



RESERVE
BANK
of
AUSTRALIA

FINANCIAL
STABILITY
REVIEW

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Reserve Bank

FINANCIAL STABILITY REVIEW

March 2005

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Reserve Bank

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Overview

The Reserve Bank's overall assessment is that the Australian financial system is in sound condition. Banks – the most important intermediaries from a systemic risk perspective – are well capitalised, highly profitable and experiencing levels of bad debts that are very low by both historical and international experience. Further, there are no signs of the excesses in the commercial property market that were the cause of significant problems for the banking system in the early 1990s. Corporate balance sheets are in very good shape, with interest-servicing burdens around the lowest level for many years. The insurance sector is also performing better than it has for some time, notwithstanding the emergence of competitive pressures in some business lines and claims returning closer to long-term averages.

Given these favourable outcomes, attention has been focused on household balance sheets, which have expanded rapidly. Over 2003, both household debt and house prices increased by around 20 per cent, and this followed large increases in previous years. The Bank's concern at the time was that a continuation of these trends would increase the likelihood of quite large corrections in house prices and household behaviour at some point in the future. This concern was not so much that these adjustments would imperil the health of financial institutions, but rather that they could lead to a period of weak economic growth.

In the event, 2004 unfolded favourably. Sentiment in the housing market finally turned in late 2003, with house prices falling slightly in some areas over the first three quarters of 2004 before recovering a little. Household credit growth also moderated from the rapid pace of 2003, although it remains quite high relative to the growth of incomes and, hence, servicing capacity.

Despite these welcome developments, the current environment is not without its vulnerabilities. At the global level, low interest rates in the major financial centres, combined with reasonable economic outcomes, have encouraged borrowing and led investors to perceive risk as very low and/or to accept less compensation for holding risky assets. The resulting concern is that in the benign environment of the past few years investors may have underestimated risks and borrowed too much. The corollary of this is that the prices of some assets may have been pushed to unsustainable levels. If this turned out to be the case, developments of recent years could have created the basis of future difficulties.

While the recent benign conditions in financial markets may well continue, if history is any guide, a reappraisal of risk and debt levels is likely at some point in time. Exactly what the trigger for any reappraisal might be is unpredictable. But there are a number of possible candidates. One is an unanticipated rise in inflationary pressure in the global economy, leading to a significant increase in interest rates. Other, but less likely, triggers include a sharp fall in the US dollar due to concerns about the sustainability of the US current account and fiscal deficits, disorderly adjustments in exchange rates in Asia, and a confluence of credit events, including the default or downgrading of a major borrower. A year or so ago, tightening of US monetary policy

would have been added to this list, although to date the tightening, if anything, appears to have reinforced the perception that risk is low, rather than the reverse.

Although disruptions in global capital markets arising from an abrupt reappraisal of risk would undoubtedly have effects on Australia, domestically, the main risks continue to revolve around the behaviour of households and their willingness to take on debt, particularly for housing. On one hand, there is the possibility that last year's favourable developments turn out to be only a temporary reprieve and that the housing market reignites, an outcome that would throw the possibility of a future costly correction back into sharp focus. On the other, there is a risk that the weakening in the housing market could become more pronounced and that households, after taking a more cautious approach to their finances over the past year, may attempt to shore up their balance sheets appreciably. On the basis of how events have evolved to date, both these risks seem to be relatively low, but they cannot be ruled out.

Another uncertainty is the response of Australian financial intermediaries to the slowdown in household credit growth. The concern here is that some intermediaries may be responding to this slowdown by taking on more risk, and at lower margins, in an attempt to preserve lending volumes and market shares. In a number of areas, lending practices are diverging some way from the tried-and-tested methods of the past: far more use is now being made of brokers; 'low-doc' lending, which involves a strong element of self-verification in the loan application process, is growing rapidly; and the discounting of home loan rates is much more widespread. To the extent that these various changes are the outcome of a more competitive market they are to be welcomed, provided that lending institutions fully understand the risks involved and are pricing those risks appropriately. Whether or not this is the case will only be evident in a weaker economic environment, when the risk now being built up materialises. While these recent developments do not represent an immediate threat to the financial system, they nonetheless need to be closely watched in the period ahead. ❧

1. The Macroeconomic and Financial Environment

1.1 The Global Environment

The International Economy and Financial Markets

The international economy has performed strongly recently, providing a favourable backdrop for the Australian economy and financial system. In 2004, growth in world economic activity is estimated to have been 5 per cent, well above the average of recent decades, though outcomes have varied widely across countries, with the United States, China and emerging Asia significantly outperforming the euro area and Japan (Table 1). Expectations are that above-average growth will continue in both 2005 and 2006. Despite a pick-up in commodity and producer prices, inflation expectations remain subdued.

Growth has been underpinned by expansionary monetary policy and, to a lesser extent, fiscal policy in a number of countries. Despite increases in some countries, policy interest rates remain very low, and long-term interest rates have also been at historically low levels (Graph 1). This combination of healthy economic outcomes and low interest rates has had significant effects on financial markets and borrowing decisions, contributing to risk being perceived as low and/or priced very cheaply, and to an increase in leverage in both financial markets and household balance sheets.

The clearest evidence on risk perceptions and pricing is from bond markets, where spreads on lowly rated corporate and sovereign bonds have fallen to levels not seen since before the Asian financial crisis in 1997/98 (Graph 2). But it is also evident in global equity prices, which have increased strongly over the past six months, particularly in emerging market economies,

Table 1: World GDP Growth
Year-average, per cent^(a)

	2004	2005	2006
	Estimate	Consensus forecasts (March 2005)	
United States	4.4	3.7	3.4
Euro area	2.0	1.6	2.0
Japan	2.7	0.9	1.7
China	9.5	8.4	7.8
Other east Asia ^(b)	5.8	4.5	4.9
Australia's trading partners ^(c)	4.8	3.5	3.7
World	5.0	4.3	4.2

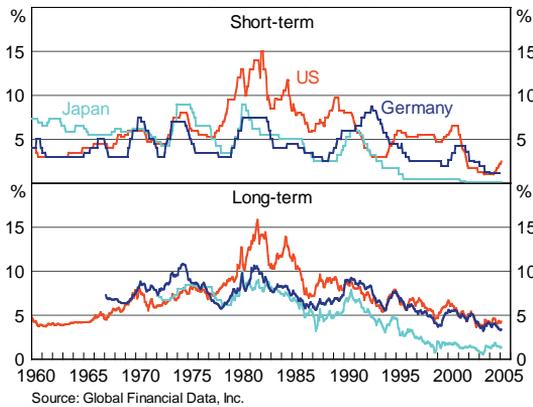
(a) Aggregates weighted by GDP at PPP exchange rates unless otherwise specified

(b) Weighted using market exchange rates

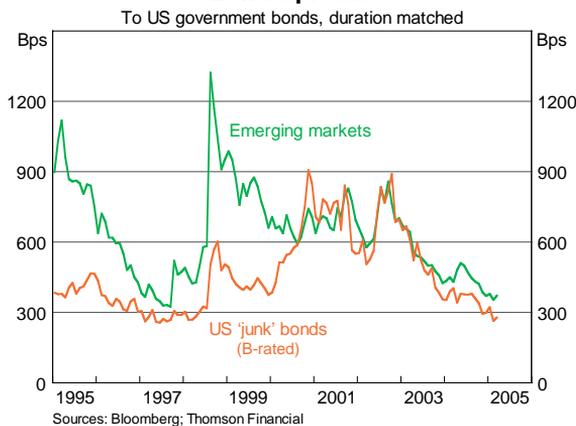
(c) Weighted using merchandise export shares

Sources: CEIC; Consensus Economics; IMF; RBA; Thomson Financial

Graph 1
G3 Interest Rates



Graph 2
Bond Spreads



while at the same time, implied equity market volatility has fallen to historically low levels in many countries (Graph 3). There have also been very strong inflows into hedge funds, which often take on more risk and leverage than many other forms of managed investments (Graph 4).

The impact of low nominal interest rates on borrowing decisions is most evident in the data on household credit growth. Over the past few years, growth in household borrowing in a range of countries, including the United States, the United Kingdom and New Zealand, has been rapid by historical standards, with much of this borrowing being for housing (Table 2). The result has been a significant rise in household debt levels and housing prices relative to income. Saving rates have also tended to decline in a number of these countries, as increased household wealth and loan refinancing has been used to support consumption (Graph 5).

In contrast, business credit growth has been more subdued in most countries. One reason for this is the relatively important role that cash flow plays as a determinant of household borrowing compared to business borrowing. In particular, low nominal interest rates have allowed households with a given cash flow to service a larger housing loan than was previously the case, with many households taking advantage of this opportunity, particularly in countries with reasonable economic growth. Low nominal interest rates have not provided the same strong impetus to borrowing by businesses and to commercial property prices.

The willingness of some investors to take on more leverage and, apparently, accept less compensation for holding risk has a number of possible explanations. One is that the perceived likelihood of a recession – or some other adverse event serious enough to cause an increase in defaults – has declined over recent years, as have concerns about a sudden increase in inflation. Such views may have been reinforced by the apparent increased stability over the past decade of both economic activity and prices. These outcomes have given investors the confidence to take on more debt and buy assets at lower risk spreads than would have been the case some years ago. They have also been important in generating the confidence that has allowed households to

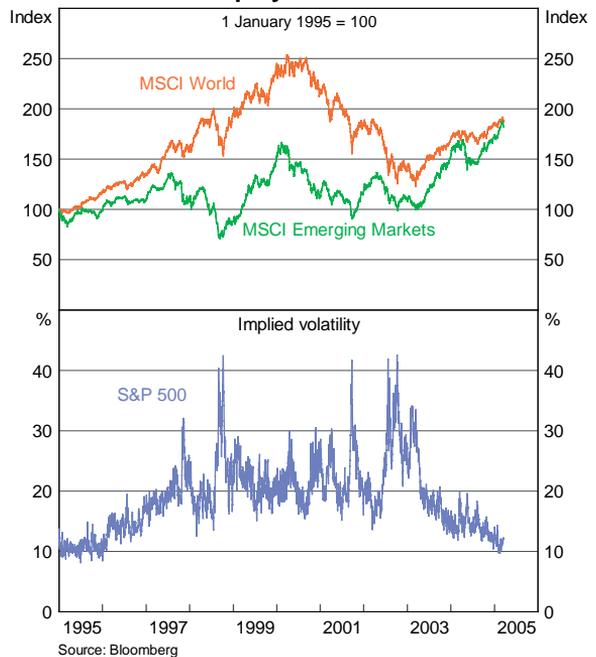
take advantage of low interest rates through increased borrowing. A second explanation is that the long period of very low interest rates, combined with a high level of global savings, has prompted a 'search for yield' by investors. In an effort to diversify expanding portfolios and maintain returns close to historical averages, investors have sought alternative assets, pushing up their prices and in so doing reducing the compensation that they receive for accepting risk.

With risk spreads at historically low levels, a reassessment of risk is likely at some point in the future. Exactly when this might occur and what might prompt it are largely unpredictable. One possible trigger would be higher-than-expected inflation globally, but particularly in the United States, leading to a sharp rise in interest rates. In such a scenario, there could be an abrupt reappraisal of risk across a broad range of assets and a rapid unwinding of highly leveraged speculative positions, with potential disruption to financial markets. There could also be significant effects on household borrowing and spending decisions.

Another possible, though less likely, trigger is a sharp and disorderly depreciation of the US dollar in response to concerns about the US

budget and current account deficits (Graph 6). The adjustment in the US dollar, to date, has been orderly, with the currency depreciating, on a real trade-weighted basis, by around 15 per cent from its peak, to around its 30-year average (Graph 7). Notwithstanding this, concerns have been expressed in some quarters that with the current account deficit at 6¹/₄ per cent of GDP, investors may become less willing to accumulate progressively larger holdings of US-dollar assets. While an abrupt change in sentiment cannot be ruled out, the historical experience is that external imbalances in industrialised countries with floating exchange rates and sound financial

Graph 3
Equity Markets



Graph 4
Hedge Fund Assets Under Management

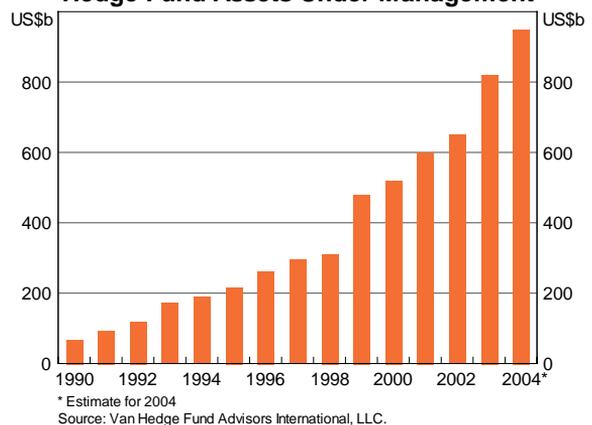


Table 2: Household Debt Growth
Annual average, per cent

	Dec 1989 to Dec 2001	Dec 2001 to Dec 2004
Australia	12.4	17.5
Canada ^(a)	6.2	9.0
Ireland ^{(a)(c)}	16.2	29.0
New Zealand ^(a)	10.0 ^(d)	13.5
Spain ^(a)	10.0	16.2 ^(b)
UK ^(a)	6.8	14.1 ^(b)
US	7.2	10.3

(a) Includes unincorporated enterprises

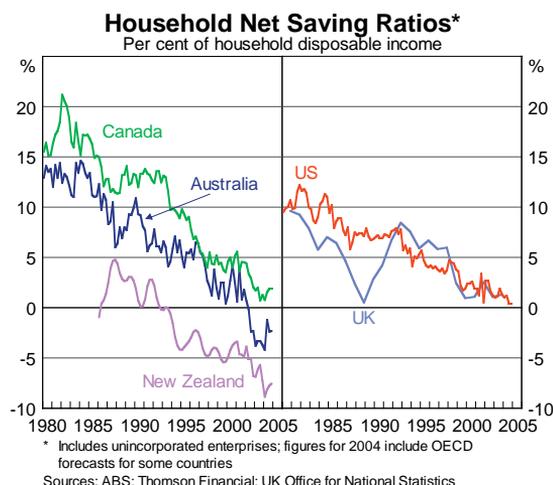
(b) To September 2004

(c) Residential mortgage credit only; data are from March 1991

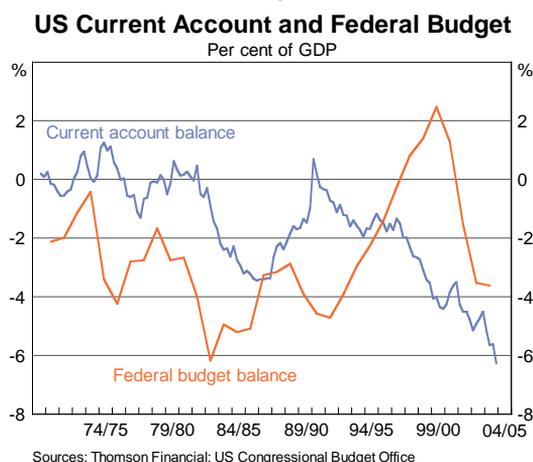
(d) From December 1990

Sources: National sources

Graph 5



Graph 6



systems have typically been resolved in an orderly manner. Perhaps of greater concern in the medium term is the deterioration in the US fiscal position over recent years.

There are other possible catalysts for a reassessment of risk, including disorderly exchange rate adjustments in Asia and the default of a major borrower. While it is difficult to assess the exact probabilities of any of these events, many in financial markets appear to be pricing assets on the basis that the current, relatively benign, conditions will continue. While this may well turn out to be the case, there is relatively little room for credit spreads to compress further, while the scope for spreads to return to levels closer to historical averages appears considerable.

Financial Institutions

Overall, the global economic environment over the past year has provided a favourable operating environment for international financial institutions. Reflecting this, indices of financial institutions' share prices have generally increased over this period (Graph 8).

Banks have profited from strong investment returns and benign conditions in financial markets. In addition, solid credit growth and falls in both impaired assets and bad-debts expense have generally supported profitability. The German banking sector is a notable exception, with banks' balance sheets adversely affected by high non-performing loans stemming from poor lending

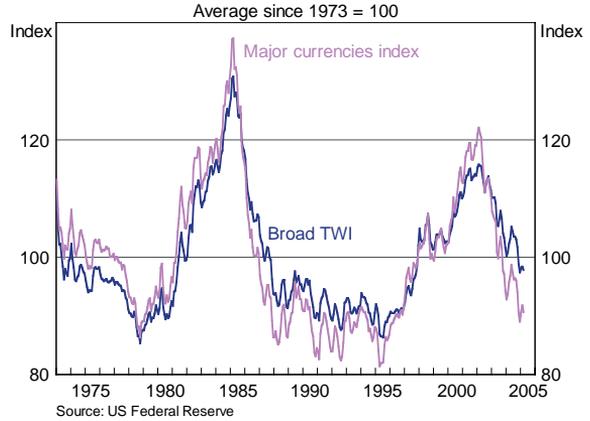
decisions over the past decade and the stagnating national economy.

The balance sheets of global insurers have also benefited from the stronger world economy and favourable conditions in financial markets. In the US, non-life insurers have experienced growth in premium income, which has supported profits, even in the presence of high losses stemming from severe weather-related catastrophes. Consistent with this, Standard & Poor's upgraded the credit ratings of eight insurers in 2004 and made only one downgrade. Similarly, European non-life insurers have enjoyed higher premium rates and relatively low claims. The performance of life insurers in 2004 was comparatively less positive, but strong investment returns saw ratings outlooks in some countries improve from negative to stable. Concerns remain, however, about the health of some life insurers, and that regulatory changes, such as the new solvency requirements in Europe, may increase the existing pressure on them to raise capital.

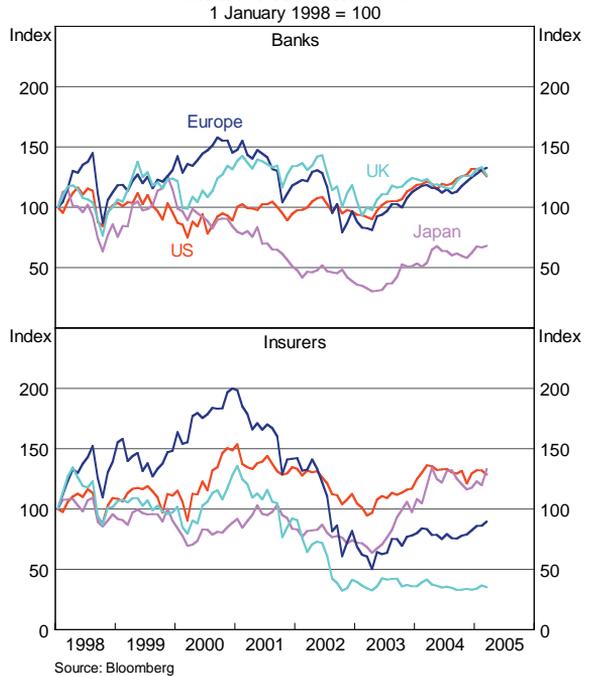
1.2 Australia

The economic and financial environment in Australia remains favourable from a financial stability perspective. While economic growth has slowed recently, the economy is in its fourteenth year of expansion, and the prospects are that demand conditions will remain broadly supportive of overall growth in the period ahead. The housing market has clearly cooled from its overheated state in 2003 and credit growth has slowed, although it remains quite strong relative to historical experience. From an overall perspective, these adjustments are welcome, as they reduce the likelihood of a costly correction in house prices and household behaviour at

Graph 7
US Dollar – Real



Graph 8
Share Price Indices



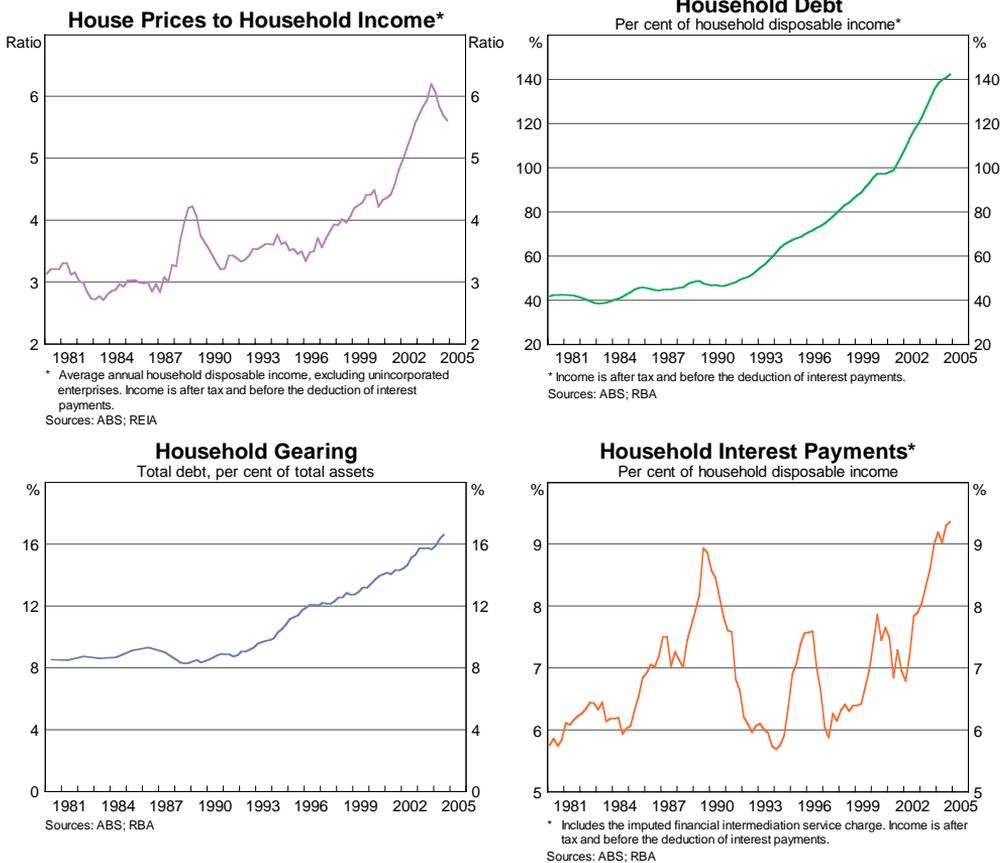
some time in the future. Notwithstanding this, household balance sheets remain more exposed to changes in economic and financial conditions than they have been in the past.

