# RESERVE BANK OF AUSTRALIA

## NOTES FOR A PANEL DISCUSSION ON
## EARLY WARNING SYSTEMS FOR GLOBAL FINANCIAL CRISES

Luci Ellis
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Australian National Audit Office
Canberra – 10 June 2011

# NOTES FOR A PANEL DISCUSSION ON EARLY WARNING SYSTEMS FOR FINANCIAL CRISES

The US experience has led many observers to put more emphasis on the risks posed by households and housing markets. And understandably so: housing prices are one-third below their peak, and even more in some cities; millions of people have lost their home to foreclosure; at least 12 per cent of outstanding mortgages were three or more months behind on their payments or in foreclosure proceedings in the first quarter of this year.

In Australia, households have become more indebted over recent decades, and housing prices are high. So we need to be alert to the possibility that many households might become overstretched. Arrears rates on home loans have drifted up as interest rates have risen. But they remain fairly low overall, even compared to the *pre*-crisis experience in some other countries. The cohort that borrowed in 2004–2007 is performing a lot worse than those who took out loans before or since then. Many of the borrowers in that period were investors, and thus more prone to speculative motives than owner-occupiers. Perhaps more importantly, lending standards eased during that period; they have since tightened again, especially around income documentation. There was a surge of first-home buyers in 2008–09 in response to government incentives. These households usually have less equity in their home, so we continue to watch them closely for emerging signs of stress. But so far, they are behaving like earlier cohorts of first-home buyers. It was the buyers in the earlier boom that now seem most vulnerable.

In any case, we need to keep those potential vulnerabilities in perspective. It is very rare that households are the instigators of financial instability. We need to be mindful of the role institutional differences play. The meltdown in the US housing market was an exception to the normal dynamic for mortgage defaults. Arrears rates and defaults started to rise rapidly there *before* the economy turned down. Everywhere else, before and since, unemployment rises in tandem with large upswings in arrears. The difference seems to be the many institutional settings that are unique to the United States. These include: a segmented mortgage lending industry with a large subprime sector; the rapid non-judicial foreclosure processes; weak or incomplete financial regulation; and a household sector that is exceptionally exposed to income and other shocks. We should bear in mind the true relative risk posed by different parts of the non-financial economy. We would be doing our fellow citizens a disservice if we allowed the housing market to become the Maginot Line of financial stability analysis.

As noted in the background paper, Barrell and his co-authors found that housing prices correlate well with periods of distress. But the loan losses, and thus the damage to financial stability, are typically in loans to property developers. That has certainly been the experience in Ireland, Spain and the UK recently.

**Developments in Australian Households' Borrowing Capacity: An Update**

Households' potential borrowing capacity is little changed since December 2010.[1]

According to our survey of lenders' online loan calculators, is the only major bank that has reduced maximum borrowing capacity; the other major banks have left their calculators unchanged since December 2010.

recently increased its interest rate buffer, resulting in a significant reduction in borrowing capacity across all income levels.[4] For example, the maximum loan size for an individual with a gross income of $100,000 has declined by 13 per cent.

Sophie Stone
Institutional Markets Section
Domestic Markets Department
10 June 2011

[1] For developments between March 2009 and December 2010, see Deans, C (2011), 'Developments in Australian Households' Borrowing Capacity', DM internal note.

[4] The increase in the interest rate buffer was confirmed by our mystery shopping. This interest rate buffer can be used by the banks as a broader serviceability buffer and therefore may also take into account potential increases in the cost of living.

## CHANGES IN THE PROVISION OF LOW-DOC LOANS

*Standards of low-doc lending tightened considerably following the onset of the financial crisis. This owes partly to a reduction in the level of competition in the market as a number of smaller and more aggressive lenders exited the market. Furthermore, there was a general reassessment of the risks involved with this type of product by both lenders and mortgage insurers. As a result, tighter regulations for low-doc lending, introduced in January 2011, appear to have had a limited effect on the industry. Nevertheless, these laws should act to curb the return of some of the riskier lending practices employed prior to the crisis.*

### *Introduction*

Low-doc housing loans are designed mainly for the self-employed and those with irregular incomes who do not have the required income documentation to obtain a conventional full-doc mortgage.[1] Since their introduction in the late 1990s, low-doc loans have played an important role in broadening the provision of housing loans. There are greater risks for the lender, however, due to the generally lower quality of information regarding, and greater volatility in, the borrower's income. For example, before the onset of the crisis, some lenders had started to rely on low-doc borrowers self-certifying their income, rather than using more reliable information such as a business activity statement (BAS).

