come into focus in recent months, with property trusts facing a period of reduced rental incomes and downward property revaluations – this saw LPTs write off a little over $12 billion in the second half of 2008. Not surprisingly in the current environment, LPTs have been actively seeking to restructure their balance sheets, with around $9 billion of new equity raised since October 2008.

Developments in the Financial System Architecture

The current turmoil in the global financial system has put many aspects of the existing architecture and regulation of financial systems around the world under the spotlight. Among the issues currently under review are: the role of credit rating agencies; the internal incentives within financial institutions to take and manage risk; the adequacy of current capital and liquidity requirements; how to give a greater macro-prudential focus to regulation, and other policies to address the excess procyclicality of the financial system; and the role that central counterparties and settlement arrangements can play in addressing counterparty risk and in managing the failure of a financial institution. A looming issue is the effect on financial systems of having a significant number of institutions operating under effective government ownership or control. Substantial policy work is taking place at the international level on many of these topics, generally under the guidance of the G-20, the Financial Stability Forum and the International Monetary Fund. The main focus nonetheless remains on how to address the more immediate problem of restoring confidence in many financial systems.

Regulatory arrangements in Australia appear to have worked effectively over recent years, with the Australian financial system widely regarded as being well regulated. Unlike the situation in many other countries, the Australian Government has not had to take the extraordinary steps of injecting capital into banks, buying troubled assets or offering large-scale asset insurance schemes to banks. Even so, as discussed in the chapter on *The Australian Financial System*, the highly unusual conditions that existed in the wake of the Lehman's failure saw the Australian Government introduce guarantee arrangements for deposits and wholesale funding in October last year.

Since the current turmoil began, the Council of Financial Regulators has provided a vehicle for co-ordination between the various regulatory agencies – APRA, ASIC, the Reserve Bank and Treasury. In particular, the Council has provided advice to the Government on the specific design of the guarantee arrangements and has kept the arrangements under review. The Council has also held discussions with the regulatory authorities in New Zealand regarding Trans-Tasman developments.

Longer-term Regulatory Issues

Credit Rating Agencies

As the current crisis has unfolded there have been widespread concerns over the role played by the credit rating agencies (CRAs) and, in particular, the accuracy of their ratings of structured financial products, including US sub-prime RMBS and CDOs. Reflecting these concerns, there have been several international reviews of the role of CRAs, with one key outcome being a revision to the International Organisation of Securities Commissions' (IOSCO) *Code of Conduct*

Fundamentals for Credit Rating Agencies. The new Code strengthens the oversight of CRAs in the areas of: quality and integrity of the ratings process; independence and avoidance of conflicts of interest; responsibilities to the investing public, including the use of differentiated ratings for structured credit products; and greater transparency. Although no agency has committed to developing an identifier for structured product ratings, all three major agencies have revised their own codes of conduct to partially respond at least to the IOSCO revisions and have agreed not to make proposals or recommendations on the design of structured finance products which they rate.

The framework for the regulation of CRAs in Australia – a market that is almost entirely comprised of the three major global agencies – has been subject to a joint review by ASIC and the Australian Treasury. As a result, CRAs will now be required to have an Australian Financial Services Licence as well as issue an annual report detailing compliance with the revised international code of conduct. The review confirmed that research houses in Australia are required to hold a financial services licence; they will also be required to issue an annual report providing similar information as that for CRAs.

Incentives and Remuneration

Another issue that has attracted considerable attention is the incentive structures within financial institutions and the role that remuneration arrangements play in shaping those incentives. This reflects the concern that the risk metrics used in the remuneration process in some financial institutions have been too focused on short-term profits, and have thus contributed to excessive risk-taking. Work in this area is directed towards the development of principles governing the design of remuneration arrangements, with institutions' compliance with these principles to be assessed as part of the supervisory review process. In broad terms, these principles aim to promote effective governance of compensation arrangements by boards, who should be responsible for ensuring that the level, timing and mix of compensation is appropriately adjusted for all risks taken in the business unit or institution, and that staff bonuses are reduced or cancelled if the business' performance is poor. APRA is playing an important role in the international work in this area and anticipates that it will release a discussion paper on Australian application in coming months, with implementation to occur during the second half of 2009.

For corporations in general, the Government has requested the Productivity Commission to examine Australia's remuneration framework for company directors and executives and has also announced that it would amend the *Corporations Act* to significantly lower the threshold at which termination payments (also known as golden handshakes) must be approved by shareholders.