Household Sector

As has been well documented in various Bank publications, the household sector has borrowed heavily over the past decade, primarily for housing, and correspondingly house prices have risen considerably. In the 10 years to end 2003, household debt grew, on average, by 15 per cent per year, with house prices increasing at an average annual rate of 10 per cent. As a result, by end 2003, a number of potential indicators of household financial vulnerability – including the ratios of debt, house prices and interest payments to income, and household gearing – had reached record highs (Graph 9).

These long-run developments primarily reflect fundamental shifts in both demand for, and supply of, housing loans. As mentioned above, the shift to a low-inflation and low-interest-rate environment in Australia has, as in other countries, significantly increased the capacity of households to borrow, particularly for housing. The more stable macroeconomic environment that has gone hand-in-hand with these developments has also apparently meant that households

Graph 9
Household Financial Ratios



now view a given debt-servicing burden as less risky than in the past. On the supply side, financial institutions have become keener to lend for housing and have significantly increased the variety and flexibility of loan products, as well as the intensity with which loan products are marketed to both owner-occupiers and investors. Competition has also brought about a significant fall in margins on housing loans (as discussed in the *Financial Intermediaries* chapter).

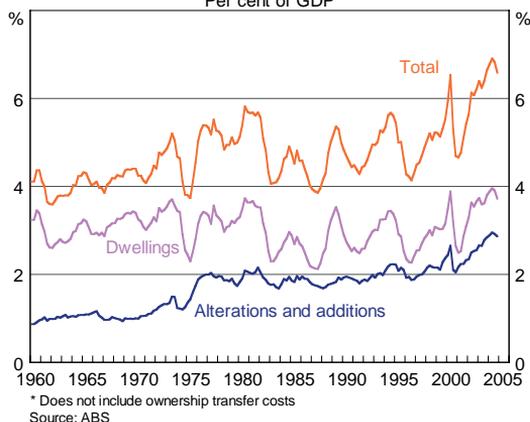
Notwithstanding these structural factors, by 2003 there were clear signs that the housing market had become overheated. Residential property investors accounted for a historically high share of financing activity – despite rental yields having fallen to very low levels – and growth in house prices and household borrowing had both accelerated to annual rates of around 20 per cent or more by the December quarter. These developments, had they continued, risked building up significant imbalances in household balance sheets.

Over recent years, the big run-up in house prices, and associated record-high levels of household assets, have underpinned strong growth in household spending. By mid 2004, dwelling investment, as a share of GDP, had increased to the highest level on record – fuelled by unprecedented spending on housing renovation – and the measured saving rate from current income had fallen to its lowest recorded level (Graphs 10 and 11). The concern arising from these developments was that further increases in house prices, and a continuation of very rapid credit growth, risked sowing the seeds of future problems, not so much for the banking system, but for the economy more broadly. In particular, the unwinding of imbalances in household balance sheets could make for a period of very weak consumption and overall economic growth.

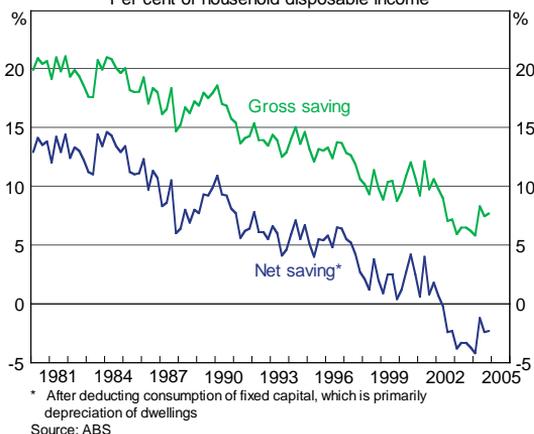
From this perspective, developments since the end of 2003 have been welcome, with a range of indicators suggesting a cooling of the housing market over the past year.

Measures of average nationwide house prices have either fallen or shown little change over the past year, after increasing by an average

Graph 10
Dwelling Investment*
Per cent of GDP



Graph 11
Household Saving Ratios
Per cent of household disposable income



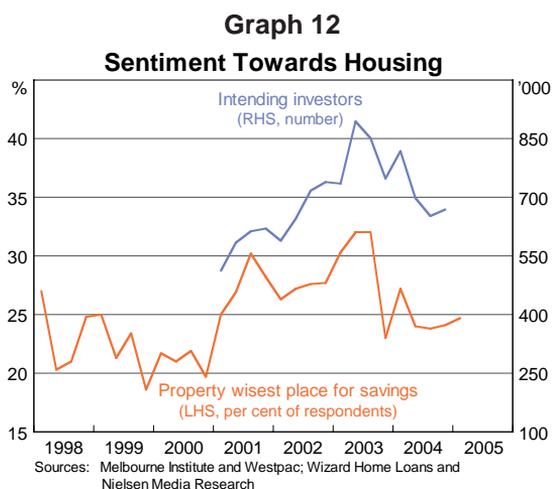
of 21 per cent over 2003 (Table 3). During the first three quarters of 2004, many series show that prices fell in a number of cities, before recording small gains in the final quarter of the year. The slowing has been broadly based, with the biggest adjustments – involving price falls over the year – in Sydney and Melbourne.

Table 3: House Prices
Year-ended percentage change

	2003				2004			
	ABS	APM	CBA	REIA	ABS	APM ^(a)	CBA	REIA ^(a)
Sydney	15.5	23.2	19.0	10.8	0.0	-6.9	-15.7	-10.2
Melbourne	12.5	17.0	25.0	15.5	-1.5	-8.2	-7.5	-1.2
Brisbane	35.1	41.7	43.9	35.8	8.4	4.9	-0.8	3.7
Adelaide	24.2	20.6	18.5	28.1	8.8	11.3	7.0	10.7
Perth	22.2	20.5	34.5	18.4	8.9	9.3	3.1	8.1
Canberra	25.3	25.9	48.1	31.8	0.2	-1.9	-6.3	-5.4
Australia	18.9	23.1	26.2	16.3	2.7	-2.9	-7.2	-2.9

(a) Preliminary
Sources: ABS; APM; CBA; REIA

Other housing-market indicators also show an easing in activity. Houses are currently taking longer to sell by private treaty than they were in 2003, auction clearance rates are below the average of recent years, and auction volumes have fallen. Through 2004, the total number of auction sales in Sydney and Melbourne was more than 50 per cent lower than in the previous year, partly reflecting an increase in the number of properties withdrawn prior to auction. The lower volume of sales is also reflected in many state government estimates of a sharp fall in stamp duty revenue from property sales over 2004/05.



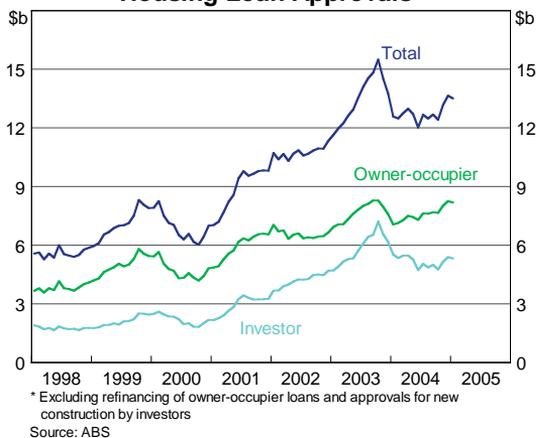
Sentiment towards housing shows a similar pattern. The proportion of respondents to the Melbourne Institute and Westpac Survey who perceive real estate to be the ‘wisest place for savings’ fell in late 2003, but has subsequently levelled out. The Wizard Home Loans and Nielsen Media Research Survey on the number of people planning to purchase an investment property over the next year has also fallen since end 2003, although it has shown some signs of stabilising in recent quarters (Graph 12).

The value of housing loan approvals also declined substantially through early 2004 before partially recovering (Graph 13). From the peak in October 2003, the value of total approvals fell by more than 20 per cent by mid 2004, with the correction particularly pronounced for investor loan approvals. More recently, however, both owner-occupier and investor loan approvals have risen, with the flow of approvals for owner-occupiers now almost back to its peak.

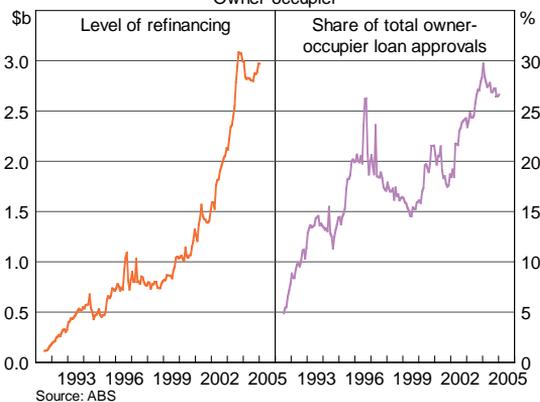
Owner-occupier mortgage refinancing also declined in the first half of 2004, in sharp contrast to average annual growth of around 30 per cent in the preceding three years (Graph 14). Recently, the level of refinancing has again picked up, to be just below the peak in September 2003. Refinancing activity partly reflects the strong competition in housing finance, which has seen many borrowers seek a change in loan terms and conditions, including the size of the loan.

Reflecting these trends, growth in housing credit – the largest component of household debt – slowed to 12 per cent (on an annualised basis) over the six months to January 2005, down from the peak of 22½ per cent at the end of 2003 (Graph 15). Despite this slowdown, household credit growth remains considerably faster than growth in incomes. Consistent with the pattern of loan approvals, the decline in the rate of growth of housing borrowing has been most pronounced among investors:

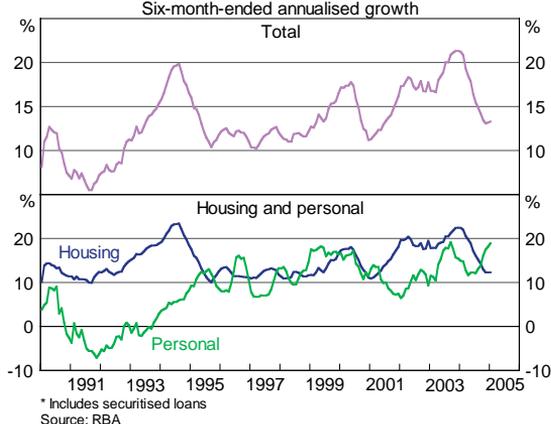
Graph 13
Housing Loan Approvals*



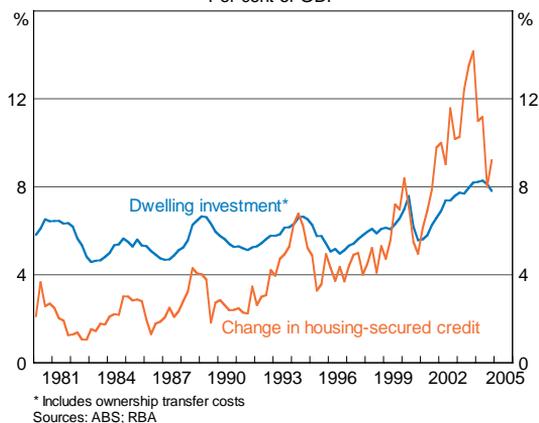
Graph 14
Mortgage Refinancing
Owner-occupier



Graph 15
Household Credit*
Six-month-ended annualised growth



Graph 16
Housing Equity Withdrawal
 Per cent of GDP



houses (Graph 16). The Bank is currently undertaking a survey of households to improve its understanding of these trends, and in particular the extent to which households are using mortgage financing, including refinancing, for non-housing purposes. The results of the survey will be published later in the year.

In contrast to housing credit, growth in other personal credit – which accounts for around 16 per cent of total household debt – picked up over the second half of 2004, with strong growth across all the main categories. Margin loans – loans typically used to purchase equities – have grown particularly strongly. Over the second half of 2004, this type of lending increased at an annualised rate of around 23 per cent, as households borrowed to invest in the rising equity market. At end December, around \$15 billion in margin loans were outstanding, with an average loan size of around \$107 000. Typically, these loans are well collateralised by the underlying securities, with an average loan-to-valuation ratio of around 43 per cent at end December. Another type of personal lending that has grown strongly recently is revolving loans secured by residential mortgages. Over the year to January, this type of credit increased by around 13 per cent, although the pace of growth appears to have picked up since mid 2004. Credit card debt has increased by around 14 per cent over the year to January, around the average rate of growth for the past three years.

The housing market slowdown has dampened overall growth in the value of household assets, although this has been somewhat offset by the strong equity market. In the three quarters to September 2004, the aggregate value of assets owned by the household sector grew at an annualised rate of 6.4 per cent, after having increased at an average annual rate of nearly 11½ per cent over the five years to end 2003 (Table 4). Overall, the total value of the household sector's assets is historically high at around 7½ times household income. As this figure has increased over time, balance sheet considerations are likely to have played a more important role in shaping the household sector's spending decisions.

Compared with other countries, a high share of Australian households' assets are held in the form of housing (61 per cent, compared with around 44 per cent in the United Kingdom and

after growing at double the rate of owner-occupier housing debt in late 2003, investor housing credit is now growing at a comparable pace.

The slowdown in household credit growth has meant that, over the past year, the dollar increase in outstanding debt secured by housing has exceeded the value of spending on dwelling investment by only a relatively small margin. This is in contrast to 2003, when the household sector borrowed much more against the housing stock than it spent building and renovating

Table 4: Household Assets

September quarter 2004

	Level \$ billion	Share of total Per cent	Annual growth Per cent	
			Three quarters to Sep 2004	Average Dec 1998 to Dec 2003
Dwellings	2 623	61.2	4.1 ^(a)	14.7
Consumer durables	148	3.5	3.4	4.5
Financial assets ^(b)	1 515	35.4	10.8	7.3
– Superannuation and life offices ^(c)	791	18.5	13.3	8.0
– Shares and other equities	273	6.4	12.0	5.9
– Currency and deposits	365	8.5	8.7	7.7
– Other	86	2.0	-4.2	4.2
Total	4 286	100.0	6.4	11.4

(a) The rise in measured dwelling assets over this period, which occurred despite falls in median national capital city house prices, reflects use of a broader dwellings price measure and an increase in the dwelling stock.

(b) Includes unincorporated enterprises.

(c) Includes unfunded superannuation claims.

Sources: ABS; RBA

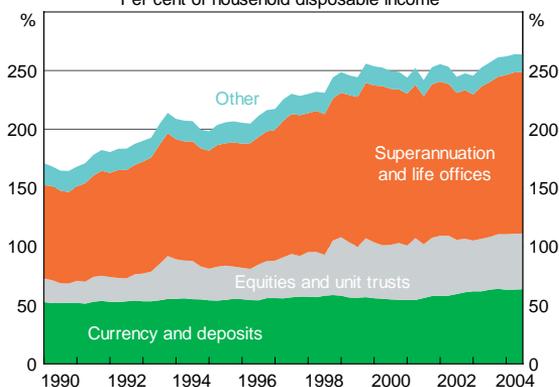
32 per cent in the United States). This reflects the fact that house prices in Australia tend to be higher, relative to household income, than in other countries, and that the rental housing stock in Australia is largely owned directly by the household sector. It also means that movements in house prices might be expected to have a more important influence on household spending decisions in Australia than is the case in many other countries.

Notwithstanding the large share of housing assets in household balance sheets, holdings of financial assets have grown quickly over the past couple of years, as households have channelled funds towards market-linked financial assets, both through institutional investors, such as superannuation funds, and through direct holdings of equities (Graph 17). The household sector has therefore benefited from strong gains in the equity market.

Claims on superannuation funds and life offices (including unfunded superannuation) now account for 52 per cent of households' financial assets, up from 46 per cent in 1990. Within superannuation holdings, increased exposure to market risks has been reinforced by the trend away from 'defined-benefit' to 'defined-contribution' or 'accumulation' superannuation schemes, in which individuals accumulate financial assets to finance their retirement. Of directly held

Graph 17**Household Financial Assets**

Per cent of household disposable income*



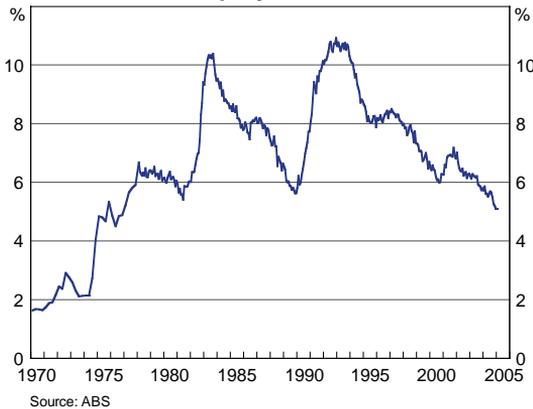
* Income is after tax and before the deduction of interest payments.

Sources: ABS; RBA

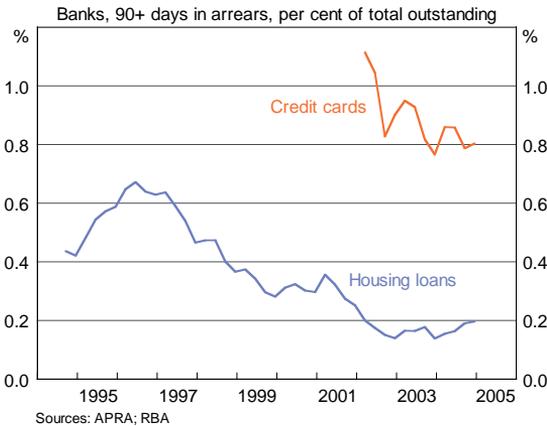
financial assets, the most recent Australian Stock Exchange Survey shows that 44 per cent of Australian adults own shares, up from 10 per cent in the early 1990s.

In addition to the continuing expansion in balance sheets, the household sector has benefited from strong employment growth and solid increases in real wages. Over the year to February 2005, employment grew by 3.4 per cent, with momentum particularly strong

Graph 18
Unemployment Rate



Graph 19
Loans Past Due



in the second half of the period. Together with ongoing increases in wages, real disposable income grew by 5½ per cent over 2004. The unemployment rate is currently at its lowest level since 1976, and the proportion of workers moving from employment to unemployment each month is around the lowest level over the period for which data are available (Graph 18).

Given this supportive environment, there are few signs of financial stress in the household sector. Notwithstanding historically high levels of debt and interest payments relative to income, arrears on credit cards, which might be an early indicator of financial stress, remain benign (Graph 19).¹ Growth in cash advances, another potential barometer of household cash-flow problems, has moderated over the past six months, and housing loan arrears remain around historical lows. Consistent with low levels of unemployment, personal administrations also fell slightly over 2004.