### *Changes in low-doc lending between 2007 and 2010*

Standards of low-doc lending have tightened considerably over the past couple of years. Most obviously, there was a broad reassessment of the risks associated with low-doc lending in late 2008. Most of the major banks, and at least one regional bank, increased their documentation requirements, such as requiring an ABN and/or a BAS. also ceased offering low-doc loans with a loan-to-valuation ratio (LVR) of above 60 per cent, while tightened the conditions under which these loans were made available.

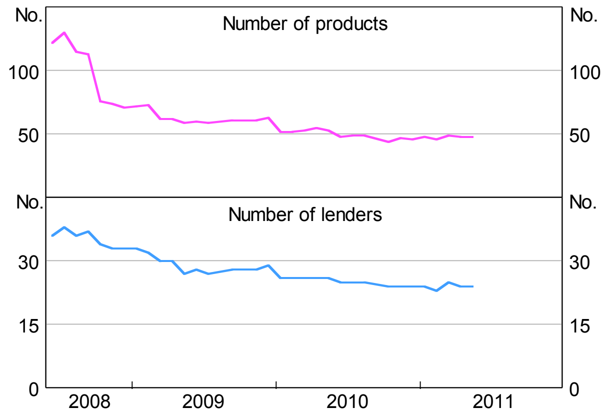
Following these changes, there was a marked fall in low-doc loans as a share of housing loan approvals (see below).

A number of smaller and arguably more aggressive lenders
were also forced to exit the market as funding pressures intensified. According to Canstar Cannex, the number of lenders offering low-doc mortgage products declined from 38 in mid 2008 to 27 a year later (Graph 1). Meanwhile, the number of available products more than halved.

[1] Typical documentation required for a full-doc loan can include a letter of employment, a payslip and a tax return.

**Graph 1**

**Low-doc Variable-rate Mortgages**

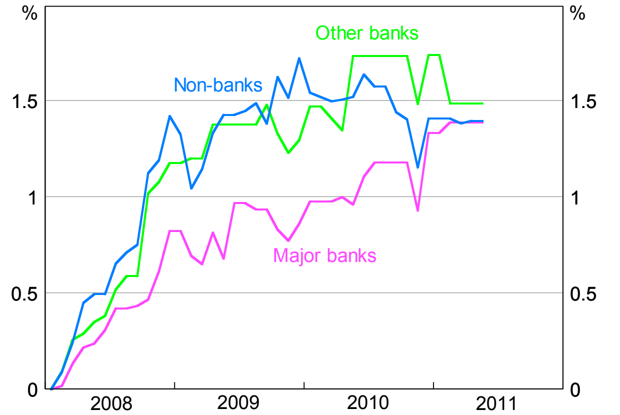



Sources: Canstar Cannex; RBA

**Graph 2**

**Variable Indicator Rates on Low-doc Mortgages**

Cumulative change in spread to cash from January 2008*




* Average of the lowest rate advertised by each lender with a loan-to-valuation ratio of 80 or below. Cumulative changes are shown, rather than levels, to alleviate some of the problems with comparison arising because some lenders advertise discounts whereas others do not. Not adjusted for changes to the sample arising from lenders exiting the market.

Sources: Canstar Cannex; RBA

Funding pressures also indirectly led to an improvement in the average quality of low-doc loans. In particular, smaller lenders – which were generally viewed as less cautious in their lending practices – experienced a larger rise in their funding costs.[5] This made it increasingly difficult for these lenders to offer competitive rates even if they were able to remain in the market (Graph 2). As a consequence, we estimate that the market share of the major banks in the low-doc market doubled from 2006 to 2008.

The incentives for borrowers to access these products also declined. In particular, the slowdown in the economy will have affected the self-employed to a greater extent than other borrowers. Furthermore, as expectations of house price growth declined, incentives to speculate on housing via potentially overstating income levels on low-doc loans arguably also fell. In combination, these factors contributed to a marked decline in the share of low-doc loan approvals from a peak of 12½ per cent in late 2008 to 6½ per cent by mid 2010.

## 3. Recent Developments and Outlook

There has been a further reduction in the market share of low-doc loans in recent months. Some lenders attribute this to the recent introduction of the National Consumer Credit Protection (NCCP) legislation. These regulations have placed responsibility upon lenders and brokers – from July 2010 and January 2011 respectively – to make sure a loan is appropriate for the borrower. In particular, 'responsible lending' requirements mean that lenders have to take "reasonable steps to verify the consumer's financial situation".