Capital and Liquidity Requirements

The recent turmoil has also led to a reappraisal of existing bank capital regulation and the appropriateness of the level and quality of the capital buffers that banks currently hold. Accordingly, the Basel Committee on Banking Supervision (BCBS) has announced a number of changes to the Basel II framework. Among the changes are an increase in risk weights for re-securitised assets such as CDOs of RMBS, and the liquidity facilities extended to entities holding these assets. For example, risk weights on senior exposures to CDOs of RMBS will

roughly triple across all ratings levels. More generally, regulatory minimum capital ratios will be reviewed, although this change will be introduced over time in order to avoid raising capital requirements in a period of market stress. Greater attention will also be paid to the quality of banks' capital, with increased emphasis being given to ordinary equity and other forms of shareholders' funds, rather than hybrid securities whose genuine capacity to absorb losses has come into doubt. This work is to be progressed by an expanded BCBS, with seven countries including Australia being added to the existing membership. Both APRA and the RBA will be represented on the expanded committee.

On top of the existing risk-weighted capital requirements, an unweighted leverage ratio is to be introduced. This change reflects concerns that some large banks had been able to report high ratios of capital to risk-weighted assets, while having very low ratios of capital to total assets, leaving them vulnerable to misjudgements about the riskiness, and thus the appropriate risk weighting, of these assets.

Another significant area of focus is the supervision of liquidity risk, with it widely recognised that supervisors and banks did not pay sufficient attention to this risk over the past decade. In particular, insufficient attention was paid to the possibility that market liquidity could dry up for considerable periods, and to the risk that many contingent funding lines could be called upon at around the same time. As detailed in the September 2008 *Review*, APRA is currently examining the prudential framework for liquidity risk management in Australia and expects to issue a paper for consultation in the middle of 2009.

Procyclicality of the Financial System

While the primary focus of policymakers remains on solving the immediate problems, attention is also being paid to the longer-term issue of dealing with the tendency for investors to underestimate risk in the good times and build up excessive leverage. One idea is that the valuation approaches for some assets need to be reconsidered, particularly for those which trade in very illiquid markets, for which 'fair' values can move considerably even when there is no change in the expected underlying cash flows. In October 2008, the International Accounting Standards Board indicated that where transaction prices are not considered to represent fair value – particularly in illiquid markets – it may be more appropriate to use other valuation approaches, such as models and expected cash flows. In response to this guidance, a number of European banks have amended their approach to valuing some assets to be more in line with that used historically for loans on banks' balance sheets. Several Australian-owned ADIs, as well as a number of the subsidiaries and branches of foreign ADIs operating in Australia, have also amended their approach to valuing a smaller number of assets.

Another issue under discussion is the extent to which financial institutions should build up their capital buffers in the good times, either as a result of regulation or by them taking a more active approach in dealing with the economic cycle. In particular, the BCBS recently announced that it would be introducing standards to promote the build-up of these buffers, although the details have not yet been finalised. A related proposal draws on the approach taken in Spain involving 'dynamic provisioning' rules. Under these rules, banks are forced to make provisions for credit impairment in the good times even if loan portfolios are performing well. This system of provisioning has been credited as one of the reasons why the major Spanish banks have,

to date, been less affected by the credit turmoil than have the banks of many other countries. This approach, however, raises concerns amongst the accounting profession, who view it as potentially giving a misleading picture of an institution's profits and balance sheet at a point in time.

Central Counterparties in Over-the-counter Derivatives Markets

The international regulatory community has been placing increasing emphasis on reducing operational and counterparty risks in over-the-counter (OTC) derivatives markets, given their rapid expansion in recent years. One specific policy proposal for improving the infrastructure in these markets is for the establishment of central counterparties for OTC credit derivatives markets, further details of which are outlined in *Box B: Central Clearing of Over-the-counter Credit Derivatives*. As well as helping to manage counterparty risk, central counterparties can reduce the complexity of the interlinkages between market participants, thereby reducing the dislocation that could occur if a participant were to fail.

The Reserve Bank is working with APRA and ASIC to assess international initiatives in this area and to consider how best to promote safe, efficient and robust practices in the Australian OTC derivatives market. A survey of OTC derivatives market participants is being undertaken to help assess: the scale of activity in the various OTC derivatives product segments; the split between onshore and offshore activities; the risks in existing risk-management and post-trade practices; and the use of automated facilities at each stage in the post-trade life-cycle.