Assessment of vulnerabilities

The adjustment in the housing market to date has occurred relatively smoothly and has not been associated with the type of costly adjustments in household balance sheets that some commentators had feared. Housing credit growth remains very strong – at a six-month-ended annualised rate of around 12 per cent – with loan approvals data suggesting that growth will remain at around this rate in the immediate period ahead. While consumer sentiment

¹ See Reserve Bank of Australia (2004), 'Box A: Credit Card Indicators', Financial Stability Review, September.

fell significantly from historically high levels in March following the increase in the cash rate and release of lower-than-expected GDP growth data early in the month, households are still generally reporting that their finances are in good shape, perhaps not surprisingly given strong gains in employment over the past year.

Notwithstanding this, households do appear to have taken a slightly more cautious approach to their finances over 2004. In the second half of the year, the national accounts suggest that real consumption spending grew at an annualised rate of 3 per cent, well down on the 7 per cent pace over the same period in 2003. Accordingly, measures of the saving rate, though notoriously volatile, have increased slightly in recent quarters after declining markedly over the past two decades. Dwelling investment, including spending on renovations, has also slowed from the very high levels of recent years, and the appetite of investors for residential property has moderated. While these developments have contributed to a slowdown in the pace of growth of the economy, they are welcome from a stability perspective, reducing the potential for a costly adjustment later on.

In assessing the vulnerability of households to further changes in economic and financial conditions, the distribution of debt across households, as well as its aggregate level, is important. At any point in time, debt-servicing burdens vary considerably across the population. Among housing borrowers, those with loans taken out only recently, lower-income households, and investors, often have either the highest debt-servicing burdens or the smallest buffers on which to fall back if something goes wrong. For many borrowers, the main financial risk that they face is a loss of employment, although for highly geared property investors even small increases in interest rates can sometimes cause considerable difficulty. While detailed data on the distribution of debt are available only with a lag, the most recent data are discussed in Box A.

It is too early to detect any material effect of the recent 25 basis point increase in the cash rate – and thus most mortgage rates – on household borrowing and spending decisions, although these are now more sensitive to a given change in interest rates than was once the case. At the aggregate level, the increase in interest rates in March will modestly add to the debt-servicing burden. The rise in this ratio represents a continuation of the trend seen over recent years, though most of the trend increase is due to housing-debt growth exceeding income growth, rather than rising interest rates.

In broad terms, housing-related risks remain two-sided. On one hand, there is the possibility that last year's favourable developments turn out to be only a temporary reprieve and that the housing market reignites, an outcome that would throw the possibility of a future costly correction back into sharp focus. On the other hand, there is a risk that house prices could fall further over the course of 2005, and that households, after taking a slightly more cautious approach to their finances over the past year, attempt to adjust their balance sheets more sharply than has occurred to date.

On the possibility of the market reigniting, the most recent data suggest a slight rebound in prices and market activity from late 2004, although more data are required before firm conclusions can be drawn. Nonetheless, the recent experience of a decline in prices is likely to lead to a better appreciation by some households of the relative risk-and-return characteristics of investment in residential property. In addition, the recent increase in the cash rate in response

to emerging inflationary pressures may also prompt a reassessment by some households of the attractiveness of investment in residential property. At this stage, the risk of the market recording the type of growth seen a few years ago looks to be low.

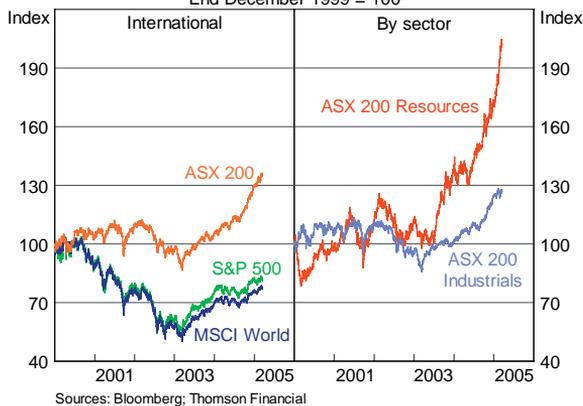
The other risk is that the moderation in housing markets could turn into something more pronounced, with significant balance sheet adjustments by the household sector affecting spending. Again, this risk currently looks to be low. A range of factors, including a favourable world environment, rising commodity prices, strong employment growth and high levels of business confidence are likely to continue to support the Australian economy in the period ahead. There are few signs that the household sector is having difficulty meeting the higher level of financial obligations. Notwithstanding this outlook, the household sector has become more exposed to changes in financial and economic conditions and its behaviour will bear close watching in the months ahead.

Business Sector

The business sector has been experiencing favourable financial conditions for some time. Profitability is at a high level, gearing is relatively low, the equity market has been strong, and finance is widely available on competitive terms.

These favourable conditions are perhaps most evident in the equity market. In 2004, the ASX 200 increased by 23 per cent, which was the largest increase amongst the major industrial countries. So far in 2005, the ASX 200 has recorded a further small increase. The strength of the market has been reasonably broadly based, with stock prices of resource companies recording

Graph 20
Share Price Indices
End December 1999 = 100



particularly large gains, reflecting the strong global demand for commodities, especially from China (Graph 20). The overall measured price-earnings ratio currently stands at 21, which is around the average of the past 20 years.

Business surveys reflect the buoyant environment, with the NAB Survey showing that perceptions of profitability and trading conditions were well above the long-run average in early 2005, notwithstanding recent declines.

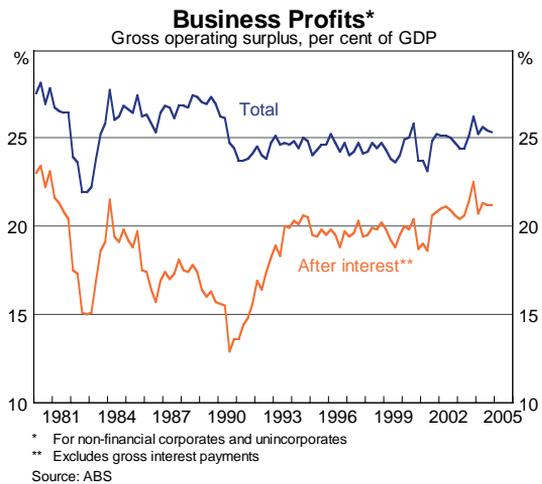
Business sector profits, as measured by non-financial sector gross operating surplus (GOS), have remained above the average of the past decade as a share of GDP, as firms have benefited from strong domestic demand and a substantial increase in the terms of trade (Graph 21). Following rapid growth in the 2003/04 financial year, the national accounts reported a slowdown in profit growth over the second half of 2004, although recent profits announced by publicly listed companies have generally shown large increases on last year's outcomes and have been slightly ahead of market expectations.

With profits strong, firms have had access to a relatively large pool of internal funds to finance investment. However, as investment expenditure has grown as a share of GDP over recent years, there has been an increased call on external sources of finance. As a result, business credit has picked up noticeably, growing at an annualised rate of 12 per cent over the six months to January 2005, around the fastest pace seen since the mid 1990s (Graph 22). Non-intermediated corporate debt issuance has rebounded strongly since mid 2004, while the rising share market has encouraged equity raisings.

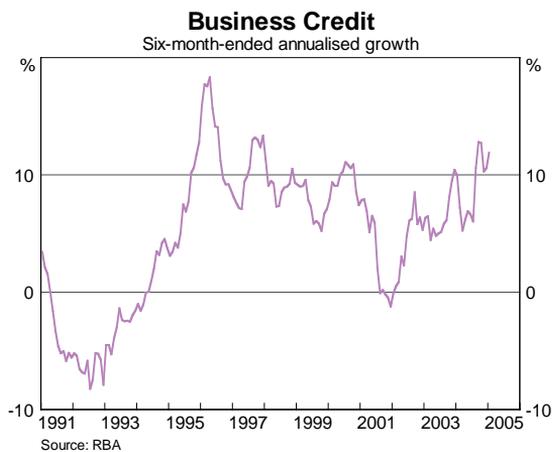
Available data suggest that Australian businesses have increasingly borrowed intermediated funds on variable-rate terms (Graph 23). In particular, the proportion of bank business loans under \$500 000 – typically those to small-to-medium sized firms – at variable interest rates has increased from 42 per cent to 60 per cent since the late 1990s. This has reduced firms’ average interest payments over this period, as short-term variable rates have generally been below long-term rates. In contrast, larger corporates have taken advantage of strong foreign demand for highly rated Australian-dollar debt and low global interest rates to lengthen the maturity profile of their non-intermediated debt liabilities.

In aggregate, levels of business sector gearing and debt servicing remain benign. Outstanding debt as a ratio to GOS has fallen over recent

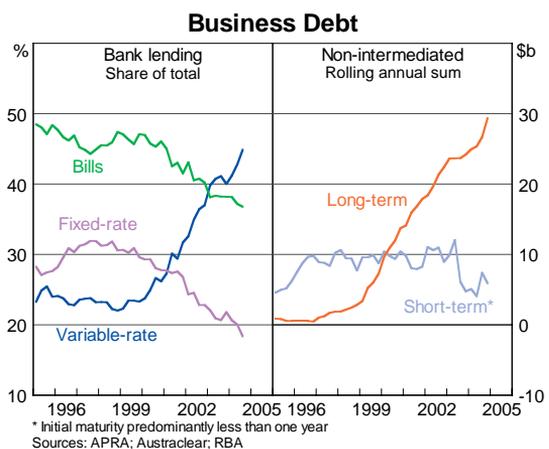
Graph 21



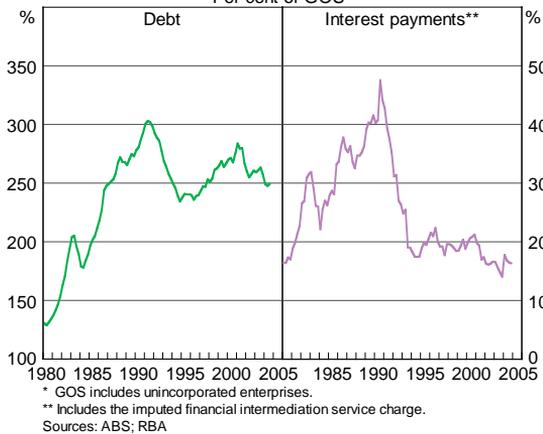
Graph 22



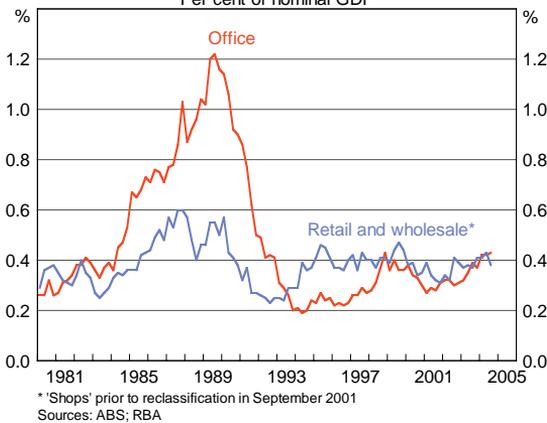
Graph 23



Graph 24
Business Sector Finances
 Per cent of GOS*



Graph 25
Commercial Property Construction
 Per cent of nominal GDP



years and is below the average of the past two decades. This decline, together with the low level of interest rates, has meant that the share of GOS devoted to interest payments is around the lowest level seen for many years (Graph 24).

In the past, imbalances in commercial property markets have been a significant cause of stress in the corporate sector. There are, however, few signs of the excesses in commercial property prices and construction activity that caused problems for many companies in the late 1980s and early 1990s. Office property prices remain below the peak reached during that period, and as a share of GDP, office property construction is currently around a third of the activity prevailing at that time (Graph 25).

Nonetheless, after a period of relatively subdued conditions, including rising vacancy rates and falling effective rents, office construction has picked up in recent years, with prices and the absorption of office space both firming in the second half of 2004. Consistent with

developments in many other countries, the retail segment of the commercial property market has been particularly buoyant, reflecting the strength in household consumption in recent years. Retail property rents increased by 5 per cent over the year to the December quarter 2004, and relatively low vacancy rates have encouraged retail construction activity. Industrial property has also performed well, with average prices in the major capital cities increasing by almost 10 per cent over the year.

Solid conditions in commercial property markets have been reflected in the strong performance of listed property trusts in recent years, though investors' 'search for yield' has also played a role, with financial market participants placing a higher value on flows of rental income in the lower-interest-rate environment. While prices of Australian listed property trusts have fallen slightly in recent months, the cumulative gains over recent years remain well above those of the broader market, a trend also evident in many international markets (Graph 26).

Assessment of vulnerabilities

Overall, conditions in the business sector do not currently pose a threat to financial stability. Most business surveys report high levels of confidence about the period ahead, with the NAB Survey showing forward-looking indicators of profitability and trading conditions to be above their long-run average, despite recent declines. The latest forecasts collated by Consensus Economics also suggest a solid outlook for corporate sector profits.

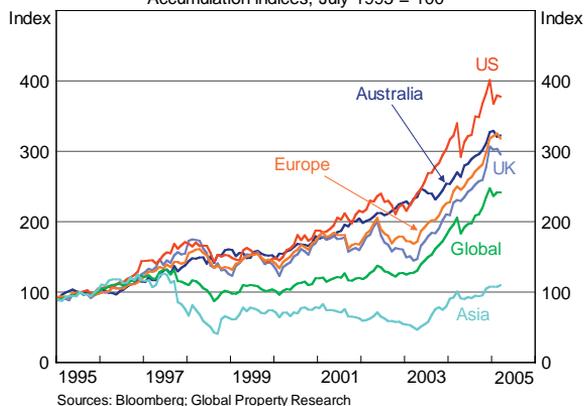
This benign outlook is also reflected in financial markets. As noted above, the share market has been very strong and uncertainty about the outlook for share prices, as measured by implied volatility from equity options, is low. Similarly, indicators of corporate credit risk, including credit default swap (CDS) premia and corporate bond spreads, suggest that financial market participants see little risk of widespread credit-quality problems emerging in the corporate sector (Graph 27). To some extent, this is unsurprising given global attitudes to risk.

The question, however, is whether the risks inherent in the current situation are fully reflected in credit and asset pricing. The risks, admittedly, may well relate more to the macroeconomy, rather than to specific aspects of the business sector's finances. A sharp slowing in the world economy, prompted or amplified by an abrupt retreat from risk taking, would affect the Australian corporate sector adversely, as would a sharp adjustment in household balance sheets that triggered or exacerbated a broader economic slowdown. If these scenarios eventuated though, the business sector should be more resilient than in past episodes of adverse economic conditions, given the healthy state of its balance sheet.

Graph 26

Listed Property Trusts

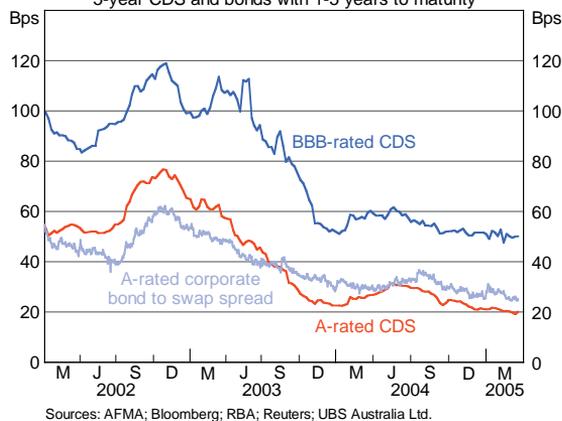
Accumulation indices, July 1995 = 100



Graph 27

Indicators of Corporate Credit Risk

5-year CDS and bonds with 1-5 years to maturity



Box A: A Disaggregated Analysis of Household Financial Exposures

The main source of disaggregated data on household debt and assets is the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The most recent data are from the 2002 Survey, which involved 7 245 households.

The Survey shows that household debt is concentrated among upper-income households. Of the two thirds of Australian households that owed some form of debt in 2002, those in the top 30 per cent of the income distribution owed almost 60 per cent of total outstanding debt (Table A1). In contrast, households in the bottom 40 per cent of the income distribution accounted for just 14 per cent of outstanding debt. This distribution reflects both a greater number of upper-income households with debt, and higher average levels of debt among these households. Property debt of investors was even more concentrated, with three quarters of such debt owed by upper-income households.

Table A1: Distribution of Household Debt
Per cent

Income decile	By value			By number		
	Total debt	Property debt	Property debt of investors	Total debt	Property debt	Property debt of investors
1-4 (lowest)	14	12	8	28	19	11
5-7	27	28	17	33	33	24
8-10 (highest)	59	60	75	39	48	65

Source: HILDA 2002, Release 2.0

While upper-income households owe most of the debt, they typically have lower debt-servicing burdens than other households. Of households with owner-occupier debt, those in the upper-income deciles used, on average, less than 20 per cent of their after-tax income to meet interest and principal repayments on that debt. The comparable figure for lower-income households was around a third of after-tax income (Table A2). Upper-income households are also more likely to be ahead in their mortgage repayments and hold more financial assets relative to the size of their debts. Unfortunately, the HILDA Survey does not contain information on debt servicing of investor or personal loans.

The disaggregated data also suggest that even if house prices fell significantly, the vast bulk of borrowers would not find themselves in a negative equity situation. Three quarters of those with property debt reported property-gearing ratios – property debt to property assets – of 60 per cent or less (Graph A1). The higher-income households that carried the bulk of outstanding debt typically had the lowest levels of gearing (Graph A2). Across the income distribution, ratios

Table A2: Households with Owner-occupier Housing Debt^(a)

Income decile	Median owner-occupier debt-servicing ratio	Ahead of schedule on debt repayments ^(b)	Median liquid assets as share of owner-occupier debt
	Per cent	Per cent of decile	Per cent
3	34	51	5
4	31	55	4
5	24	53	5
6	22	57	10
7	21	60	7
8	20	64	10
9	16	66	16
10	14	58	22

(a) Sample differs across columns

(b) Primary mortgage repayments only

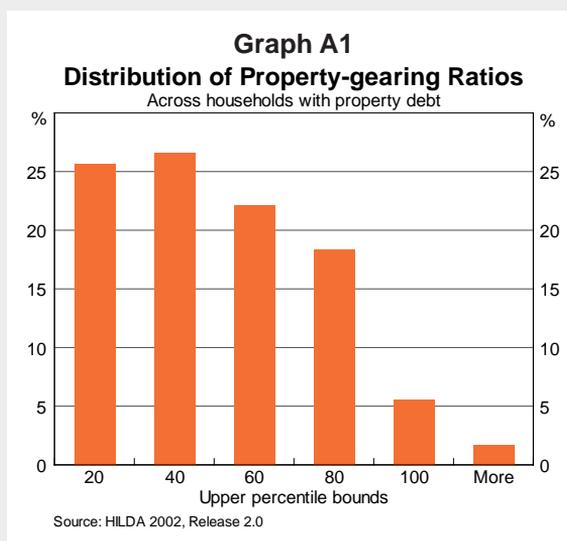
Source: HILDA 2002, Release 2.0

of total gearing – total debt to total assets – were typically lower than property gearing ratios.

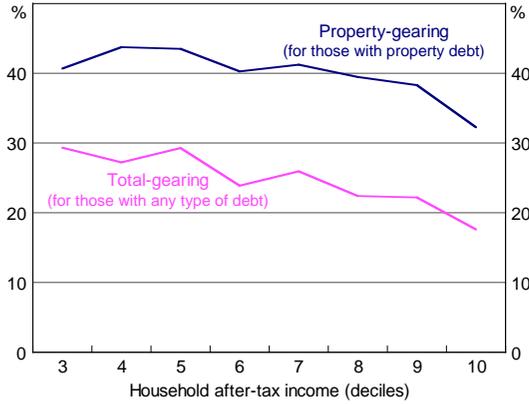
Disaggregated data based on income deciles may disguise important distributional information *within* each income decile, so analysis of financial characteristics at an individual household level is also of interest. This analysis shows that owner-occupier debt-servicing costs were at least 50 per cent of after-tax income for around 2 per cent of all households, while property-gearing ratios were greater than 75 per cent for about 4 per cent of households

(Table A3). Less than half of 1 per cent of households had both debt-servicing and gearing ratios above these levels. These higher readings on financial ratios were more common among lower-income households with owner-occupier mortgages.