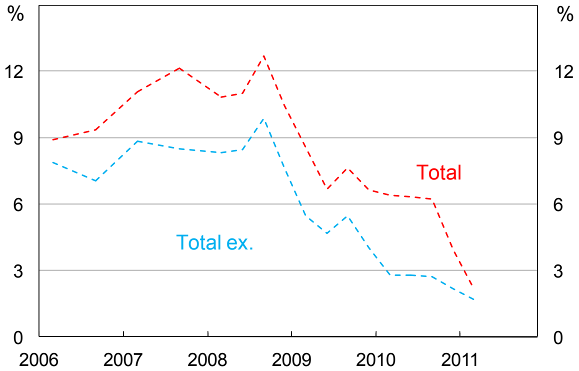
Any effects on the availability of finance to the self-employed appear to have been relatively minor, with most of the recent decline in low-doc lending reflecting a procedural change in products offered by (Graph 3). had offered 'low doc loans' to borrowers with at least a 40 per cent deposit at no pricing differential to conventional mortgages. As such, many borrowers that were eligible for a full-doc loan had applied for a low-doc loan in order to reduce the administrative requirements of the application. With the introduction of the NCCP, now requires these individuals to apply for full-doc loan products.

[5] For example, smaller lenders accounted for the vast majority of products available to borrowers with weaker credit histories.

## Graph 3

**Low-doc Housing Loan Approvals**

Share of total housing loan approvals, by value, quarterly*




* Prior to March 2008, shares are estimated based on securitisation data and company reports.

Furthermore, there has been little change in their lending standards. This follows guidance from ASIC that simply obtaining recent tax returns and/or BAS should be sufficient. Additionally, the smaller lenders have gained market share recently, suggesting that they also have not materially tightened non-price conditions (although their advertised rates have become more competitive recently). Finally, although liaison suggests that documentation requirements for broker-originated loans have been tightened recently, this was largely attributed to lenders' funding considerations.

Overall, the regulations appear to have struck a reasonable balance between allowing responsible low-doc lending to continue, while discouraging the return of high-risk lending. Nevertheless, lenders' funding considerations and some marginal effects from the NCCP mean that it is unlikely that low-doc lending will outpace the broader market over the next 12 months.

Cameron Deans
Institutional Markets Section
Domestic Markets Department
17 June 2011

# BANKS' NON-PERFORMING ASSETS – MARCH QUARTER 2011[1]

*Most banks reported an increase in their domestic housing NPA ratio over the quarter.*

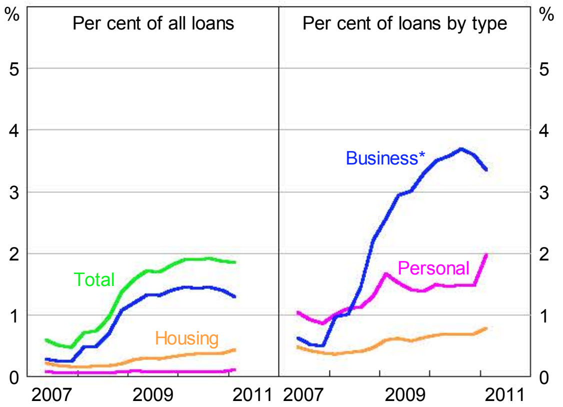
## Domestic books assets

The industry NPA ratio fell for business lending over the quarter, but increased for housing and, in particular, personal lending (Graph 3, Table 1). Past-due assets account for most non-performing housing loans

**Graph 3**

**Banks' Non-performing Domestic Assets**

Domestic books



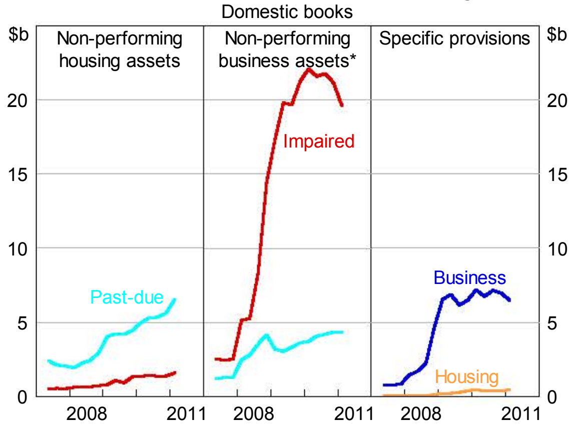

* Includes lending to financial businesses, bills and debt securities, and other non-household loans

Source: APRA

**Graph 4**

**Banks' Domestic Asset Quality**

Domestic books




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

Source: APRA

**Table 1: Banks' Non-performing Domestic Assets**

Domestic Books

| | Share by loan type* (per cent) | | Share of all loans* (per cent) | | Amount ($ billions) | | *Memo: loan type as share of all loans* (per cent)* | |
|---|---|---|---|---|---|---|---|---|
| | Mar 11 | Dec 10 | Mar 11 | Dec 10 | Mar 11 | Dec 10 | *Mar 11* | *Dec 10* |
| **Housing** | **0.8** | **0.7** | **0.4** | **0.4** | **8.1** | **7.0** | ***55*** | ***55*** |
| Owner-occupier | 0.8 | 0.7 | 0.3 | 0.3 | 5.7 | 4.8 | *38* | *38* |
| Investor | 0.8 | 0.7 | 0.1 | 0.1 | 2.4 | 2.2 | *17* | *17* |