One driver of the global policy interest in central counterparties is that they are increasingly offering their services across national borders. Reflecting this general trend, the Reserve Bank has recently established arrangements that allow a foreign central counterparty to offer services in Australia in a way that ensures that the central counterparty meets high standards, while avoiding unnecessary regulatory duplication. In particular, if the central counterparty is from a country with a 'sufficiently equivalent' regime to that in Australia, it will be exempt from formal compliance with the Reserve Bank's *Financial Stability Standard for Central Counterparties* provided that the home country regulator provides an annual statement that the foreign central counterparty has complied with its regulatory requirements. Such central counterparties will, however, retain some obligations to the Reserve Bank including to provide information on a regular basis.

Other Developments

In Australia there have been a number of other regulatory and market developments since the previous *Review*. As discussed in the chapter on *The Australian Financial System*, guarantee arrangements were announced for deposits and wholesale funding in October 2008. The Australian Government has also set up a special purpose funding vehicle to provide finance for motor vehicle dealers. On the regulatory front, progress has been made in the establishment of uniform national regulation of consumer credit and new arrangements have been established for short-selling and securities lending.

The Government has established a special purpose vehicle (SPV) to help provide wholesale financing to those motor vehicle dealers that were financed by GE Money Motor Solutions

and GMAC, both of which announced their intention to exit the Australian market as a result of the global financial environment. The SPV is being established as a financing trust, with the joint support of the Government and the four largest Australian banks, to provide liquidity to car dealer financiers through the securitisation of eligible loans provided to car dealers. The expectation is that the SPV could be required for up to a year, with its funding now expected to total around $850 million from an initial $2 billion estimate. The lower funding requirement in part reflects the willingness of the remaining finance providers to grow their loan books and to finance a large number of former GE and GMAC dealers. The Government's support to the SPV is in the form of a guarantee on the portion of the securities issued as subordinated notes.

In addition to this funding vehicle, the Government has established arrangements under which the Australian Office of Financial Management (AOFM) purchases RMBS. In particular, in late September 2008 the Government announced that the AOFM (the agency responsible for the management of Australian Government debt and certain financial assets) could purchase outright up to $8 billion of newly issued RMBS. The securities to be purchased must be rated AAA, or equivalent, by one of the major credit rating agencies and any one issue is subject to a minimum investment by the AOFM of $100 million and a maximum of $500 million. Conditions also apply to the mortgage pool, including: the value of low-doc loans cannot exceed 10 per cent of the initial principal value of the pool; and the individual loans must be of a maximum size of $750 000 and have a maximum loan-to-valuation ratio of 95 per cent. The Government also stipulated that at least half of the investments in RMBS be allocated to issuers that are not ADIs.

The investment by the AOFM has been spread out over several rounds. The first round took place in late 2008 and involved the AOFM investing nearly $2 billion across four issues. A second round, involving an investment by the AOFM of $1.25 billion across three issues, has recently been completed. In both cases, the AOFM's purchases accounted for the bulk of the issue.

National Regulation of Consumer Credit

In July 2008, the Council of Australian Governments agreed to transfer responsibility for the regulation of all consumer credit to the Commonwealth Government and, in doing so, simplify and standardise the regulation of financial services and credit across Australia. This standardisation is to occur via the Commonwealth enacting the existing State legislation, the Uniform Consumer Credit Code (UCCC), into Commonwealth law. As part of this process, the UCCC will also be extended to cover the provision of consumer mortgages over residential investment properties. In addition, a national licensing regime will be introduced that will require all consumer credit providers, as well as credit-related brokering services and advisers, to obtain a licence from ASIC. Licensees will be required to observe a number of general conduct requirements, including responsible lending practices. ASIC will be the sole regulator of the new framework and ASIC's enforcement powers are to be enhanced. It is anticipated that the relevant Commonwealth, State and Territory legislation will be amended by the end of June 2009.

The issue of margin lending will be specifically addressed under the new consumer credit regime. The *Corporations Act* will be extended to cover margin lending products, with providers required to issue new product disclosure statements. The format of these statements will be

similar to those introduced for First Home Saver Accounts, and the Financial Services Working Group will oversee this exercise as part of its responsibility for formulating a national margin lending regulatory regime. The disclosures will include information about the risks of margin lending, as well as the fees and charges and any commission paid by margin loan providers to advisers who sell such products. As with all other credit providers and brokers, margin lending providers will have to be licensed by ASIC and will need to be trained to provide that advice and observe general conduct requirements.