Overall, disaggregated measures of debt servicing and gearing from the 2002 HILDA Survey suggest that the bulk of indebted households have some buffers against a change in their financial circumstances. This is especially the case for the higher-income households that owe most of the debt. However, the increase in aggregate debt-servicing and gearing ratios since the Survey was undertaken suggests that these disaggregated indicators may understate the exposure of some households to a change in their financial circumstances. In addition, there was a group



Graph A2
Gearing Ratios
Median



Source: HILDA 2002, Release 2.0

– particularly among lower-income households – for which debt repayments occupied more than half of after-tax income, suggesting a degree of vulnerability within the household sector to a large rise in interest rates.

Table A3: Highly Indebted Households^(a)
Per cent of each group of households, unless otherwise indicated

	Households with owner-occupier mortgage debt				Total households ^(b)
	Income deciles				
	3-4	5-7	8-10	All ^(b)	
Debt-servicing ratio > 50%	18.4	7.5	3.1	6.7	2.4
Property-gearing ratio > 75%	10.7	15.5	9.2	11.7	4.2
Debt-servicing ratio > 50% and property-gearing ratio > 75%	1.1 ^(c)	1.4 ^(c)	0.8 ^(c)	1.1	0.4
<i>Memo items</i>					
Per cent of all households with owner-occupier mortgage debt	12.6	34.6	47.3	–	–
After-tax income (range)	\$18 721 –30 977	\$30 981 –55 909	\$55 925 and above	–	–

(a) Excludes those households not reporting debt-servicing costs

(b) Excludes households in the lowest two income deciles

(c) Estimate based on a sample of 15 or less; hence, the standard error could be quite large

Source: HILDA 2002, Release 2.0

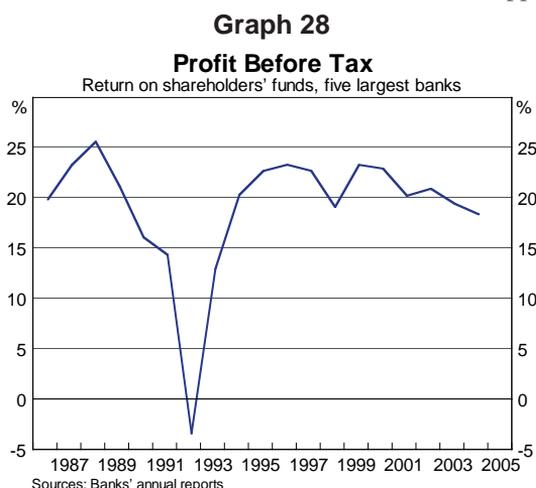
2. Financial Intermediaries

Australian financial intermediaries remain in sound condition, an outcome that partly reflects the generally favourable economic conditions over the past decade or so. Profitability remains strong, credit losses are low and the main institutions are well capitalised. This is not to say that the current environment is without its challenges. In particular, the slowdown in the pace of household credit growth appears to have intensified competition in a range of markets, with some financial intermediaries taking on more risk at lower margins than has been the case for some time. To the extent that this is associated with some underpricing of risk it could ultimately presage a deterioration in the very good conditions experienced over recent years.

2.1 Deposit-taking Institutions

Profitability

Banks, the largest deposit-taking institutions, have been highly profitable over the past decade. The pre-tax return on shareholders' funds has averaged 21 per cent per year over this period, and there has been relatively little volatility. While the rate of return on shareholders' funds has slipped a couple of percentage points over the past few years, largely reflecting a compression of interest margins, the banking industry is still generating returns that are high in comparison with most other industries. Over the past year, the five largest banks recorded an aggregate pre-tax return on equity of more than 18 per cent (Graph 28). Returns were held down by the lower profits of the National Australia Bank, following problems with its foreign currency options trading and other writedowns.



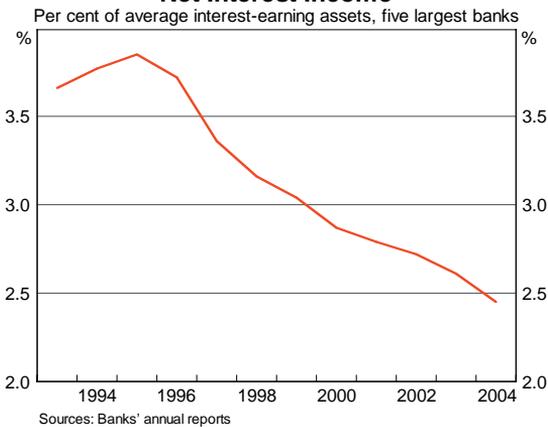
This overall strong performance reflects a combination of factors, including exceptionally low bad-debts expense and sustained efforts to reduce costs. Banks are also reaping the benefits from their substantial investments in wealth management, which are helping to boost non-interest income. This form of income, including fees and commissions, grew by 11 per cent last year and now accounts for around 45 per cent of total net income of the five largest banks (Table 5). In comparison, net interest income rose by 7½ per cent, with the effect of strong growth in loans and advances partly offset by declining interest margins.

Table 5: Full-year Profit Results

Five largest banks, consolidated

	2003	2004	2003	2004
	Per cent of average assets		\$b	\$b
Income				
Net interest income	2.03	1.95	22.5	24.2
Net income from wealth management	0.27	0.35	3.0	4.3
Other non-interest income	1.26	1.18	14.0	14.7
Expenses				
Operating expenses	1.85	1.85	20.5	22.9
Bad and doubtful debts	0.19	0.18	2.1	2.3
Goodwill amortisation and revaluations	0.10	0.06	1.1	0.8
Profit				
Net profit before tax	1.42	1.39	15.8	17.2
Net profit after tax	1.00	0.99	11.2	12.3

Sources: Banks' annual reports

Graph 29**Net Interest Income**

The decline in margins, which has been going on for more than a decade, has seen the ratio of net interest income to interest-earning assets fall to 2.45 per cent (Graph 29). The reasons behind this trend decline were discussed at some length in the previous *Review*. In summary, on the funding side, they include a fall in the share of low-cost retail deposits, as banks have needed to access wholesale funds to finance lending and households have invested a larger share of their savings in non-deposit

products. More recently, competition spurred by the introduction of high-yielding internet deposit accounts, notably by a number of foreign-owned banks, has put upward pressure on deposit rates. On the lending side, margins on a variety of loan products, particularly mortgages, have declined as a result of greater competition, often initiated by new providers of finance.

The effect of competition in housing loan markets is clearly evident in the spread between banks' standard variable mortgage rate and the cash rate, which has fallen by nearly 2½ percentage points since 1993, to around 1.8 per cent. Most of the decline occurred by 1997, with the spread being stable over recent years as standard variable mortgage rates have generally

moved in lock-step with the cash rate. Notwithstanding this, the actual spread that banks earn on home loans has fallen recently, reflecting widespread discounting and broader product offerings (Box B).

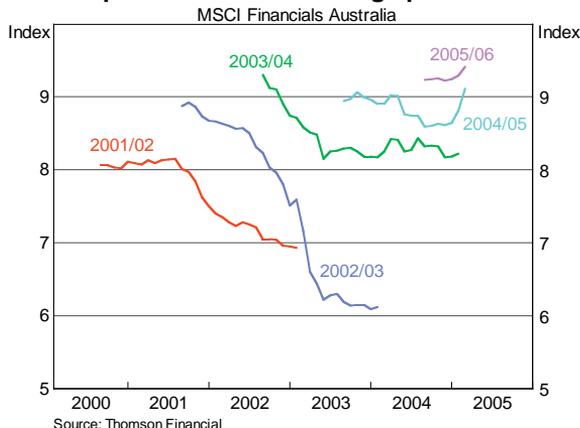
Over the past year, margins have also been compressed due to the short end of the yield curve being more upward sloping than in 2003. This has compressed margins since banks' funding costs are determined, in part, by the 90-day bank bill rate, while their loan rates are often linked to the cash rate. In 2004, the spread between these two rates averaged around 25 basis points, up from 9 basis points in 2003.

Despite the ongoing pressure on margins and the slowdown in credit growth, financial market participants have generally revised up their expectations of future profitability for banks and, more so, for other financial institutions (Graph 30). In response, bank share prices have risen by 13 per cent since the previous *Review*, reversing the declines during the preceding half year. Nevertheless, since the slowdown in credit growth has become widely apparent, banks' share prices have underperformed the rest of the share market and those of other segments of the financial system (Graph 31).

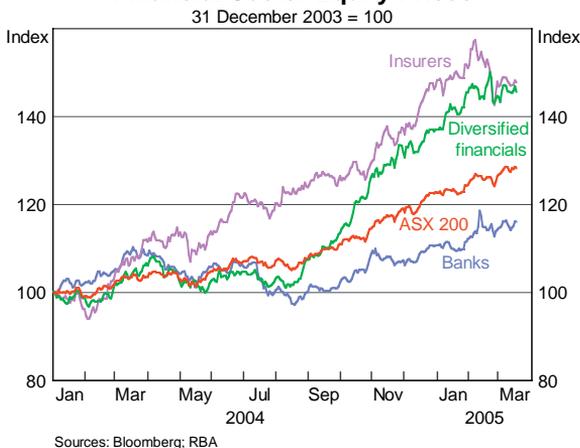
Capital Adequacy

The regulatory capital ratio for the Australian banking system has been relatively constant over the past six to seven years, with capital fluctuating in a narrow range of around 10 to 10½ per cent of risk-weighted assets. By international standards, aggregate regulatory capital ratios in Australia are not particularly high, notwithstanding the largest Australian banks enjoying relatively high credit ratings. In part, this reflects the large share of relatively low-risk housing loans on banks' balance sheets.

Graph 30
Expected Level of Earnings per Share

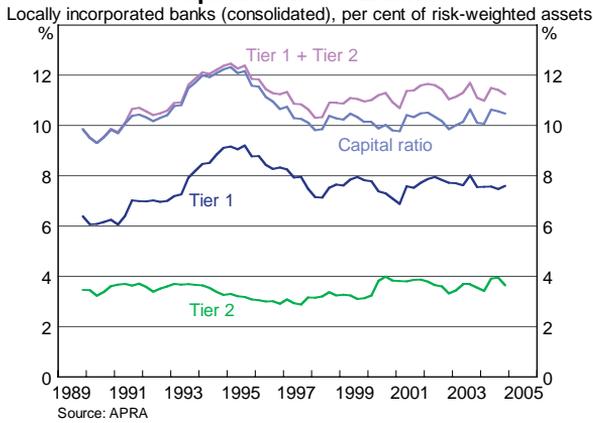


Graph 31
Financial Sector Equity Prices



Graph 32

Capital Ratios – Banks

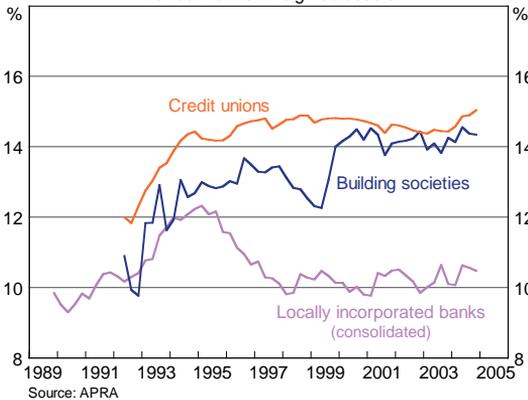


The split between Tier 1 and Tier 2 capital has also been fairly stable over recent years, although there has been a slight substitution of shareholders' funds (Tier 1) for other forms of regulatory capital (Tier 2) (Graph 32). Within Tier 1, most banks have not needed to issue new equity in recent years, despite rapid growth in their assets, instead relying heavily on retained profits to boost their regulatory capital levels. Banks have tended to supplement these retained earnings with issues of hybrid capital instruments, while at the same time returning ordinary capital to shareholders through share buybacks. Within Tier 2 capital, general provisions for bad and doubtful debts have decreased relative to banks' assets, with this being offset by new issues of subordinated debt.

Graph 33

Capital Ratio

Per cent of risk-weighted assets



Over the six months to December 2004, the level of banks' regulatory capital rose by around 3 per cent. Retained profits, which account for one third of total capital, contributed around half of this growth, with the remainder largely reflecting issuance of hybrid instruments by two banks. In comparison, risk-weighted assets grew by 4 per cent over this period, resulting in a slight fall in the regulatory capital ratio to 10½ per cent as at December 2004. The capital ratios of credit unions and building societies remain around the highs of recent years (Graph 33).

Looking ahead, the implementation of the International Financial Reporting Standards (IFRS) has the potential to reduce the capital adequacy ratios of some banks. In particular, banks will need to remove any excess of market value over net assets in their life insurance subsidiaries from Tier 1 capital, and similarly, any deficits in defined-benefit superannuation schemes will need to be deducted from regulatory capital. APRA has, however, indicated that it will provide a transitional period for those banks significantly affected by IFRS adjustments.

Credit Risk

As noted above, Australian banks have benefited from very low bad-debts expense over recent years. As at end 2004, only 0.3 per cent of banks' on-balance sheet assets were classified as 'impaired' – that is, loans that are not well covered by collateral and where either payments are 90 days or more in arrears, or there are other reasons to doubt the ability of the borrower to repay the loan. Including those assets that are in arrears, but are well secured ('past due' items), the ratio of 'distressed' assets to total assets is still only 0.5 per cent (Graph 34). These are exceptionally low ratios both by our own historical experience and by standards overseas.

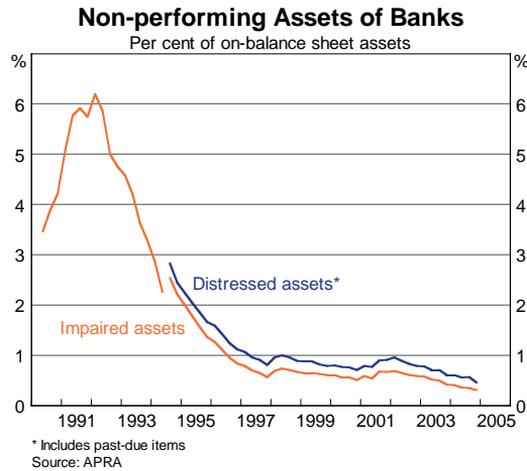
One reason for these very low ratios is the relatively high share of housing loans in most banks' portfolios. Residential housing loans now account for over half of total bank credit – which is high by international standards – compared to less than one third in the early 1990s. As at end December 2004,

only 0.2 per cent of outstanding housing loans were past due by 90 days or more (Graph 35). This ratio has ticked up recently, though this increase primarily reflects a revision in the methodology used by one major bank to measure its housing loan delinquencies. There has not been a similar pick-up in arrears rates for other personal lending.

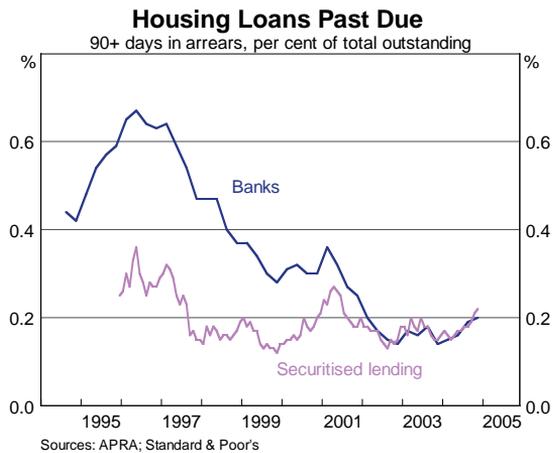
Another measure of the performance of housing loans is provided from data on loans that banks and other lenders have securitised. Over the past year, the arrears rate on these loans has also picked up, although, in this case, the increase is not explained by a change in reporting methodology. This rise may partly reflect an increase in the share of low-doc loans in the pool of securitised mortgages, with these loans having higher average default rates than standard housing loans.

With the overall rate of problem loans so low, there seems little prospect of further material declines. Indeed, it is more likely that, over time, the ratio of problem loans will increase, rather

Graph 34



Graph 35



than fall. Such an outcome would be consistent with the intense competition in mortgage markets, which has seen banks supplement their ‘tried-and-tested’ lending practices with a variety of new approaches. These include:

- *the increased reliance on brokers to originate loans*

Broker-originated loans are estimated to account for around 30 per cent of new housing loans, although for some lenders, notably smaller regional institutions with limited branch networks, the figure is considerably higher. The use of brokers is promoting a higher rate of refinancing of mortgages than in the past, as brokers ‘shop around’ to find their clients replacement loans on better terms and conditions than their existing ones. To the extent that this process reduces overall debt-servicing burdens, it should help strengthen household balance sheets, but in practice many borrowers take the opportunity when refinancing to increase the size of their loan. So far, there is little evidence that broker-originated loans perform worse, on average, than loans originated directly by banks, but brokers’ incentives are aligned more closely with volume than quality. Brokers are typically paid an upfront commission equal to about 0.6 per cent of the loan amount and a trailing commission of about 0.25 per cent annually.

- *the granting of low-doc loans*

Low-doc loans involve a large element of self-verification in the application process, often including verification of income. These loans are designed mainly for the self-employed with limited records of their income, but may also be sought by borrowers who have understated their income for tax purposes but wish to declare the correct, higher amount, to their lender, or those who are overstating their income for borrowing purposes. From a financial stability perspective, this latter category of borrower is the main source of concern, given that their capacity to service loans may be poor. While the major banks have only recently entered the low-doc market, a number of regional banks have been more active in undertaking low-doc lending, and have significant market shares. In the case of one regional bank, low-doc loans account for nearly 30 per cent of its outstanding housing loans. Though available data are incomplete, the share of low-doc loans for non-bank intermediaries also tends to be considerably higher than for the four largest banks, with low-doc loans comprising 22 per cent of housing loans securitised by non-bank lenders in the past two years.

Although banks offer certain low-doc loans, they still typically do not lend to borrowers with impaired credit histories. However, this segment of the market, which is dominated by specialist ‘non-conforming’ lenders, has also grown rapidly in recent years (Box C).

- *an increase in permissible debt-servicing burdens*

A traditional rule of thumb for lenders was that interest and principal payments could not exceed 30 per cent of a borrower’s gross income. This constraint has now been relaxed significantly. Banks’ online calculators suggest that they routinely consider loan applications with debt-servicing ratios of over 45 per cent (Box D). In addition, the fall in nominal interest rates has allowed households to take on a larger debt relative to their income, for any given debt-servicing burden. The combined effect of these changes is that many households are likely to be more vulnerable to a change in their circumstances than was previously the case. However, lenders note that improvements in risk management techniques mean that they know more about, and better understand, the risks posed by their mortgage portfolios.

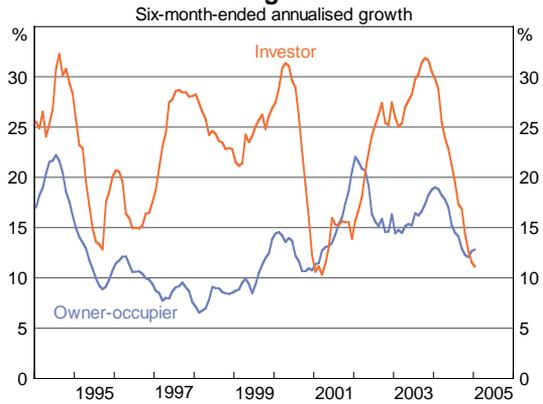
- *the use of alternative property valuation methods*

Over recent years, there has been a trend away from valuations that involve full external and internal inspections of properties. A recent APRA survey of approximately 100 lenders found that, while around two thirds of the valuations requested by lenders were performed in this way, there was also extensive use of alternative methods based on only external inspections, or conducted solely off site. These valuation techniques are typically based on information drawn from sources such as the contract of sale, Valuer General records, or desk-based electronic methods. Such techniques tend to be used by larger lenders for fully documented, low-LVR mortgages, but have not been tested in a downturn. APRA has requested that authorised deposit-taking institutions conduct formal and periodic reviews of valuation methods, including comparisons with results obtained using full on-site valuations.

Taken together, these changes are helping to provide borrowers with easier and cheaper access to finance. From an efficiency perspective, this is a welcome development, provided that both borrowers and lenders understand the risks involved and lenders are pricing the risks appropriately. It does mean, however, that the past performance of housing loan portfolios may not be a good guide as to how default rates play out in the future.