* On-balance-sheet credit as at March 2011

Sources: APRA; RBA

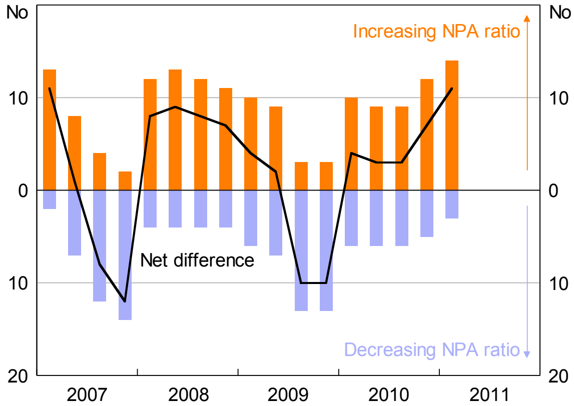
*Domestic housing assets*

Most banks' housing assets performed worse over the March quarter, with about 80 per cent of banks reporting an increase in their domestic housing NPA ratio (Graph 9). All bank types experienced a rise in non-performing housing loans, despite increases in loans outstanding (Graph 10). The deterioration reflected both higher impairments and past-due loans, particularly at the foreign-owned banks. Banks have indicated that they expect asset performance to deteriorate further over the June quarter due to recent natural disasters and interest rate increases.

**Graph 9**

**Banks' Non-performing Housing Asset Ratio**

Domestic books, number of banks reporting change over the quarter

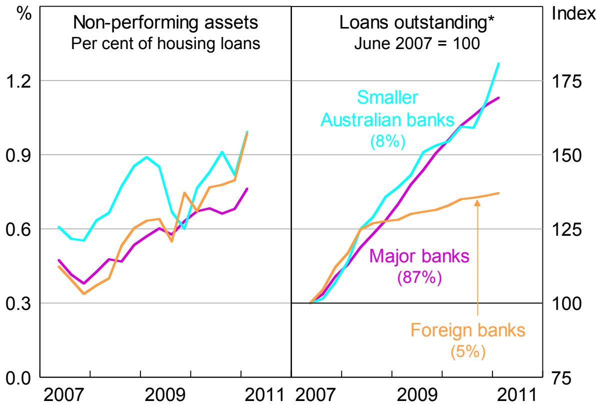



Sources: APRA; RBA

**Graph 10**

**Banks' Domestic Housing Assets**

Domestic books



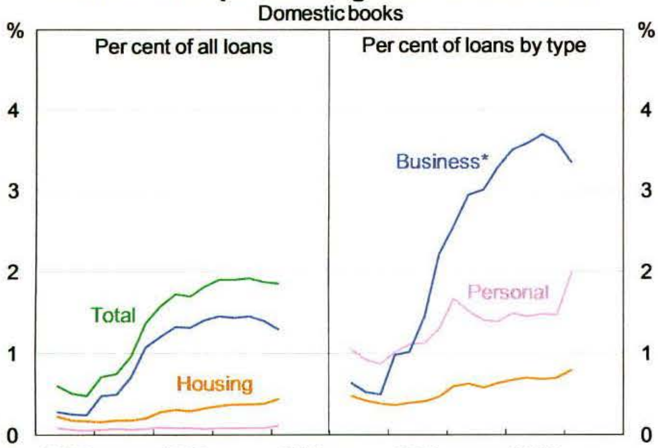

* Share of all banks' housing loans as at March 2011 denoted in parentheses

Source: APRA

## Graph 3

### Banks' Non-performing Domestic Assets

Domestic books




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

Source: APRA

**From:** JOHNSON, Robert
**To:** EDEY, Malcolm
**Cc:** PENDLE, Lara; ELLIS, Luci; THOMPSON, Chris; STIEHM, Susan
**Subject:** RE: Mortgage arrears [SEC=UNCLASSIFIED]
**Date:** Monday, 27 June 2011 16:18:58

A quick update now that we have a copy of the JPMorgan report. Its statements about the 2009 cohort are forward looking; the more negative take on their current performance appears to be that of the author of the AFR article.

The JPMorgan report states that the although the delinquency rate of the 2009 vintage remains below that of the 2008 and 2007 vintages, it is too early to assume that it will continue to perform better. JPMorgan's concerns about the 2009 cohort stem from its view that gearing tolerance was extended in that period, because of:

- increased approvals levels for First Home Owners;
- flat national house prices since 2009
- low interest rates during 2009 (they estimate that the interest rates on loans made during 2009 are now around the buffer levels used by the banks in their loan application assessments);
- increased average borrowing levels;
- higher levels of interest-only loans.