Short Selling and Securities Lending

In September 2008, after regulators in a number of countries imposed bans on short selling of equities to help preserve financial stability, ASIC banned both naked and covered short selling of stocks listed on the ASX. (A 'covered' short sale is a sale of a product that the seller, at the time of sale, does not own, but does have an existing right to obtain, typically via a binding securities lending agreement, while a 'naked' sale is one where the seller has no such right at the time of sale and must acquire it prior to settlement.) The ban on covered short selling of non-financial stocks was lifted on 19 November 2008 and the ban on covered short selling of financial stocks remains in place, while the ban on naked short selling of all stocks is permanent (subject to certain limited exemptions). In making its recent decision to extend the ban on covered short selling of financial stocks until end May, ASIC noted that it had weighed the continued volatility in global financial markets and potential damage from aggressive or predatory short selling against the possible loss of some market efficiency or price discovery.

In December 2008, the Government amended the *Corporations Act* to give legislative force to these changes and to simplify and clarify the regulatory framework governing short selling more generally. The amendment also provides for the establishment of an enhanced disclosure framework for short sale transactions, with the detailed aspects of the disclosure framework currently being developed. In the interim, clients are required to inform their broker when they execute a short sale, with brokers then obliged to inform the market operator of their daily flow of short sales in each security. The data are aggregated by the ASX and published daily in an online report.

As reported in the September 2008 *Review*, the Reserve Bank has also been working with industry to improve disclosure of securities lending activity in the Australian equities market. The specifics of the new arrangements have now been agreed and they have been given regulatory backing through changes to the relevant measure of the *Financial Stability Standard for Central Counterparties*.[3] Under the new arrangements:

- the ASX will require all transactions related to securities loans to be 'tagged' when they are submitted for settlement;
- participants in the settlement facility will be required to report to the ASX on a daily basis outstanding securities borrowed and loaned; and
- the ASX will publish daily data on both the gross flow of securities loan-related transactions and the stock of loans outstanding.

3 *See Reserve Bank of Australia (2009),* Disclosure of Equities Securities Lending, *February.*

There will be a phased approach to implementation of the new disclosure regime. A pilot phase for the direct reporting of the stock of loans outstanding is due to commence at the end of April 2009, with full implementation by the end of December 2009. During the pilot phase the Reserve Bank will work with the industry to encourage those entities that are significant players in the securities lending market, but are not settlement participants, to participate in the reporting arrangements. The tagging of securities loan-related transactions submitted for settlement is scheduled to be introduced from October 2009.

Box B: Central Clearing of Over-the-counter Credit Derivatives

In the past year a number of international regulatory and government groups have called for improvements to the operational infrastructure for over-the-counter (OTC) derivative markets, especially for credit derivatives, including credit default swaps (CDS). A proposal that is receiving increased support is that central counterparties (CCPs) be used for the clearing of transactions in these markets.

Background

Credit default swaps are derivative instruments that allow market participants to buy and sell a notional dollar amount of protection as insurance against the default of a reference entity in exchange for a regular premium payment. The reference entity can be a single borrower, such as an individual corporation or government, or it can be a more exotic entity such as an index of other CDS written against tranches of residential mortgage-backed securities.[1] The CDS market has grown very quickly over recent years: according to the Bank for International Settlements, the notional value of CDS outstanding in major financial markets was US$57.3 trillion in June 2008, having increased by more than 450 per cent over the preceding three years. One reason for this rapid expansion is that, being an OTC market, the CDS market offers counterparties the flexibility of customised, bilaterally negotiated terms on each transaction. However, this lack of standardisation, together with the very rapid growth in the number of transactions and counterparties, has greatly increased the market's operational complexity.

Further increasing operational complexity has been the bilateral counterparty risk management of market participants. As with other OTC derivative transactions, a CDS buyer faces the risk that its counterparty may default on its obligation before the contract expires, leaving the buyer unprotected and forced to replace the trade with another counterparty. To mitigate the potential for loss in that event, market participants typically negotiate terms that give the CDS buyer the right to demand an initial margin (usually collateral such as cash or government bonds) from the CDS seller as some minimum protection should the seller default. If CDS premiums subsequently rise (thus increasing the cost of purchasing replacement protection should the CDS seller default), more collateral may be posted. Conversely, if prices fall, collateral can be returned, or the CDS buyer might even be required to post collateral to the seller. With positions generally being marked-to-market daily, participants are continuously exchanging collateral, which might require tracking the ownership of securities across numerous transactions.

In the largest CDS markets – mainly the United States and Europe – regulators have for several years been encouraging participants to address the risks arising from these operational complexities. A group of the major international dealers in the credit derivatives market and

1 *A discussion of the latter can be found in Reserve Bank of Australia (2008), Box B: The ABX.HE Credit Default Swap Indices,* Financial Stability Review, *March*.

their regulators, convened by the Federal Reserve Bank of New York, has been instrumental in encouraging several important improvements to OTC infrastructure. These include: increased automated processing of trade confirmations via the New York-based Depository Trust and Clearing Corporation (DTCC); and the launch of DTCC's Trade Information Warehouse, a central repository of information on credit derivatives trades executed in the OTC market.