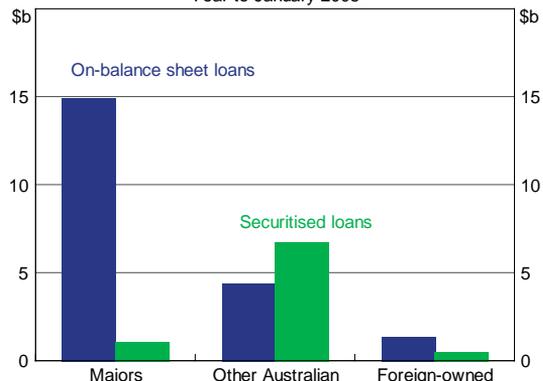
This is particularly true for investor housing loans, which have been such a prominent feature of the Australian housing market in recent years. The growth rate of lending for investor housing has significantly outstripped that of lending for owner-occupied dwellings over most of the past decade, although recently it has slowed to around the same rate as that for owner-occupier lending (Graph 36). This decline in growth has, however, not been uniform across banks, with some regional banks still experiencing rapid growth in investor housing lending. Much of this is ultimately securitised, with banks other than the four largest accounting for around 80 per cent of loans securitised by banks since the beginning of 2004 (Graph 37). Over

Graph 36
Housing Credit*



* Growth rates estimated from information on bank loans only prior to April 2003 and from on-balance sheet loans of all financial institutions thereafter; includes securitised loans
Source: RBA

Graph 37
Banks' Investor Housing Loan Growth*
Year to January 2005



* On-balance sheet loans are net of repayments, while securitised loans are gross.
Source: APRA

the past year, these smaller banks have also increased the value of investor housing loans held on their balance sheets more rapidly than the four largest banks. So far, loan quality has not differed markedly between investor and owner-occupier housing lending, although the expanded investor market has yet to be tested through a more difficult economic climate.

In contrast to mortgage portfolios, the risks inherent in banks' business loan portfolios do not appear to have increased over recent years. As discussed in the previous chapter, corporate profitability is high, gearing and interest burdens are low, and there are few signs of the imbalances in commercial property markets that caused problems in the 1980s and early 1990s. Indeed, the arrears rate on banks' commercial property portfolios is currently very low, with only 0.2 per cent of outstanding commercial property loans impaired as at the September quarter 2004 (Table 6). Exposures in this area have, however, been growing relatively briskly, fuelled by 16 per cent growth in commercial lending relating to residential property, including development, over the year to September 2004. Prospects in this segment of the portfolio will ride in tandem with those for the residential property market more generally.

Table 6: Banks' Australian Commercial Property Exposures

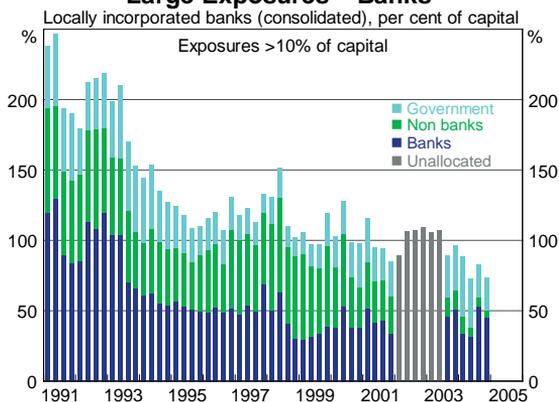
Per cent, September 2004

Type of exposure	Growth Year to September 2004	Share of total commercial lending	Impaired assets Share of commercial property exposures
Office	2	9	0.1
Retail	12	7	0.0
Industrial	9	3	0.1
Residential	16	10	0.3
Tourism and leisure	13	1	1.2
Other	23	4	0.6
Total	11	35	0.2

Source: APRA

Graph 38

Large Exposures – Banks*



* Breakdown unavailable between March 2002 and September 2003 due to changes to APRA reporting forms
Source: APRA

An important part of controlling credit risk is limiting the concentration of exposures to particular sectors, countries, or individual clients. Relative to total capital, Australian banks, in aggregate, have significantly reduced their overall 'large exposures' since the early 1990s, with large exposures to non-bank private sector entities having fallen to 5 per cent of the total value of capital in the banking system (Graph 38). While large inter-bank exposures have risen a little in recent

years, these exposures typically raise fewer concerns from a credit risk management perspective, as banks tend to be highly rated counterparties.

In terms of country exposures, Australian banks' largest exposures are to New Zealand and the United Kingdom, predominantly through lending to residents by branches and subsidiaries located in those countries, rather than from cross-border lending by their Australian-based operations (Table 7). A significant amount of this lending is for housing in both countries, raising some familiar issues from an overall risk management perspective. As in Australia, house prices have grown strongly in New Zealand and the United Kingdom in recent times, household debt-to-income ratios are high by historical standards, and there are signs that momentum in housing markets has slowed.

Table 7: Australian Banks' Foreign Exposures

As at September 2004, ultimate risk basis

Country	Total		Of which:	
	Level \$b	Share Per cent	Local \$b	Cross-border \$b
New Zealand	158.5	44.5	146.6	11.8
United Kingdom	92.7	26.0	70.3	22.4
United States	30.8	8.6	16.0	14.8
Other developed countries	48.6	13.6	9.7	38.9
Developing countries	12.4	3.5	6.1	6.3
Offshore centres ^(a)	12.7	3.6	5.4	7.4
Other	0.6	0.2	0.2	0.4
Total	356.3	100.0	254.2	102.1
<i>Per cent of total assets</i>	29.6		21.1	8.5

(a) Includes Hong Kong and Singapore
Sources: APRA; BIS

Market Risk

By international standards, Australian banks continue to have relatively small unhedged positions in financial markets. This is evident in the major banks' exposure to market risk through their trading operations, as measured by the average value at risk (VaR).² Over 2004, this measure of risk was equivalent to 0.06 per cent of shareholders' funds, much lower than that for most international banks (Table 8). This figure was unchanged from 2003, despite a decline in financial market volatility, suggesting that the level of trading book exposures may have increased a little over the past year.

The single largest component of traded market risk is interest-rate risk, although this risk has declined, relative to shareholders' funds, since 2003. Interest-rate risk also arises in the banking

² Value-at-Risk (VaR) models use the distribution of historical price changes to estimate the potential for future losses, relative to a confidence level. A confidence level of 99 per cent, for example, indicates a 99 per cent probability that losses will not exceed the VaR estimate on any given day, based on historical performance.

Table 8: Market Risk^(a)
Per cent of shareholders' funds, four largest banks

	2003	2004
Interest rate	0.05	0.03
Foreign exchange	0.02	0.02
Other ^(b)	0.02	0.03
Diversification benefit	-0.02	-0.02
Total	0.06	0.06

(a) Value at risk calculated using a 99 per cent confidence interval and one-day holding period.

(b) Other market risks include commodity, equity, prepayment, volatility and credit spread risk.

Sources: Banks' annual reports; RBA

book, due to mismatch in the maturity and repricing of assets and liabilities. However, for Australian banks, this risk too appears relatively low. For example, results reported in the four largest banks' financial statements indicate that a 1 percentage point movement in interest rates across the yield curve would have only a small impact on expected net interest earnings. This is consistent with the high proportion of Australian bank lending that is contracted at variable interest rates. For the four largest banks, around 60 per cent of total loans, and 80 per cent of housing loans, are based on variable interest rates.

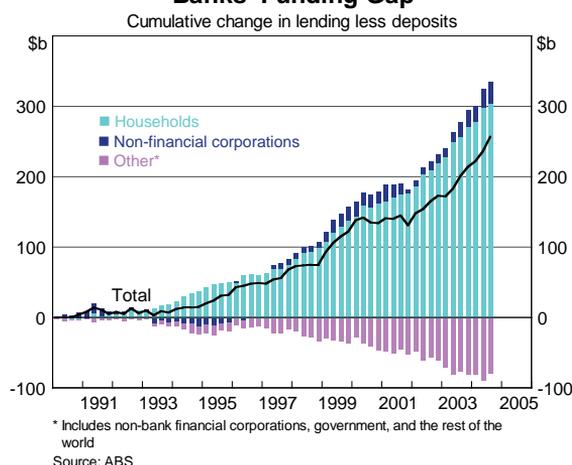
Liquidity and Funding

The funding patterns of Australian banks over the past decade have been heavily influenced by developments in household balance sheets. Lending to the household sector has grown rapidly, while growth in retail deposits has been relatively slow, with the household saving rate declining and households investing

a larger share of their savings in non-deposit products. By September last year, the cumulative differential between the increase in bank lending and the increase in bank deposits since the early 1990s had reached around \$250 billion (Graph 39). The banks have funded this 'gap' by raising funds in wholesale markets, with offshore funding exceeding that raised in the domestic market (Graph 40). Reflecting these trends, the banking system now obtains more funding from offshore than it does through retail deposits in Australia. Around one third of these

foreign liabilities are denominated in Australian dollars, while the remainder are denominated in a range of foreign currencies, with the exchange-rate risk typically being fully hedged.

Graph 39
Banks' Funding Gap

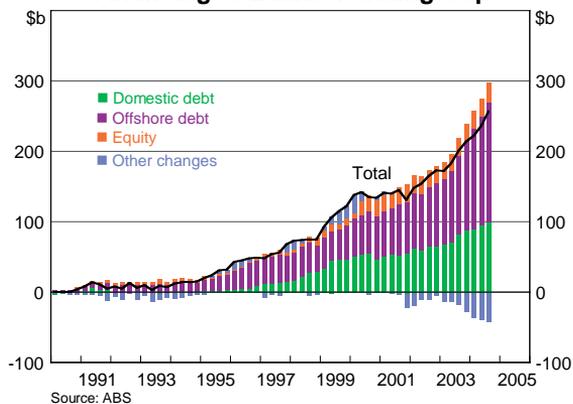


Over the past year, banks have taken advantage of the historically low yields in global capital markets to lengthen the average maturity of their foreign borrowings. At the end of 2004, around 75 per cent of banks' foreign (non-intermediated) debt had a maturity of more than one year, up from 70 per cent at end 2003 (Graph 41). One positive consequence of these longer-term borrowings is that they reduce the likelihood of liquidity problems arising from difficulties in rolling over the liabilities.

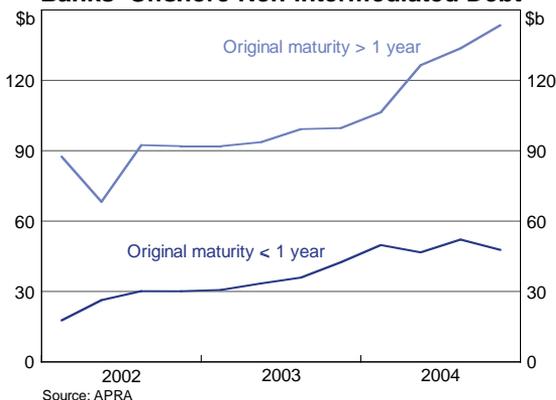
On the other side of the balance sheet, the holding of assets that can be readily sold in difficult market conditions is also important in managing liquidity risk. The most liquid assets are those that the Reserve Bank will accept as collateral in its daily open market operations. Currently, such assets account for around 8 per cent of on-balance sheet assets, up from around 2 per cent in early 2004. This follows a decision by the Reserve Bank last year to widen its definition of acceptable collateral to include certain bank bills and certificates of deposit (Graph 42).

More broadly, total liquid assets have stabilised at around 12 per cent of on-balance sheet assets since late 2003, after this ratio fell for much of the previous decade. As noted in the previous *Review*, this decline partly reflects banks holding fewer government bonds in the face of a diminishing stock of Commonwealth Government bonds outstanding. Banks have partly compensated for

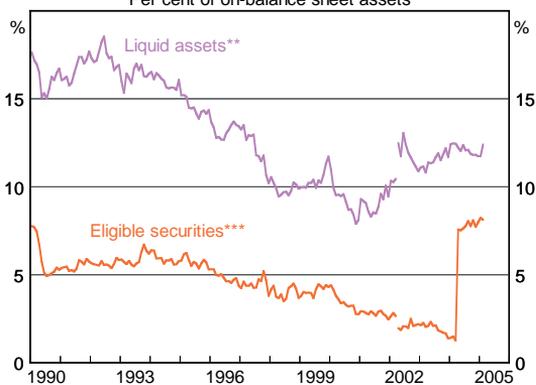
Graph 40
Financing of Banks' Funding Gap



Graph 41
Banks' Offshore Non-intermediated Debt

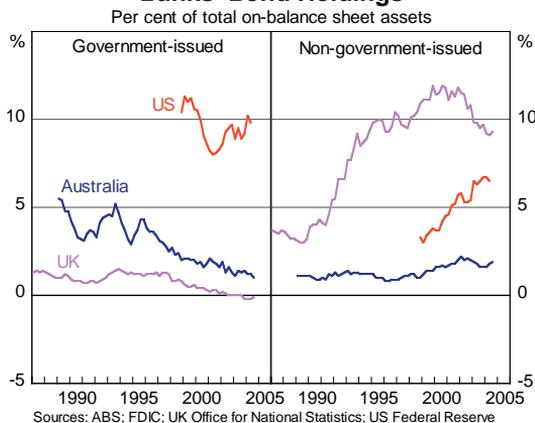


Graph 42
Banks' Eligible Securities and Liquid Assets*
Per cent of on-balance sheet assets



* Series break in March 2002 due to change in reporting requirements
 ** Includes Australian notes and coin, short-term balances due from financial institutions, government securities and short-term securities issued by ADIs
 *** Until 1997, includes only Commonwealth Government securities; from July 1997 includes certain State/Territory central borrowing authorities' securities; from March 2004, includes certain bank bills and certificates of deposit
 Source: APRA

Graph 43
Banks' Bond Holdings



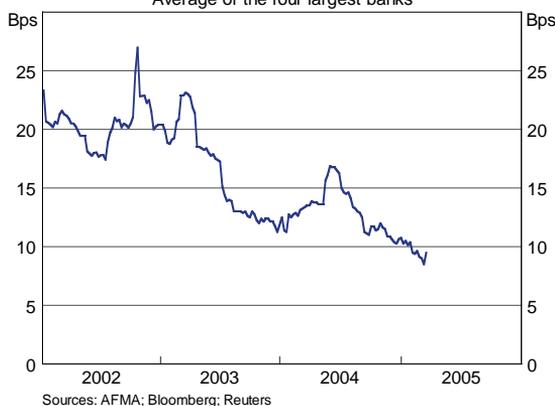
this by increasing their holdings of bonds issued by domestic and overseas corporates (Graph 43). Despite this, bond holdings of Australian banks are still lower, as a share of total assets, than those of banks in the United States and United Kingdom.

Financial Markets' Assessment

Financial markets continue to view the Australian banking system favourably. The spread between yields on bank and government debt has remained steady at around 50 basis points over the past six months, and the credit default swap premium for the four largest banks has fallen to around its lowest level since these instruments became commonly traded in Australian markets (Graph 44). The expected future volatility of banks' share prices implied by options markets is also around historically low levels, suggesting few concerns about banks' earnings prospects (Graph 45). To some extent, these developments are unsurprising, given the global attitudes to risk discussed in Chapter 1.

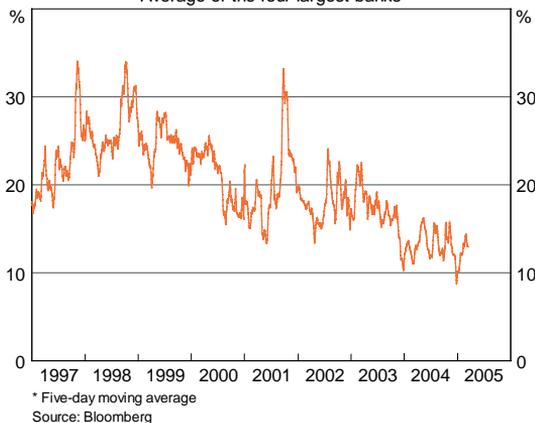
Graph 44

Banks' 5-year Credit Default Swap Premium
Average of the four largest banks



Graph 45

Implied Volatility of Banks' Share Prices*
Average of the four largest banks



Ratings actions in the banking sector have been positive over the past six months (Table 9). In late 2004, both Standard & Poor's and Moody's upgraded Adelaide Bank's long-term credit rating by one notch, to BBB+ and Baa1 respectively. In the past six months, Standard & Poor's has also upgraded BankWest from A to A+, Bendigo Bank from BBB to BBB+, and moved Bank

Table 9: Long-term Ratings of Australian Banks

	Standard & Poor's	Moody's	Fitch
Adelaide Bank	BBB+	Baa1	na
AMP Bank	A-	A3	na
Arab Bank	na	Baa3	BBB+
Australia and New Zealand Banking Group	AA-	Aa3	AA-
Bank of Queensland	BBB	Baa3	BBB
BankWest (Bank of Western Australia)	A+	A1	na
Bendigo Bank	BBB+	na	BBB+
Commonwealth Bank of Australia	AA-	Aa3	AA
ING Bank (Australia)	AA-	Aa2	na
Macquarie Bank	A	A2	A+
National Australia Bank	AA-	Aa3	AA
St George Bank	A	A2	A+
Suncorp-Metway	A	A2	A
Westpac Banking Corporation	AA-	Aa3	AA-

Sources: Fitch; Moody's; Standard & Poor's

of Queensland and ING Bank (Australia) from a stable to a positive outlook. Moody's financial strength rating of Australian banks, which unlike long-term credit ratings does not take account of likely external support, remains relatively high by international standards (Table 10).

2.2 Insurers

General Insurance

The general insurance industry continued to perform strongly in 2004, with major underwriters reporting robust profits. In addition to solid investment results, which were supported by buoyant equity markets, general insurers benefited from higher premium income, and claim levels that remained low by historical standards (Graph 46). Another factor supporting aggregate profitability has been the release of funds from claim reserves, as realised losses have been lower than the provisions placed in those reserves.

There are signs, however, that the strong increases in profitability may be beginning to moderate. Claims increased in the latter part of 2004, and competition is again placing downward pressure on premiums in some business lines, such as in the corporate property and

Table 10: Moody's Weighted-average Bank Financial Strength Index^(a)

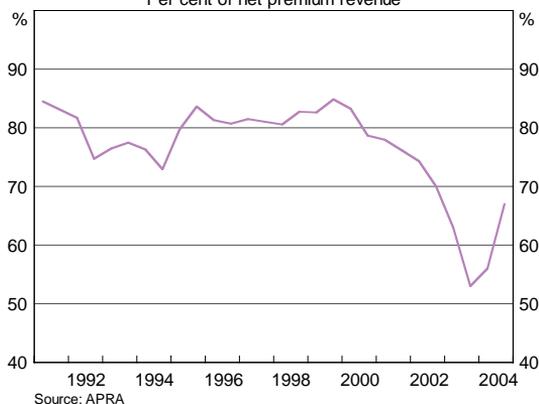
December 2004

Australia	72.5
Canada	75.0
France	72.7
Germany	47.2
Hong Kong SAR	62.3
Japan	20.6
Malaysia	35.2
Netherlands	84.2
Singapore	74.7
United Kingdom	83.3
United States	77.0

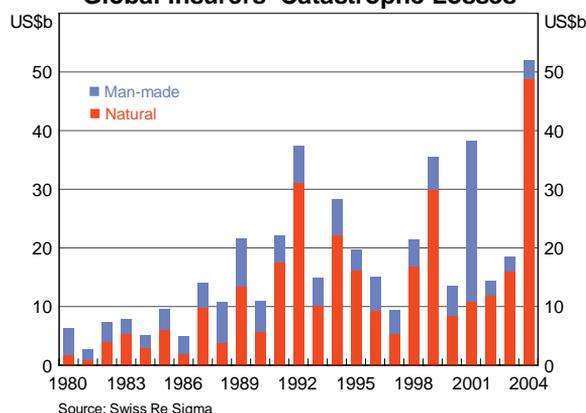
(a) Constructed according to a numerical scale assigned to Moody's weighted-average bank ratings by country. Zero and 100 indicate lowest and highest possible average ratings, respectively.

Sources: IMF; Moody's

Graph 46
General Insurers' Claim Expenses
 Per cent of net premium revenue



Graph 47
Global Insurers' Catastrophe Losses



public liability markets. That said, the outlook for the domestic general insurance industry remains generally benign, partly reflecting the stronger operational management practices and enhanced risk management processes introduced following the collapse of HIH. These improvements have been supported by the changes to prudential requirements introduced by APRA since 2001.