Given these factors, they estimate that a further 100 basis point increase in interest rates over the next 18 months would likely lead to 2009 (and 2008) loans performing more poorly than the peak arrears in loans originated in 2007. In aggregate, they estimate that the arrears rate could increase by a further 20 – 30 basis points (to a total arrears rate of 90 – 100 basis points).

The report also estimates the impact of seasoning as small (1 – 3 basis points for the major banks). It does not provide its methodology for these calculations. It uses this to argue that the recent rise in interest rates is more a reflection of the arrears rates drifting up for all cohorts than seasoning of the loans. This is broadly in line with our own work on seasoning of banks' mortgage loans, although as emphasised in my earlier email, as yet there is no evidence that loans for 2009 are performing poorly relative to other cohorts.

Thanks

Rob

**From:** JOHNSON, Robert
**Sent:** Monday, 27 June 2011 14:58
**To:** EDEY, Malcolm
**Cc:** PENDLE, Lara; ELLIS, Luci; THOMPSON, Chris; STIEHM, Susan
**Subject:** Mortgage arrears [SEC=UNCLASSIFIED]

Malcolm

The main thrust of the mortgage arrears discussion in the 'Trouble on the Home Front' article in the AFR is based on a report by JPMorgan. We are trying to get hold of the JPMorgan report, but in the meantime here are our thoughts on the main messages from the press report.

On arrears, the press report makes the following statements, based on data from Genworth:

1. Loans written in 2008 are performing worse than in previous or subsequent years
2. Loans written in 2007 and 2009 are "only marginally better"
3. Loans that are 4-6 years also have seen a jump in arrears recently

This leads the author to conclude that the deterioration in mortgage arrears is broad based and based more on a deterioration in credit quality than because of natural seasoning of the loans.

Much of this analysis is consistent with our data. Both figures provided by and figures from on securitised mortgages suggest that at the aggregate level the 2008 cohort is the poorest performing given its level of seasoning (see Graphs 1 and 2 in attached document). In fact, figures suggest it is the poorest performing in absolute terms, consistent with the press article.

However, on point 2, we have no data that suggests that 2009 loans are only performing marginally better than those made in 2008. Both and securitisation data suggest that loans made in 2009 have performed considerably better than those issued in previous years.

The press article's statement that loans that are 4-6 years old have also seen an increase in arrears recently is also consistent with securitisation data. However, the conclusion that the arrears trend is broad based is based on the statement that 2009 loans are also performing poorly. As mentioned above, our data shows that 2009 loans, and 2010 loans, have performed much better than loans issued in early years. This suggests that the increase in arrears that is related to asset quality, rather seasoning, is largely confined to loans made prior to the tightening of lending standards in the second half of 2008.

We are contacting another to get an understanding of how their 2009 insured loans have performed relative to earlier years. Given that our other sources all point to higher credit quality in 2009, it is unlikely that data will support the press article on this point. Once we get hold of the original JPMorgan article we will have a better understanding of whether or not the press article has quoted JPMorgan's work out of context.

If we look at the securitisation data on a state level, the credit standards story is even more compelling. For Western Australia, loans made in 2006, 2007 and 2008 are the poorest performers (Graph 3). These were loans made towards the end of the period of strong house price growth in Western Australia (Graph 4). For New South Wales, loans made in 2003, 2004 and 2005 are worst performing; these were associated with a loosening in credit standards, particularly for loans based in Western Sydney (Graph 5). For Queensland, arrears are more broad-based, reflecting more volatile house prices and weaker macroeconomic conditions (Graph 6).

Thanks

Rob

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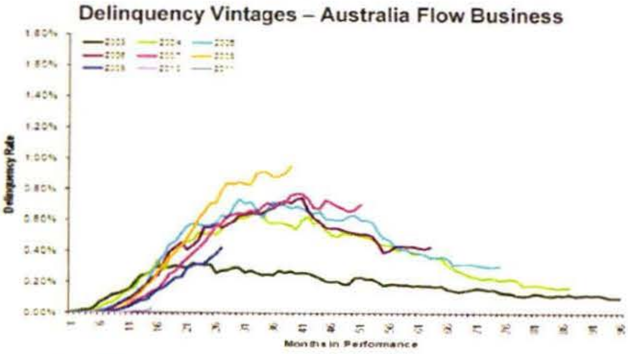
## Graph 1