The risks associated with operational complexity and decentralised clearing were highlighted by the default of Lehman Brothers in September 2008. Lehman had been an active, market-making participant in CDS markets, so its default precipitated a significant deterioration in market liquidity. Those with direct counterparty exposure to Lehman also faced considerable uncertainty and complexity, at least initially, in identifying the extent of their open positions and how much money they owed or were owed upon close-out, and in co-ordinating the decentralised replacement of defaulted trades. In addition, establishing their recourse to collateral placed with Lehman was made more difficult by the common practice of 'collateral rehypothecation'; that is, securities posted as collateral by a CDS seller were often then used by the buyer as collateral for other transactions, CDS or otherwise.

Central Counterparties

In contrast to the situation in OTC derivative markets, the default of Lehman was handled much more efficiently in markets served by CCPs. Lehman's open positions were ascertained quickly and unwound with little uncertainty regarding counterparty risk or disruption to the broader market, and the close-out process did not create co-ordination problems. This is because, in markets with CCPs, the CCP is interposed as the counterparty to every trade once it is negotiated, becoming the buyer to every seller and the seller to every buyer. In this way, the only direct counterparty risk in the market is between individual participants and the CCP, and this is reduced using standardised, conservative risk management tools and multilateral netting, such that individual participants have smaller exposures overall.

For example, the unwinding of Lehman's US$9 trillion open positions in LCH.Clearnet Limited's SwapClear, a central counterparty for OTC interest rate swaps, proceeded smoothly. SwapClear's centralised and tested default-management process brought in dealers from participant firms to hedge the market exposure associated with Lehman's open positions and then auction the hedged portfolio to surviving participants. Recourse to LCH.Clearnet Limited's default fund proved unnecessary for any of the products it cleared, since adequate margin had already been collected from Lehman.

In addition to reduced counterparty risk, CCPs can bring other benefits to a market, including:

- encouraging streamlined operational processes;
- reducing collateral management complexities;
- mitigating systemic risks arising from a complex network of interconnected bilateral exposures;

- providing a focal point for regulation and oversight of risk management; and
- reducing informational asymmetries in the market.

These advantages had seen the potential expanded role of CCPs in OTC derivatives markets discussed even before the onset of the recent turmoil. Recent events have given these discussions more impetus, and in the past year a number of international regulatory and government fora have promoted CCP clearing and settlement of CDS transactions.[2] Given the increased regulatory and market appetite for their services, several CCPs in both the United States and Europe have developed products for credit derivatives, with two having already commenced operations.

Because CCP clearing necessarily involves centralisation of risk in the market, it is essential that the CCP's risk management practices are robust and that the CCP has adequate capital backing. At the same time, the market must be able to bear the cost of ensuring the CCP's robustness without undermining market functioning. In general, the prerequisites for a robust and financially viable central counterparty solution include:

- sufficiently standardised contract terms, to facilitate automated processing and netting;
- a relatively predictable distribution of market price movements, to ensure confidence in initial margin coverage;
- reliable mark-to-market valuations, to underpin mark-to-market margin calls; and
- a liquid market for close-out in the event of default, or the capacity to establish robust default-management procedures with involvement of market participants.

While credit derivative indices are likely to meet these prerequisites, single-name CDS pose more challenges, partly because of their inherent event risk and the possibility of simultaneous defaults by the CDS seller and reference entity. As such, the initial margins required to ensure adequate coverage on a single-name CDS portfolio are likely to be quite high. An alternative would be to rely more heavily on mutualised loss sharing in the default fund, although this would require higher participant contributions. The prospective providers of CCP clearing services for credit derivatives are currently working through these issues.

The Australian Context

The Reserve Bank, together with ASIC and APRA, have been monitoring developments in this area closely. Much of this work is being carried out via an inter-agency working group established in mid 2008. Since the end of last year this group has been surveying participants in the OTC derivatives market in order to: assess the scale of activity in the various OTC derivatives product segments; understand the split between onshore and offshore activities; gauge risks in existing risk-management and post-trade practices; and examine existing use of automated facilities.

2 *For instance, Financial Stability Forum (2008),* Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, *7 April, and Group of 20 (2008),* Declaration: Summit on Financial Markets and the World Economy, *15 November.*