The health of global insurers – particularly reinsurers – is of interest because they underwrite some of the business of domestic insurers. Compared to the domestic industry, global insurers suffered substantial claims from the spate of natural catastrophes in 2004. While the tsunami in Southern Asia is estimated to have caused around US\$5 billion in insured claims, its relatively muted impact on insurers reflects the low take-up of insurance cover in the region. In contrast, other natural disasters, including weather-related events in the US, Japan and Caribbean are estimated to have caused more than

US\$44 billion in total insured claims last year, making 2004 the costliest year for such events on record (Graph 47).

Despite the claims caused by natural catastrophes, profitability in the global reinsurance industry remained fairly strong in 2004, supported by robust investment returns and relatively high premiums. It was also helped by the fact that the direct insurers worst affected by the weather-related events in the US had retained most of the risk on their own books. Reflecting the overall profit outcome and efforts to strengthen balance sheets in recent years, credit rating agencies removed their negative outlook for the global reinsurance industry in 2004.

Life Insurance

Life insurers' assets increased by 2½ per cent over the past year, and profitability in the industry improved, mainly reflecting life insurers' exposure to the strong equity market. However, the effect of strong investment returns on profitability was partly offset by policy payments which,

for the second year running, exceeded premium revenue (Graph 48). Credit ratings in the sector stabilised in 2004, after a number of years of decline.

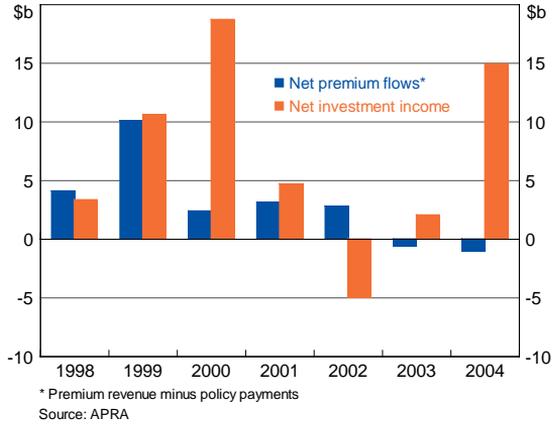
Notwithstanding very good investment results over the past year, the life insurance industry has been under pressure for some time, partly reflecting the marked decrease in the share of superannuation assets held in life offices – around 25 per cent, compared to nearly 45 per cent in 1992 (Graph 49). The sector is expected to come under further pressure when the transitional tax relief, granted to life insurers following the federal government’s overhaul of the industry’s taxation rules, expires later this year.

2.3 Superannuation

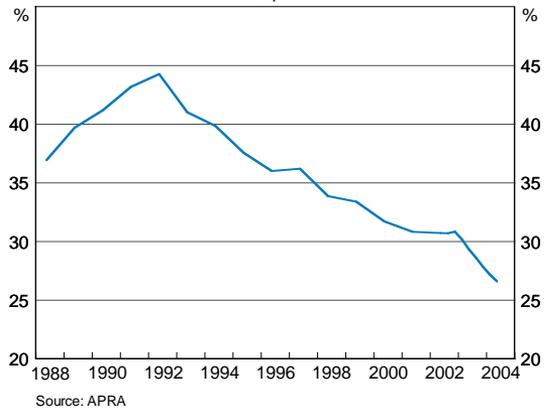
Like insurers, superannuation funds have benefited from strong investment returns. Over the past year, the average growth of these funds was 18 per cent, the highest since 1999 (Graph 50). At end September 2004, total superannuation assets stood at \$649 billion, equivalent to around 80 per cent of annual GDP. Equities and units in trusts accounted for nearly 50 per cent of superannuation assets, a share that has increased over the past five years, while the share of interest-bearing securities has fallen (Graph 51).

Over recent years, there has been a marked decline in the share of superannuation assets managed by defined-benefit funds (Graph 52). In the mid 1990s, these funds

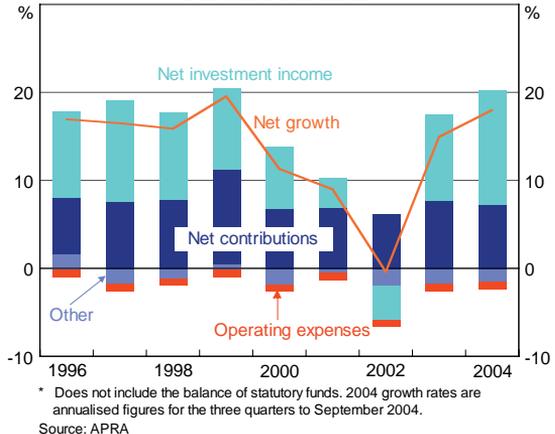
Graph 48
Life Insurers’ Results
Year ended June



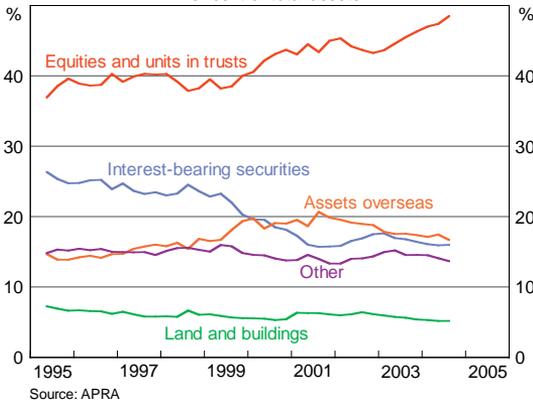
Graph 49
Life Office Superannuation Assets
Per cent of total superannuation assets



Graph 50
Growth in Superannuation Assets*
Per cent of total assets

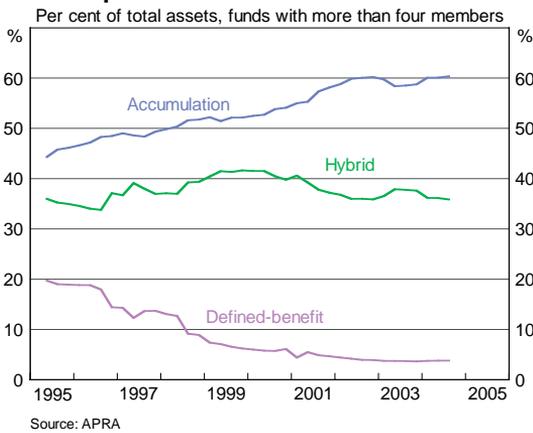


Graph 51
Composition of Superannuation Assets
 Per cent of total assets



accounted for around 20 per cent of total assets, compared with their current share of around 4 per cent. One consequence of this decline is that households now tend to bear more market risk, relative to their income, while employers tend to bear less, since poor performance in asset markets no longer requires defined-benefit superannuation schemes to be replenished to the same extent as in the past.

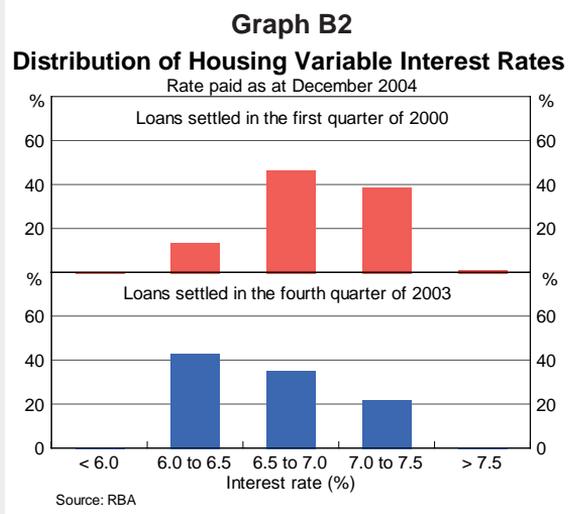
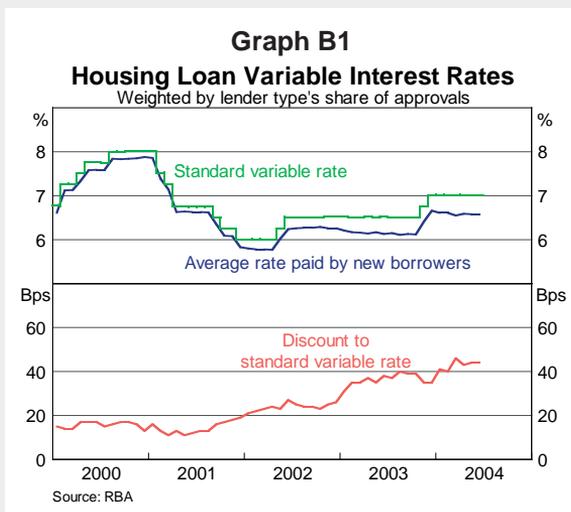
Graph 52
Superannuation Benefit Structure
 Per cent of total assets, funds with more than four members



Box B: Variable Interest Rates on Housing Loans

Competition in the housing loan market has led to a sharp increase in the discounting of mortgage interest rates. Whereas during the 1990s most housing loan borrowers were paying the standard variable interest rate, it now appears that about 80 per cent of borrowers taking out loans recently paid less than this rate; the weighted-average rate paid by new borrowers is now almost 50 basis points below the standard indicator rate quoted by lenders (Graph B1).¹ Through to mid 2001, the weighted-average variable rate paid by new borrowers was only marginally below the standard variable rate. This slight margin was probably attributable to some borrowers taking out basic variable-rate loans; these types of loans charge interest at a discount to standard variable rates, but typically have less flexible repayment options.

The shift in the distribution of mortgage rates paid clearly illustrates how lower rates have become more prevalent for new borrowers (Graph B2). In the absence of discounting, all variable-rate borrowers would be paying the same rate at every point in time regardless of when their loan was taken out. As at late 2004, however, even though



¹ Estimates in this Box are based on data on housing loans that have been securitised. Typically, a discount to the standard variable rate is constant for the life of a loan. As a result, information on loans extended and securitised before December 2004 and still outstanding in December 2004 can be used to infer the prevalence of discounting through time.

the standard variable rate was around 7 per cent, almost 80 per cent of loans taken out in the fourth quarter of 2003 were being charged interest rates of less than 7 per cent, and 40 per cent were being charged less than 6.5 per cent. In contrast, in the case of loans taken out in the first quarter of 2000, only about 15 per cent were paying rates below 6.5 per cent as at late 2004.

Partly explaining the greater prevalence of lower-rate loans is an increase in market share by non-bank lenders, which have generally offered lower interest rates on their product ranges. However, the bulk of the shift can be explained by borrowers moving to loans within the same institutional type that either have lower advertised rates, or for which they have been able to negotiate some discount. Banks have broadened their product range, often with lower-rate loans being offered. For example, they increasingly market product bundles, such as ‘professional packages’, which typically require customers to pay an annual fee of a few hundred dollars in return for more attractive interest rates and fee waivers on a range of bank products including home loans, credit cards and deposits. More generally, the growth of mortgage brokers, which market loans for a wide range of lenders, has made it easier for borrowers to compare products and has, therefore, increased competition.

While some of the measured increase in discounting over time has been offset by the aforementioned introduction of fees, it is clear that standard variable rates quoted by lenders increasingly overstate the typical cost of housing loans. It has also meant that the increase in interest rates for new borrowers in recent years has been significantly less than the increase in the cash rate resulting from monetary tightenings.

Box C: Non-conforming Housing Loans

Non-conforming lenders provide loans to borrowers who do not satisfy the standard lending criteria of mainstream lenders, including banks. These lenders are not authorised deposit-taking institutions and, hence, are not regulated by APRA. Their share of the housing loan market has grown significantly in recent years, with non-conforming loans estimated to account for up to 4 per cent of the value of new housing loans in Australia, though this is still less than half the size of the non-conforming markets in the US and UK.

In the past, some borrowers who could not obtain housing loans from traditional lenders turned to alternative sources such as finance companies, solicitors and accountants. But in recent years, specialist lenders have emerged and are playing an increasingly important role in the non-conforming market. The major non-conforming lenders have achieved scale through large distribution networks, including the use of mortgage brokers, and have been able to use their size to obtain relatively favourable wholesale funding – largely by securitising pools of mortgages – to provide end borrowers with competitive interest rates.

Non-conforming loans are inherently more risky than standard home loans. In total, around two fifths of the value of non-conforming loans are to individuals with impaired credit histories.¹ Other non-conforming borrowers include those earning an irregular income, those with an erratic saving pattern or ‘non-genuine’ deposit, full-time property investors, new immigrants or temporary residents, and elderly borrowers. Over half of all non-conforming loans are to borrowers who self-certify their income, typically with less restrictive conditions than those on banks’ similar ‘low-doc’ products.

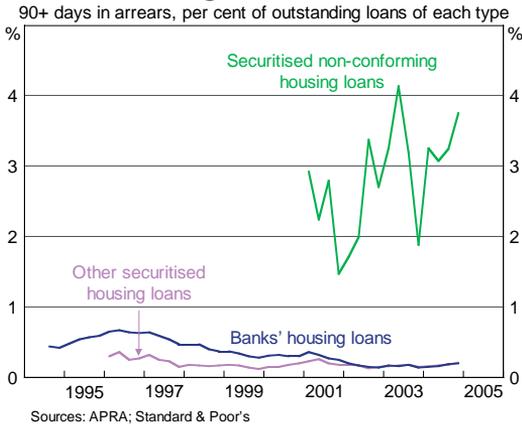
A significant proportion, around 60 per cent, of the value of non-conforming loans involve the refinancing or consolidation of other debt(s). Some of these are to borrowers who use their housing loans to consolidate numerous personal and credit card debts, while other borrowers may have fallen into arrears on their mortgage repayments with other lenders and have subsequently refinanced with a non-conforming lender.

Reflecting the riskiness of non-conforming loans, a relatively high proportion of non-conforming borrowers are behind schedule on their loan repayments. At the end of 2004, nearly 4 per cent of the value of securitised non-conforming loans were in arrears by at least 90 days, compared to only 0.2 per cent of both other securitised and banks’ housing loans (Graph C1).

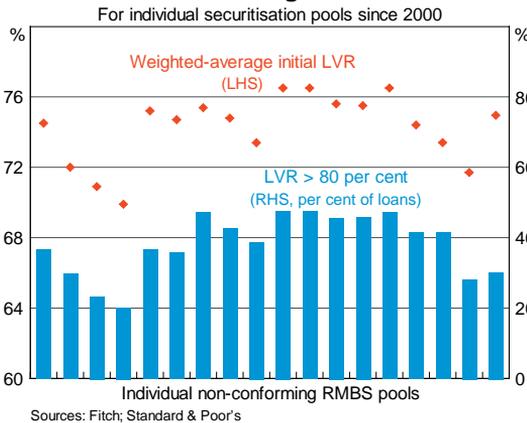
To compensate for this risk, interest rates on non-conforming loans are higher than those on more conventional housing finance. As the level of credit impairment and loan-to-valuation ratio (LVR) increase, so does the interest rate payable. Applicants who self-certify their income or

¹ Figures on the characteristics of non-conforming loans are based on those securitised since 2000 and on information provided by rating agencies. Pools consisting entirely of loans with high loan-to-valuation ratios are not included, though these are sometimes also considered to be non-conforming.

Graph C1
Housing Loans Past Due



Graph C2
Non-conforming Loan LVRs



use the loan for property investment also tend to be charged a higher rate. Typically, interest rates on non-conforming loans are between 1 and 3 percentage points above those on a standard home loan, but for higher-risk loans they can be more than 4 percentage points higher. Maximum allowable LVRs on non-conforming loans also tend to be relatively low, particularly for the more severely credit impaired and for self-certified loans. The average initial LVRs on securitised non-conforming loans are usually between 70 per cent and 80 per cent, though a significant proportion are above 80 per cent (Graph C2).

The average life of non-conforming loans is much lower than that of other housing loans. This is largely because many borrowers refinance with a traditional lender, at a lower interest rate, after demonstrating an ability to service their debt. For this reason, and the fact that originating a non-conforming loan is a relatively labour intensive and costly exercise for the lender, non-conforming lenders charge significant early repayment fees if borrowers exit

their loans within a certain period (usually four to six years from loan origination). Further, some non-conforming lenders now reduce the interest rate payable by those borrowers who have had an unblemished repayment record for a specified period.

The features of non-conforming loans place a strong emphasis on the lender's credit underwriting and property valuation standards, and mean that close attention to loan servicing and collections administration is required. The rating agencies believe that these aspects of the major non-conforming lenders in Australia are sound. Nevertheless, to the extent that non-conforming borrowers are more sensitive to less favourable economic conditions, loan quality may deteriorate at a faster rate than on standard housing loans during an economic downturn.

Box D: Estimates of Borrowing Capacity from Banks' Online Housing Loan Calculators

When assessing a housing loan application, the maximum amount that a bank will lend is generally determined by the size of the borrower's upfront deposit and the borrower's ability to service the loan. In the past, a common rule of thumb on servicing was that loans would not be extended where the required debt-servicing ratio – the ratio of interest and principal repayments to gross income – exceeded 30 per cent. Over time, however, this limit has been relaxed. An indication of this is provided by the housing loan calculators that many banks make available on their websites to help potential borrowers estimate their borrowing capacity.

Generally, these online calculators require potential borrowers to specify their income, household size (e.g. single or couple, number of dependants) and existing loan commitments, from which they estimate the maximum amount that can be borrowed. In most cases the calculators do not ask the potential borrower to quantify their living expenses, relying instead on built-in estimates of average living expenses for each type of household. A number of lenders base these estimates on the Henderson Poverty Line (HPL), an estimate of income below which households are considered to be living in 'poverty'. In the September quarter 2004, the HPL, excluding housing costs, for a single individual with no dependants was \$213.75 per week, and \$310.75 for a couple (Table D1). Use of the HPL differs from lender to lender, with some using it as a direct estimate of living expenses, while others use a multiple of the HPL, or add some buffer.

Table D1: Henderson Poverty Line
Excluding housing costs, September 2004

Income unit ^(a)	\$ per week
Couple – no dependants	310.75
Couple + 1	386.27
Couple + 2	461.80
Couple + 3	537.32
Single person – no dependants	213.75
Single + 1	293.57
Single + 2	369.09
Single + 3	444.61

(a) With household head employed
Source: Melbourne Institute

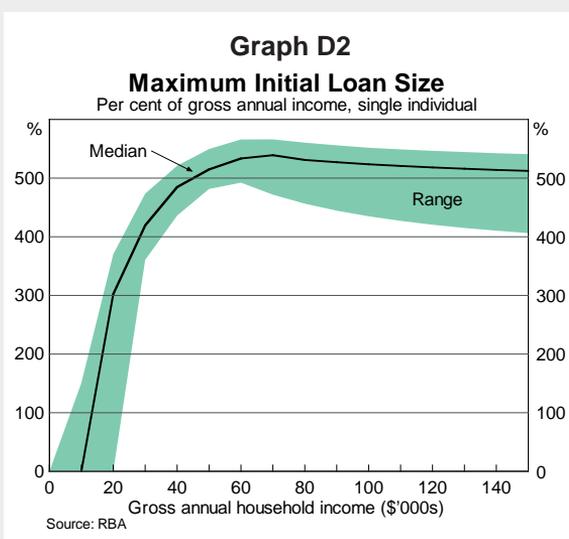
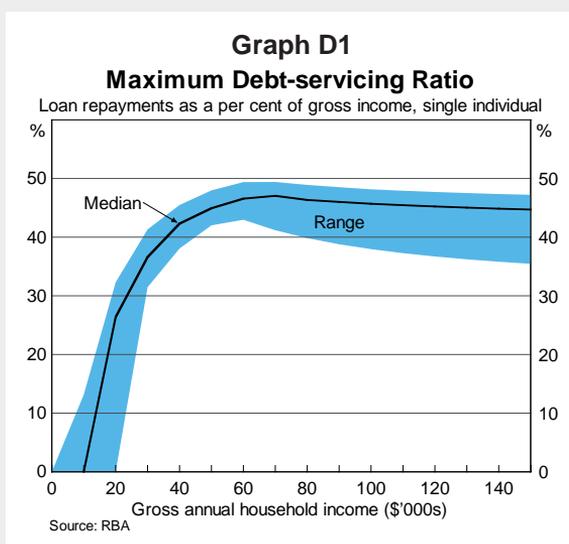
Online calculators can be used to estimate maximum allowable loan sizes. The numbers presented below were derived from the calculators on eight banks' websites, and were estimated for a single borrower with no other loan commitments (including credit card debt) and whose sole income is from wages and salary. The calculations also assume that borrowing is for the purchase of an owner-occupied property and that the loan has a term of 25 years and an interest rate of 7.30 per cent, which is the major banks' current average standard variable rate. Given the prevalence of discounting, many borrowers pay a lower rate, allowing them to borrow somewhat more than suggested by these calculations.