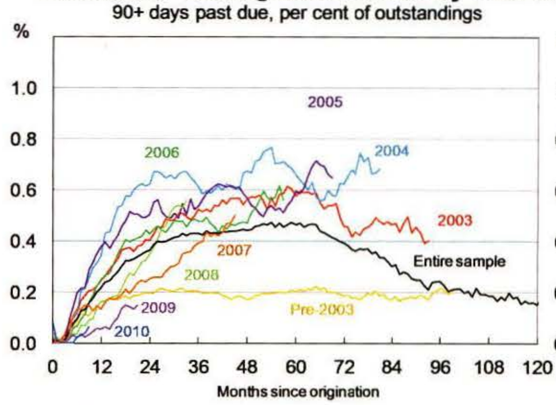
**Delinquency Vintages – Australia Flow Business**




Source: Genworth

## Graph 2

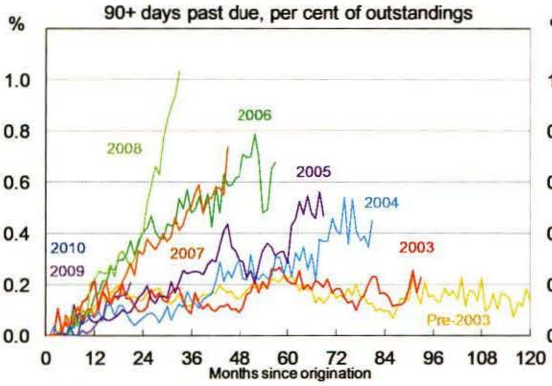
**Securitised Housing Loan Arrears by Cohort***
90+ days past due, per cent of outstandings




* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

## Graph 3

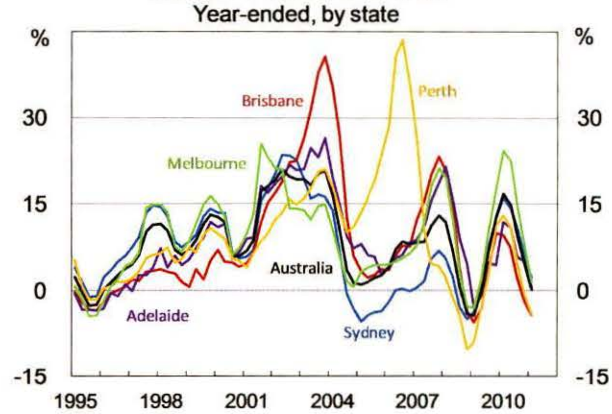
**Securitised Housing Loan Arrears by Cohort**
**Western Australia***
90+ days past due, per cent of outstandings




* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

## Graph 4

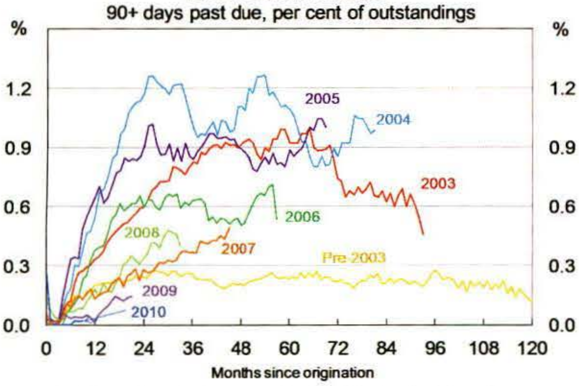
**House Prices Growth**
Year-ended, by state




Source: APM

## Graph 5

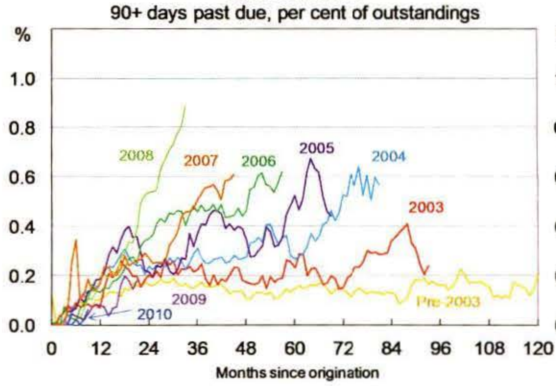
**Securitised Housing Loan Arrears by Cohort**
**New South Wales***
90+ days past due, per cent of outstandings




* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

## Graph 6

**Securitised Housing Loan Arrears by Cohort**
**Queensland***
90+ days past due, per cent of outstandings




* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

**LOMAS, Phil**

**From:** THOMPSON, Chris
**Sent:** Tuesday, 28 June 2011 15:27
**To:** ELLIS, Luci
**Subject:** FW: Non-peforming housing loans... [SEC=UNCLASSIFIED]
**Attachments:** NPHL.docx

FYI. Interesting comparison of bank and CUBS NPLs. Recent increase in NPLs is evident for CUBS as well, though the increase in the March quarter is not quite so sharp. It's interesting that for CUBS, a higher share of their non-performing housing loans are classified as impaired than past-due.