Graph D1 shows the debt-servicing ratios implied by the maximum loan sizes for various income levels. The banks' loan calculators appear to regard the bulk of income after tax and living expenses as being available for debt servicing. Over the lower range of incomes, the maximum

permissible debt-servicing ratios rise as household income rises. This reflects the assumption that living expenses do not increase proportionately with income. At higher income levels, however, this effect is offset by the fact that tax payments rise more than proportionately with income, causing the maximum permissible debt-servicing ratios to level out and eventually fall slightly.

The maximum permissible ratios rise through to incomes of around \$60 000 per annum. At that income the maximum debt-servicing ratios lie in a range of 43 to 49 per cent, with a median outcome of around 47 per cent, well above the 30 per cent benchmark used in the past. Based on the assumptions above, a debt-servicing ratio of 47 per cent of gross income corresponds to an initial loan size of nearly 5½ times gross annual income (Graph D2).

Despite their apparently high borrowing capacity, most borrowers take out loans with debt-servicing requirements well below the maximum implied by estimates from online calculators. Discussions with banks confirm that customers with high debt-servicing requirements are typically those with high, and often diversified sources of, income. Nonetheless, given the availability of loans with high debt-servicing ratios, there is the possibility that some borrowers could overextend themselves and be at greater risk of default if there was an adverse change in their economic circumstances, including a loss of income due to unemployment.



3. Developments in the Financial System Infrastructure

A major challenge for regulatory authorities is ensuring that the financial infrastructure – the regulatory, accounting and legal framework that supports the day-to-day activity of financial institutions – is keeping pace with evolving risks within the financial system.

One of the more significant issues for the financial system over recent years has been the rapid growth in borrowing by households. Reflecting this, in 2003, APRA conducted an extensive stress test of the ability of financial institutions to withstand a simultaneous substantial increase in home loan defaults and a 30 per cent fall in property prices. The results of this test have been discussed in previous issues of the *Review*. More recently, APRA has reviewed the regulatory arrangements that apply to various, potentially riskier, types of housing loans, and has also released draft prudential standards which, upon implementation, will increase the minimum capital requirements for mortgage insurers. In addition, both APRA and the Reserve Bank have drawn public attention to changes in lending practices over recent years and the implications that these might have for both households and financial institutions. There has also been a review by the Ministerial Council on Consumer Affairs of the fragmented regulatory arrangements that apply in the mortgage-broking industry.

Later this year, the risks facing the financial system are likely to come under greater scrutiny as Australia is scheduled to participate in the Financial Sector Assessment Program (FSAP) conducted jointly by the International Monetary Fund (IMF) and the World Bank with the assistance of outside experts. As part of the FSAP process, Australia's compliance with key international financial standards and codes will be assessed, as will crisis-management arrangements. The assessment is also likely to involve additional stress tests of the banking system.

3.1 Capital Requirements on Housing Lending

Historically, lending for housing has been a very low-risk activity. On average, around 0.1 per cent of insured mortgages have defaulted in any given year, with the maximum default rate in any single year being 0.27 per cent.³ Actual losses have been far lower, as most housing loans are well secured by the underlying property.

Given the record of relatively small losses, housing loans typically attract lower regulatory capital requirements than business loans. Under the current framework for capital adequacy developed by the Basel Committee on Banking Supervision, housing loans have a risk weight of 50 per cent, rather than the 100 per cent weight that applies to business lending. This means that, in effect, an authorised deposit-taking institution (ADI) must hold four cents of capital for each dollar of most housing loans, rather than the eight cents that must be held against most other types of loans.

³ See Reserve Bank of Australia (2004), 'Box C: Measures of Housing Loan Quality', Financial Stability Review, September.

For a loan to qualify for the lower capital requirement, APRA requires that it be well secured, by either having a loan-to-valuation ratio (LVR) of less than 80 per cent, or by the lender having taken out mortgage insurance on the loan, covering the lender for any losses. Partly reflecting this, mortgage insurance has come to play an important role for ADIs, with around one fifth of outstanding ADI-originated housing loans being insured.

The rapid growth of low-doc loans and the mortgage-broking industry prompted APRA to review these requirements last year. Low-doc loans, in particular, are recognised as likely to have both higher probabilities of default and greater variability in default rates than standard loans, warranting more conservative regulatory capital arrangements. Under changes that became effective in October 2004, APRA now only permits a 50 per cent risk weight on uninsured low-doc loans if the LVR is below 60 per cent, rather than the 80 per cent threshold that applies to standard loans. In addition, the 60 per cent threshold also applies to loans originated by mortgage brokers if the ADI does not have procedures in place to substantiate critical information provided by the borrower.

3.2 Capital Requirements on Lenders' Mortgage Insurance

APRA has also recently reviewed the capital requirements that apply to lenders' mortgage insurers (LMIs). These insurers have come to play an important role in the financial system. Not only do they allow ADIs to reduce their regulatory capital requirements, they also provide the credit enhancement that has helped underpin the growth of the Australian mortgage-backed securities market. The vast bulk of securitised mortgages are either insured individually or as part of a pool of loans.

The lenders' mortgage insurance market is highly concentrated, with the three largest LMIs (one of which no longer writes business) accounting for around 80 per cent of the total value of outstanding policies. The other 20 per cent of policies are mostly written by captive insurers that provide cover only to the ADIs that own them. In contrast to a number of other countries where lenders' mortgage insurance is also used heavily, there are no longer any government-owned LMIs in Australia.

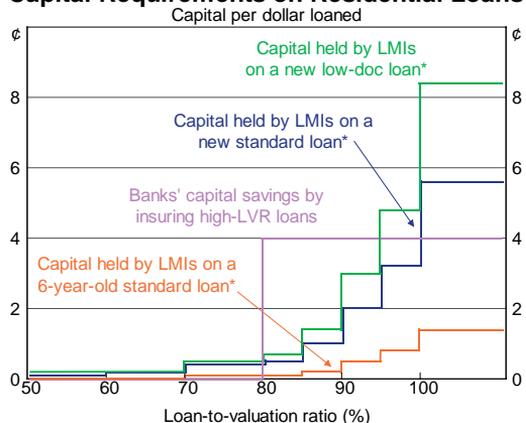
As part of its stress testing of the banking system to a fall in house prices, APRA noted that a significant rise in mortgage defaults could have serious implications for the mortgage insurance industry. Partly in response, a number of changes have been proposed to regulatory arrangements, with these planned to come into effect on 1 October 2005.

The most significant of these changes is an increase in minimum capital requirements for LMIs. Under the proposed arrangements, the capital requirement on any given insured loan will depend upon the LVR, the age of the loan, and whether it is a standard or non-standard loan (such as low-doc mortgages). For most loans, the proposed capital requirements will be more than double those that currently apply. The overall increase in LMIs' capital holdings, however, is likely to be less than this as the LMI industry's capital position is well in excess of current requirements and approximately equal to the new requirements.

Under the new arrangements, the required minimum amount of capital in the financial system will still typically fall when an ADI takes out mortgage insurance, with the only exception being for high-LVR or low-doc loans. One justification for this reduction is that, by taking

out insurance, the losses from loan defaults are spread more widely through the system. The effect on overall capital requirements from insurance is illustrated in Graph 53 which shows the approximate capital requirements applying to LMIs for various types of insured loans. If, for example, a new standard loan has an LVR of 87 per cent, the insurer's capital requirement on the loan would be around one cent in the dollar, compared with the capital saving of four cents in the dollar for the bank taking out the insurance. For a low-doc or other non-standard loan with the same LVR, the insurer's

Graph 53
Capital Requirements on Residential Loans



* Comprises the concentration risk component only and is therefore not strictly comparable to capital held by banks.
Source: APRA

capital requirement on the loan would be around 1½ cents, although this would increase to almost five cents if the LVR was in the range of 95 to 100 per cent.

Another proposed change relates to the authorisation of LMIs. Currently, ADIs can only apply the 50 per cent risk weight to an insured loan if the LMI has either an 'A' credit rating or, if unrated, is considered by APRA to have financial strength consistent with that rating. The new prudential standard will dispense with this rating condition, and locally incorporated LMIs will need to be authorised directly by APRA. For LMIs not domiciled in Australia, the LMI will need to be licensed in its home jurisdiction and supervised to APRA's satisfaction by the home regulator. The new standards also stipulate that if an LMI, or a reinsurer, has contractual recourse to the ADI that originated the loan, the ADI will not be eligible for the lower capital charge.

3.3 Regulation of Mortgage Brokers

Another recent development has been rapid growth in the use of brokers by individuals borrowing for residential property. As the number of lenders has proliferated and the complexity of loan products has increased, many borrowers have turned to mortgage brokers for advice. The growth of the broking industry has, in turn, prompted greater competition amongst financial institutions, helping to deliver cheaper housing loans to many households (see Box B).

This growth, however, has also focused attention on the regulatory arrangements that apply to mortgage brokers and the incentives that they face. Of particular concern has been the fact that although brokers effectively work for borrowers, they may be influenced in their recommendations by commissions offered by lenders. There have also been reports that some brokers have 'coached' borrowers so that they qualify for larger loans than would otherwise have been the case, as well as reports of brokers falsifying documents that support a loan application by a potential borrower.

Currently, the regulatory framework applying to mortgage broking, and to finance broking more generally, is fragmented. There are both federal and state regulations, but significant gaps in the regulatory framework remain. At the national level, ASIC is the chief regulator, but its licensing powers do not extend to brokers that only advise on credit products. At the state level, only Western Australia has an occupational licensing regime for finance brokers, and disclosure of financial benefits that brokers receive from lenders is required only in some states. There is no specific regulation of finance brokers in Queensland, South Australia, Tasmania and the Northern Territory.

The disparate regulatory arrangements were recently reviewed by the Ministerial Council on Consumer Affairs (MCCA) which, in December last year, released a Regulatory Impact Statement proposing uniform regulation of finance brokers. Under the proposals, regulation would be administered by the states on a nationally harmonised basis, and would apply to all brokered loans, other than business loans to large firms or amounts over \$2 million.

The proposals address business conduct, disclosure (especially of fees and commissions), mechanisms for dispute resolution, 'fit and proper' background checks, and minimum standards of education or experience. For example, on disclosure of commissions, the MCCA has proposed that contracts between consumers and brokers disclose whether or not the broker will be receiving a financial or other benefit from a third party. The MCCA also recommends that brokers be required to justify recommendations and provide a suitability test for loan products.

The MCCA also proposes extending arbitration for dispute resolution beyond the existing system, which is voluntary and not available to all customers of brokers. The MCCA envisages a non-judicial, but compulsory, mechanism involving an industry ombudsman. It also proposes that mortgage brokers be required to hold professional indemnity insurance against the risk of breaching regulations.

3.4 Financial Sector Assessment Program

As noted above, Australia is scheduled to participate in the FSAP conducted by the IMF and World Bank. The process will commence later this year, with the final report expected to coincide with the conclusion of the regular Article IV Consultation in mid 2006. The Australian Treasury will co-ordinate the process, with participation by APRA, ASIC, the Reserve Bank and private financial institutions.

A core element in the process is an assessment of Australia's compliance with internationally accepted standards and codes relating to the financial infrastructure. The IMF currently recognises 12 such standards relating to accounting, auditing, anti-money laundering and combating the financing of terrorism, banking supervision, corporate governance, data dissemination, fiscal transparency, insolvency and creditor rights, insurance supervision, monetary and financial policy transparency, payment systems, and securities regulation. Typically, compliance with only a subset of these standards is assessed as part of the FSAP process. It has not yet been decided which specific standards will be examined in Australia's case.

A related element of the FSAP process is an assessment of procedures for dealing with financial crises involving major difficulties at one or more financial institutions. These arrangements are currently being reviewed by the Council of Financial Regulators.

A third element involves stress tests of the financial system. Here the FSAP is likely to build on the earlier work by APRA examining the impact of a significant fall in house prices. The exact scenarios to be used will be developed in consultation with the banking industry and the FSAP team. They will then be given to financial institutions, which will model the implications of the scenarios for their own health.

Financial Soundness Indicators

In the course of the FSAP visit, the IMF will also be reviewing the quality and comprehensiveness of Australia's financial statistics.

Interest in financial data has increased greatly over recent years as financial factors have come to play a more important role in shaping economic outcomes. In contrast to the plethora of statistics on output and employment that exists in most countries, collection of financial sector data has typically lagged behind, and there is far less standardisation across countries. One obvious example to which the Reserve Bank has drawn attention in recent times is the relatively limited data on house prices, although by international standards Australia is quite well served in this particular area.

In an effort to improve the quality and comparability of data, the IMF has developed a set of Financial Soundness Indicators (FSIs) that it hopes will be calculated on an internationally harmonised basis, and be released quarterly by most countries. These indicators are divided into two sets. The first, or 'core', set includes statistics on the health and performance of the deposit-taking sector. The second, or 'encouraged', set includes additional statistics on deposit-taking institutions as well as statistics relating to the household and corporate sectors, real estate markets and non-bank financial institutions. All up, there are 39 FSIs, of which 12 are on the core list (Box E).

To promote and support the compilation of FSIs, the IMF is organising a Co-ordinated Compilation Exercise involving around 60 countries, including Australia. Participating countries are required to compile the core indicators and as many of the second set of indicators as possible. Data for end December 2005 are to be submitted by end July 2006, and the IMF hopes to publish the results by end 2006. The Reserve Bank is co-ordinating Australia's participation. Overall, Australia's data are expected to compare favourably with those of most other countries, although some gaps remain to be filled.

3.5 Other Developments

Trans-Tasman Banking

Last year, the Australian Treasurer and the New Zealand Minister of Finance commissioned a working group of officials from their respective Treasuries, APRA, the Reserve Bank of New Zealand (RBNZ) and the Reserve Bank of Australia to explore options for closer integration of the regulatory and crisis-management arrangements of both countries. In the case of banking,

business integration is well advanced, with some 85 per cent of the New Zealand banking market by assets owned by the four major Australian banks. New Zealand subsidiary and branch operations represent the largest overseas exposure of the four major Australian banks and account for some 15 per cent of their total assets. The options canvassed by the working group included an 'enhanced home-host supervisory model' that would build upon the existing, but separate, regulatory frameworks, and a more far-reaching initiative involving a larger role for APRA in the supervision of Australian banks in New Zealand.

This work has been given further impetus following a Ministerial meeting on 17 February 2005. A joint Trans-Tasman Council on Banking Supervision has now been established, chaired jointly by the Secretaries to the two Treasuries. The terms of reference require the Council to develop enhanced co-operation on the supervision of trans-Tasman banks, to promote and regularly review crisis-management arrangements and to guide the development of policy advice to both governments.

The Council has been asked to report to Ministers by 31 May 2005 on legislative changes that may be required to ensure that APRA and the RBNZ can support each other in the performance of their current regulatory responsibilities at least regulatory cost.

Business Continuity Planning

For some time, the Reserve Bank has been working with the finance industry in identifying risks to the operational resilience of the financial sector. This parallels work being undertaken overseas examining such issues as industry-wide contingency planning and testing, crisis communications procedures, and the resilience of critical telecommunications services used by the financial industry. In 2003, an advisory group for the Australian banking and finance sector was established under the Government's Trusted Information Sharing Network for Critical Infrastructure Protection. The group has broad membership among financial institutions, industry associations, and operators of market infrastructure. At the end of 2004, it provided a preliminary report to the Reserve Bank summarising its analysis to date of risks and potential options for mitigating them. Now under the chairmanship of one of the major banks, and with the Reserve Bank as deputy chair, the group is developing a work plan and initiating a series of projects to address the issues identified in the report. ✎

Box E: Financial Soundness Indicators

	No	Indicator
CORE SET		
Deposit-takers		
<i>Capital adequacy</i>	1	Regulatory capital to risk-weighted assets
	2	Regulatory Tier 1 capital to risk-weighted assets
	3	Non-performing loans net of provisions to capital
<i>Asset quality</i>	4	Non-performing loans to total gross loans
	5	Sectoral distribution of loans to total loans
<i>Earnings and profitability</i>	6	Return on assets
	7	Return on equity
	8	Interest margin to gross income
	9	Non-interest expenses to gross income
<i>Liquidity</i>	10	Liquid assets to total assets (liquid asset ratio)
	11	Liquid assets to short-term liabilities
<i>Sensitivity to market risk</i>	12	Net open position in foreign exchange to capital
ENCOURAGED SET		
Deposit-takers		
	13	Capital to assets
	14	Large exposures to capital
	15	Geographical distribution of loans to total loans
	16	Gross asset position in financial derivatives to capital
	17	Gross liability position in financial derivatives to capital
	18	Trading income to total income
	19	Personnel expenses to non-interest expenses
	20	Spread between reference lending and deposit rates
	21	Spread between highest and lowest interbank rate
	22	Customer deposits to total (non-interbank) loans
	23	Foreign-currency-denominated loans to total loans
	24	Foreign-currency-denominated liabilities to total liabilities
	25	Net open position in equities to capital
Other financial corporations	26	Assets to total financial system assets
	27	Assets to GDP
Non-financial corporate sector	28	Total debt to equity
	29	Return on equity
	30	Earnings to interest and principal expenses
	31	Net foreign exchange exposure to equity
	32	Number of applications for protection from creditors
Households	33	Household debt to GDP
	34	Household debt service and principal payments to income
Market liquidity	35	Average bid-ask spread in the securities market
	36	Average daily turnover ratio in the securities market
Real estate markets	37	Real estate prices
	38	Residential real estate loans to total loans
	39	Commercial real estate loans to total loans

How Do Australian Businesses Raise Debt?¹

Introduction

Over the past decade, the composition of bank lending has shifted from being primarily to businesses to now being directed predominantly to households. In part, this reflects greater demand for debt from households and a conscious shift by intermediaries to target this sector. But another important factor is that businesses have been increasingly willing and able to access debt directly through capital markets.

Traditionally, Australian (non-financial) businesses have relied more heavily on loans from financial intermediaries (intermediated debt) rather than securities issued in their own name (non-intermediated debt). This is especially true of small businesses, in part because the fixed costs and minimum issuance requirements involved in non-intermediated debt tend to be prohibitively high for businesses with relatively low funding requirements.

Larger businesses are likely to find the fixed costs and minimum issuance requirements of debt issuance less problematic. Nevertheless, they often find it difficult to attract Australian institutional investor demand if their securities have a low credit rating, as such bonds are excluded from the main bond indices. As a result, lower-rated businesses have typically followed one of two funding strategies: issuing securities that are backed by a third-party guarantor; or issuing into markets with a greater appetite for lower-rated securities, such as the domestic hybrid securities market or the US private placement market. There are, however, some signs that demand for conventional, lower-rated bonds is rising in Australia, a process that should accelerate this year following the broadening of the main bond index used by Australian fund managers to include BBB-rated bonds. This in turn may have some implications for the amount and credit quality of non-intermediated debt issued domestically by Australian businesses.

Broad Characteristics of Business Debt

Non-intermediated debt accounted for 21 per cent of Australian businesses' total debt in mid 2004, up from 13 per cent in 1999, with this trend more pronounced for larger businesses. According to company annual reports, the share of non-intermediated debt in the total debt of the 350 largest listed Australian businesses – the focus of this article – doubled over the five years to mid 2004, to around 40 per cent (Table 1). The greater use of non-intermediated debt has not led to a significant increase in Australian businesses' total indebtedness. Instead, Australian businesses have substituted non-intermediated debt for intermediated debt, with the dollar value of intermediated debt of the top 350 listed businesses actually falling over the period.²

¹ This article was prepared by the Securities Markets Section of Domestic Markets Department.

² Businesses' total funding has, in aggregate, risen significantly over this period, reflecting retained earnings and equity raisings.

Table 1: Australian Businesses' Sources of Debt Finance^(a)

350 largest listed businesses, A\$ billion

	June 1999				June 2004			
	Higher rated ^(b)	Lower rated ^(c)	Unrated	Total	Higher rated ^(b)	Lower rated ^(c)	Unrated	Total
Non-intermediated debt	11.4	11.9	1.0	24.3	27.5	22.4	8.9	58.8
Domestic bonds	1.5	0.9	0.3	2.7	6.1	3.5	2.5	12.1
– Unwrapped	1.5	0.9	0.3	2.7	6.1	2.2	0.0	8.3
– Credit wrapped	0.0	0.0	0.0	0.0	0.0	1.4	2.5	3.9
Offshore bonds	9.9	10.2	0.0	20.1	19.7	13.4	2.6	35.8
– Private placements	1.3	2.5	0.0	11.5	2.4	9.3	2.6	14.3
– Other	8.7	7.7	0.0	8.7	17.3	4.1	0.0	21.4
Hybrids	0.0	0.8	0.7	1.5	1.7	5.5	3.8	11.0
– Domestic	0.0	0.3	0.7	1.1	1.7	3.1	3.8	8.6
– Offshore	0.0	0.4	0.0	0.4	0.0	2.4	0.0	2.4
Intermediated debt	34.8	30.4	46.2	111.4	19.5	33.7	35.3	88.5
Total	46.3	42.2	47.2	135.7	47.0	56.2	44.2	147.4

(a) Domestic short-term securities were excluded from non-intermediated debt.

(b) Companies rated A- or higher

(c) Companies rated BBB+ or lower

Sources: ASX; RBA; Salomon Smith Barney; UBS Australia Ltd.

The increased use of non-intermediated debt has been evident across the broad categories of non-intermediated debt: domestic bonds' share of listed Australian businesses' total debt rose from 2 per cent to 8 per cent; offshore bonds' share rose from 15 per cent to 24 per cent; and hybrid securities' share rose from 1 per cent to 7 per cent. It has also been evident across all credit ratings. In contrast, the fall in the level of intermediated debt has been most pronounced among higher-rated businesses.

A firm's credit rating has a significant bearing on the exact type of non-intermediated debt that it chooses to issue and the market into which the securities are issued. About 60 per cent of securities outstanding at June 2004 were issued offshore, with 40 per cent of these issued in the US private placement market, mainly by lower-rated and unrated businesses. (In contrast, only 6 per cent of financial institutions' outstanding offshore securities were issued in the US private placement market.) Domestic bonds and hybrid securities each accounted for a further 20 per cent of Australian businesses' securities outstanding. Within the domestic market, 40 per cent of lower-rated businesses' bonds have been backed by a third-party guarantor, that is, 'credit wrapped'. All the bonds issued by unrated businesses have been credit wrapped, though there is an element of self-selection in this as firms not wanting to issue unwrapped bonds are unlikely to seek a (relatively costly) credit rating. Hybrids are evidently the domain of lower-rated and unrated businesses.³

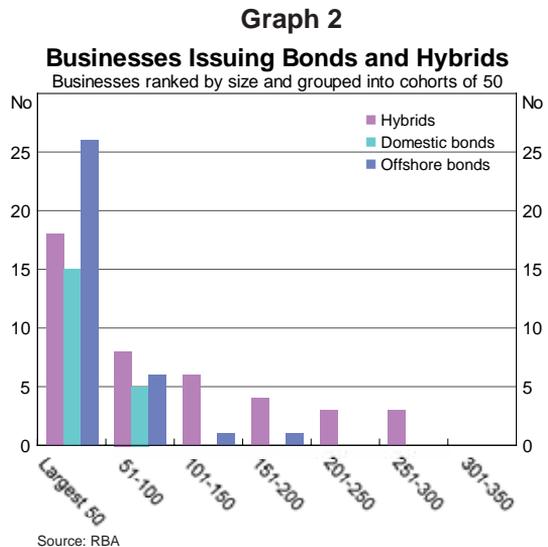
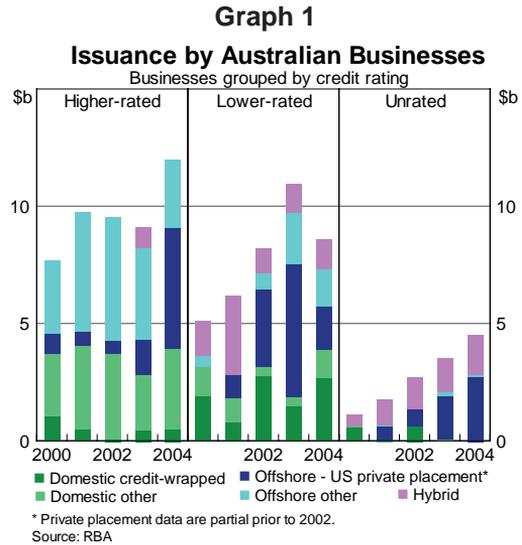
³ For the purposes of this article, hybrid securities are regarded as being a form of (non-intermediated) debt, regardless of whether they are treated as debt or equity on the balance sheet of the issuing firm.

Consistent with these patterns in outstandings, over the past five years, lower-rated and unrated businesses have issued \$16 billion (gross) of bonds into the domestic market, with \$11 billion of this being credit wrapped (Graph 1). These businesses have issued \$23 billion of bonds offshore, of which \$18 billion has been in the US private placement market. Issuance of hybrid securities has amounted to \$14 billion over the same period.

In summary, over the past five years, 82 per cent of all non-intermediated debt raised by lower-rated and unrated businesses was either credit wrapped, hybrids or issued in the US private placement market. In contrast, only 25 per cent of higher-rated businesses' debt was issued into these markets.⁴ Some background information on each of these markets is provided in Box 1.

Issuers in Each Market

The propensity of a business to issue non-intermediated debt, and the type of debt issued, is more dependent on its size than its credit rating. Whereas 30 of the largest 50 listed businesses have issued domestic or offshore bonds, only 10 of the next largest 50 businesses, and very few of the smaller listed businesses have done so (Graph 2). Most likely this reflects the cost effectiveness of issuing debt securities in reasonably large volume. Four fifths of Australian businesses' domestic bond issues are at least \$100 million, with offshore bond issues often larger. The use of hybrid securities also appears to be influenced by business size, but the relationship is less strong. Though hybrid securities are more prevalent amongst the largest 50 listed

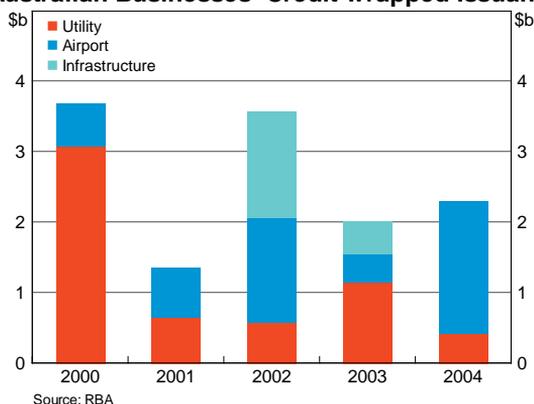


⁴ A single bond issue by Westfield Group accounted for 70 per cent of higher-rated businesses' issuance in the US private placement market in 2004.

businesses, they are regularly issued by much smaller listed businesses. Two fifths of Australian businesses' hybrid issues are smaller than \$25 million.

Within non-intermediated debt, businesses tend to view domestic bonds, offshore bonds and hybrids as substitutes. Less than a quarter of businesses with non-intermediated debt outstanding have issued securities in more than one market. Compared with financial institutions, which tend to view these markets as complements, (non-financial) businesses often find a particular market generally best suited to their needs. One exception is domestic issuers of credit-wrapped bonds, who almost always have also issued unwrapped bonds. This may be because investors are more willing to buy unwrapped bonds from businesses that have satisfied the credit requirements of the monolines in addition to those of the credit rating agencies.

Graph 3
Australian Businesses' Credit-wrapped Issuance



The issuers of credit-wrapped securities have been utilities, airports and infrastructure businesses (Graph 3). Despite their tangible assets and generally solid cashflows, these businesses – which are often regulated oligopolies – tend to have credit ratings that are at the lower end of the investment-grade scale. This is because of their relatively heavy demand for debt, especially long-dated debt, to fund infrastructure. Nonetheless, the high quality of their assets means that they are often more attractive than other

businesses to credit wrappers because they are likely to offer a high recovery rate in the event of a default. Anecdotal evidence suggests that while credit rating agencies consider recovery rates when assigning credit ratings, they are more likely to focus on default rates.

The US private placement market is particularly appealing to lower-rated businesses that do not necessarily wish to swap the proceeds back into Australian dollars, have relatively large but infrequent funding needs (and hence are less troubled by issuance-specific documentation) and wish to raise long-term funds. A broad range of businesses – including materials, energy, food and beverage and media businesses – has tapped this market.

Credit-wrapped bonds and private placements involve larger amounts and tend to have longer maturities than unwrapped domestic bonds and offshore publicly listed bonds (Table 2). Anecdotal evidence suggests that this is because credit-wrapped bond and private placement investors are more willing to purchase long-dated bonds than investors in other markets. Also, because the documentation associated with private placements and credit-wrapped bonds is relatively time consuming to prepare, businesses have an incentive to reduce the frequency of their issuance by issuing large, long-dated bonds.

The domestic hybrid security market is characterised by a relatively high degree of issuer diversity. Hybrid securities have been issued by businesses of all sizes and credit ratings. The

Table 2: Characteristics of Businesses' Debt Security Issues

2002 to 2004

	Domestic bonds		Offshore bonds		Hybrids ^(a)
	Unwrapped	Credit wrapped	US private placements	Other	
Total issuance (A\$b)	11.4	8.8	23.4	16.7	7.8
Number of issuers	41	16	49	27	49
Number of issues	61	20	55	62	55
Average size (A\$m)	190	440	430	270	140
Average maturity (years)	5	8	11	6	5

(a) Offshore hybrids are excluded owing to the small sample.

Sources: ASX; RBA; Salomon Smith Barney; UBS Australia Ltd.

broader use of hybrid securities partly reflects the considerable flexibility of these instruments, with businesses able to structure the securities to suit their expected cash flows and their balance sheet requirements.

While individual hybrid issues are, on average, smaller than those of other types of securities, they have ranged in size from \$1 million through to \$1.5 billion. The average maturity of hybrid securities issued in recent years is similar to that of 'vanilla' bonds issued in the domestic and offshore markets.

Investors in Each Market

The domestic and offshore bond markets are dominated by institutional investors. The available, albeit limited, evidence suggests that in Australia, the holders of lower-rated bonds are usually the same as those holding higher-rated bonds, namely banks, insurance companies and fund managers. Investors in the US private placement market are mainly insurance companies and fund managers. In contrast, anecdotal evidence suggests that somewhere between a third and a half of outstanding domestic hybrid securities are held by retail investors.

There are a number of possible explanations for the preponderance of retail investors in the hybrid market. First, retail investors have easier access to hybrid securities than to corporate bonds, since many more hybrid securities are listed on the ASX and can be bought in relatively small amounts. Corporate bonds tend to be traded over-the-counter and, because they are marketed without a prospectus, have a legal requirement that the investment be at least \$500 000. In addition, retail investors may be less sensitive to credit ratings than institutional investors. Whereas some institutional investors are either explicitly or implicitly constrained by their investment mandates from participating in the hybrid market, a high-profile brand name may be more appealing to some retail investors than an investment-grade rating. Perhaps supporting this, many high-profile businesses have issued unrated hybrid securities. A third reason might be that some retail investors are, or at least have been, attracted by the relatively high yields on hybrid securities without fully appreciating the risk implications of a future conversion to equity.

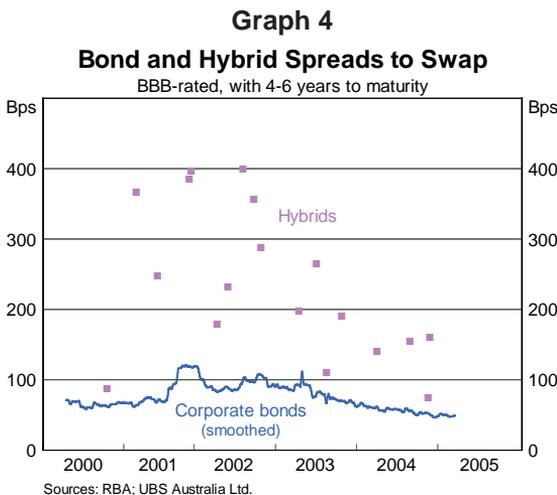
Institutional participation in the Australian hybrid market has, to date, been limited. While some institutional investors are not permitted to invest in hybrid securities by their mandates, others have argued that the credit risk in hybrid securities is priced too cheaply (perhaps because retail investors are mispricing the risks). However, anecdotal evidence suggests that interest from hedge funds and specialist high-yield debt funds has increased, particularly over the past year.

The Cost of Debt in Each Market

The cost of raising debt in the US private placement market varies considerably between firms, with client confidentiality and a lack of secondary market prices making it difficult to quote definitive prices. Nonetheless, the available evidence on primary issuance suggests that for a given Australian business, the yield on debt issued in the private placement market would be about the same as debt issued in the US publicly listed market. However, it is possible that for infrequent issuers the transaction and ongoing reporting costs, and hence total costs, are lower in the private placement market. Anecdotal evidence suggests that total funding costs in this market are competitive with Eurobonds.⁵ Whether the effective Australian dollar cost would be lower than issuing in the domestic bond market depends, in part, on conditions in the cross-currency swap market.

For some businesses, the total cost of raising credit-wrapped debt is evidently lower than the cost of unwrapped debt, in that the fees paid to insurers are less than the saving on yields. The fact that yields on credit-wrapped bonds tend to be around the same as on bonds issued by ‘genuine’ AAA-rated corporate borrowers suggests that investors are equally prepared to hold either type of bond. However, spreads on both wrapped and unwrapped AAA-rated corporate bonds tend to be higher than those on AAA-rated bonds issued by government and supranational/quasi-government borrowers, reflecting lower liquidity as well as credit quality.

The cost of issuing hybrid securities is less straightforward to calculate, given their relatively complicated structure. For example, convertible preference shares are equivalent to



a combination of subordinated debt and an ‘out of the money’ equity call option. Other hybrids, such as reset securities, are appreciably more complicated. Nonetheless, it is clear that spreads on A-rated and BBB-rated hybrid securities have declined steadily over recent years – much more than similarly rated corporate bonds – and are now 75 basis points and 125 basis points, respectively, lower than in mid 2002 (Graph 4). Despite the sharp fall, hybrid securities are still more expensive to

⁵ Eurobonds are bonds that are issued in one currency but sold offshore in one or more different national markets. For example, Australian dollar Eurobonds are bonds that are denominated in Australian dollars but issued and traded outside of Australia.

issue than conventional bonds: convertible hybrids offer grossed-up yields to maturity that are on average 70 to 100 basis points higher than yields on similarly rated corporate bonds. That some businesses seem to issue them in preference to bonds suggests that, at least for these issuers, hybrid securities' greater flexibility, such as the ability to defer or cancel coupon payments or convert the securities into equity, outweighs their higher funding costs.

Conclusions

In recent years, Australian businesses have increasingly raised debt from a range of capital markets, rather than from financial intermediaries. Australian businesses have accessed a number of different markets in order to raise non-intermediated finance. Each of these alternative markets appears to cater to borrowers with different characteristics: the US private placement market attracts businesses that wish to borrow relatively large amounts at long maturities, some of which have revenues denominated in US dollars; the credit-wrapped market caters to domestically focused, highly geared businesses with relatively stable cash flows; and the hybrid market is particularly attractive to businesses that are unrated but have a high profile amongst households.

The growth of the non-intermediated debt market is generally supportive of financial stability. Instead of concentrating corporate credit risk on the balance sheets of a limited number of (mainly) domestic financial institutions – as in the case of intermediated debt, such as bank lending – non-intermediated debt disperses it more widely across bond holders in Australia and overseas.

However, the increased use of non-intermediated debt does raise a number of issues. One which has been discussed in previous *Reviews* is that the increased use of credit-wrapped bonds, while allowing lower-rated businesses to diversify their funding sources relatively cheaply, has led to a significant concentration of credit risk in a small number of monoline insurers.⁶ While these insurers are all AAA-rated, and have large and well-diversified bond portfolios, periods of severe economic stress could result in a large volume of claims, perhaps undermining their creditworthiness.

Another issue is that some retail investors may not fully appreciate the risk implications of a future conversion of hybrid securities into equity. The number of investors potentially in this situation is, however, likely to be very small and the amounts involved are not significant from a systemic viewpoint. Moreover, to the extent that hybrid securities are issued instead of debt, rather than equity, they strengthen the issuers' balance sheet because often coupon payments can be cancelled or deferred and the securities can be converted into equity.

Regarding the private placement market, concerns have also been expressed about undisclosed covenants imposed by investors in these securities causing problems for investors in public debt and equity markets. Again, however, it is unlikely that this would have significant implications for the soundness of the Australian financial system as a whole.

⁶ See for example, Davies, M and L Dixon Smith (2004), 'Credit Quality in the Australian Non-government Bond Market', Reserve Bank of Australia, Financial Stability Review, March.

Finally, while issuance of credit-wrapped bonds, private placements and hybrid securities has increased noticeably, there has been only modest growth in the issuance of unwrapped bonds into the domestic market. In part, this has reflected relatively subdued demand on the part of Australian investors for lower-rated domestic bonds. While this does not appear to have impeded lower-rated businesses' financing efforts, having a diverse range of financing options available to corporate borrowers reduces their cost of capital and makes them less dependent on any one type of finance. The broadening of investment mandates for fund managers should increase the demand for lower-rated bonds, thereby providing an additional source of funding for lower-rated businesses. At this stage, it is unclear as to what extent this might facilitate an increase in the total indebtedness of lower-rated businesses, rather than simply change the composition of their debt.

Box 1: Sources of Non-intermediated Debt Finance for Lower-rated Businesses

As noted in the text, lower-rated businesses have tended to issue credit-wrapped bonds or issue into markets with greater appetite for lower-rated securities, such as the domestic hybrid securities market or the US private placement market.

Credit-wrapped Bonds

Credit-wrapped bonds contain an unconditional promise from a private sector guarantor – normally a specialist, or ‘monoline’, insurer – that they will continue to pay the interest and principal repayments of the bond should the issuer default. As the guarantors are generally AAA-rated businesses, the guarantee is sufficient to raise the credit rating on the bonds to AAA.

The issuer of a credit-wrapped bond pays the insurer an up front premium based on the insurer’s assessment of the credit risk associated with that borrower. Anecdotal evidence suggests that this premium is generally one half to three quarters of the interest saving that the borrower expects to achieve by issuing a credit-wrapped rather than an unwrapped bond. Insurers are willing to provide credit wraps because they require less compensation to take on some businesses’ credit risk than do bond investors. This might be because currently there is only a small pool of investors willing (or able) to invest in domestic lower-rated debt. Another reason might be that the credit wrappers are better able to build more diversified portfolios of lower-rated credit risk than domestic bond fund managers because they have internationally diversified operations.

Hybrid Securities

Hybrid securities contain features of both debt and equity. Those issued in Australia include: perpetuities (securities with no maturity date) as well as securities with a lifespan of a few years; securities that can be redeemed at the option of the issuer or the investor; some that are repayable with cash; and others that convert (automatically or voluntarily) to the issuer’s ordinary equity (Table 1). In the event of the business being liquidated, all hybrid investors rank behind senior and subordinated debt holders but ahead of ordinary shareholders. In addition, unlike bonds, the coupon and dividend payments of many hybrid securities can under certain circumstances be postponed or cancelled, so there is a slightly higher probability of non-payment associated with hybrids than with senior debt. Accordingly, their credit ratings tend to be one to three notches lower than the businesses’ senior debt.

US Private Placement Market

The US private placement market allows businesses to issue bonds to Qualified Institutional Buyers – investors who own or invest on a discretionary basis a minimum of

Table 1: Features of Hybrid Securities Issued in Australia

Type	Key features
Income securities	Perpetual securities with regular interest or coupon payments. They are only redeemable at the option of the issuer.
Perpetual step-up securities	Similar to income securities, except that the interest payment on the security increases if the issuer does not redeem the security on a certain date.
Converting preference shares	The security converts automatically into ordinary shares on the maturity date.
Convertible preference shares/notes	At the maturity date, the investor can choose whether to convert the security into ordinary shares or receive cash.
Reset convertible preference shares/notes	The issuer has the option to change the terms or redeem the securities on a predetermined date. The investor has the option to accept the new terms of the security, or to request an exchange. If an exchange is requested, the issuer decides whether it is for ordinary shares or cash.

US\$100 million – such as high net worth individuals, banks and institutional investors, without having to meet the full reporting and disclosure requirements for publicly listed securities. These bonds need not be rated by one of the major credit rating agencies and can be tailored to meet the needs of specific borrowers (and investors), hence offering more flexibility than is available in public debt markets.

The market does, however, have some drawbacks for issuers. In particular, issuers are often required to agree to financial covenants and to punitive prepayment penalties if the debt is repaid early. Also, reflecting the market's customisation, preparing the documentation associated with each issuance can be time consuming.