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**From:** TELLEZ, Eduardo
**Sent:** Tuesday, 28 June 2011 12:19
**To:** THOMPSON, Chris
**Cc:** GORAJEK, Adam
**Subject:** Non-peforming housing loans... [SEC=UNCLASSIFIED]

Chris
Please find attached a graph comparing non-performing housing loans for CUBS and banks. Some key points:

- Impaired assets for both types of institutions are very similar.
- Past-due loans for CUBS are significantly lower than for banks (even lower than impairments).

At this point, we are not sure why the CUBS's past-due loans are so low.
Regards
Ed

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**LOMAS, Phil**

**From:** THOMPSON, Chris
**Sent:** Wednesday, 29 June 2011 18:37
**To:** ELLIS, Luci; DONOVAN, Bernadette; STIEHM, Susan
**Subject:** FW: Business Spectator chart [SEC=UNCLASSIFIED]
**Attachments:** image001.png

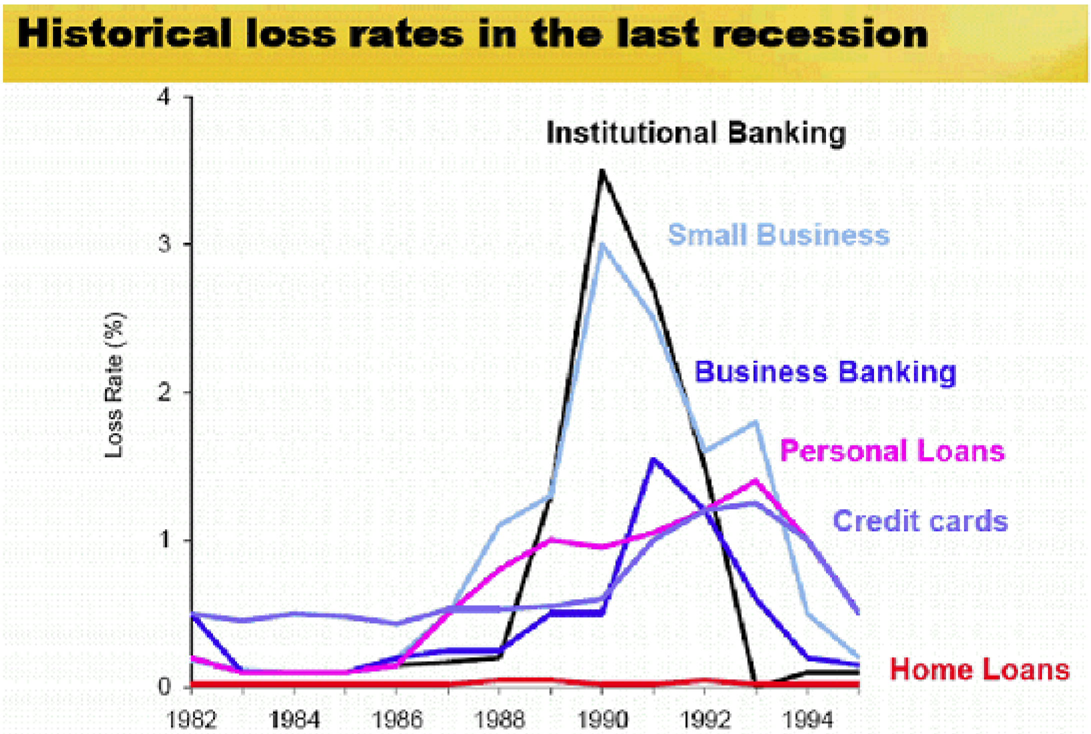
Interesting graph. The data are actually CBA's loss rates during the early 1990s, not banks in general.

**From:** CHAMBERS, Mark
**Sent:** Wednesday, 29 June 2011 16:42
**To:** THOMPSON, Chris
**Subject:** Business Spectator chart [SEC=UNCLASSIFIED]

Chris,

I came across this chart in a Business Spectator article (by Chris Joye) a couple of days ago.
Might be of interest.

-Mark




http://www.businessspectator.com.au/bs.nsf/Article/banks-property-housing-lending-APRA-RBA-credit-ris-pd20110628-J8UEX?OpenDocument&src=is

**Mark Chambers** | Senior Manager, Payments System Stability | Payments Policy Department
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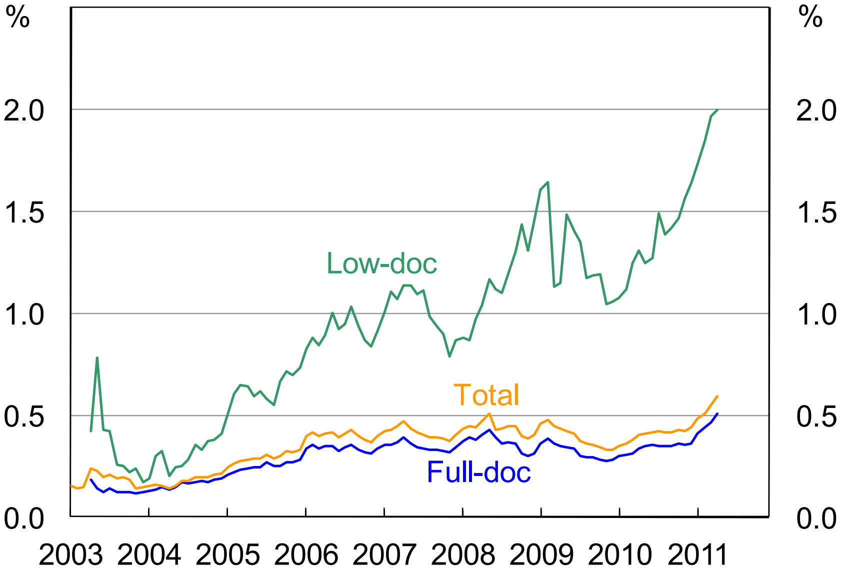
Although the arrears rate on low-doc loans is far higher than that of full-doc loans, low-doc loans are shrinking as a percentage of the pool (to around 6 per cent including self-securitisations) and are therefore not contributing a large amount to the total arrears rate.

**Securitised Housing Loan Arrears***

By documentation type; 90+ days past due

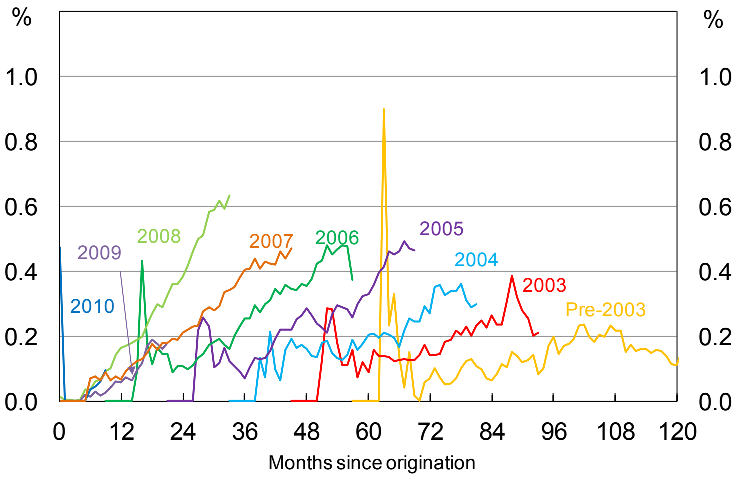



* Prime loans securitised by all lenders. Includes self-securitisations.
Sources: Perpetual; RBA

Hard to know what to make of the cohorts graph for self-securitised loans only, as it is discontinuous for earlier cohort years and therefore hard to compare across years and to data excluding self-securitisations.

**Securitised Housing Loan Arrears by Cohort***

90+ days past due, per cent of outstandings




* Full-doc and low-doc loans self-securitised by all lenders, excludes loans that have not been self-securitised
Source: Perpetual

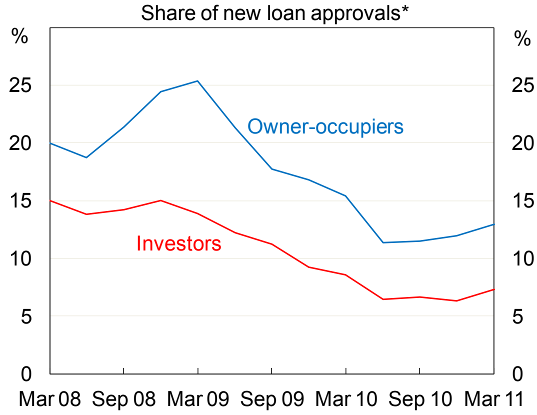
## RESIDENTIAL PROPERTY INVESTORS

*There are several attributes of investor mortgage lending that differentiate it from owner-occupier lending. These attributes potentially make lending to investors more procyclical and more prone to losses than lending to owner-occupiers. Despite this potential vulnerability, the performance of investor loans has not differed markedly than that of owner-occupiers in recent years. However, new investor borrowing does appear to be more pro-cyclical than that of owner-occupiers, potentially amplifying house price cycles and losses on loans backed by residential property during downturns periods of property price weakness.*

**Graph 1**

**Loans with LVR>90%**

Share of new loan approvals*

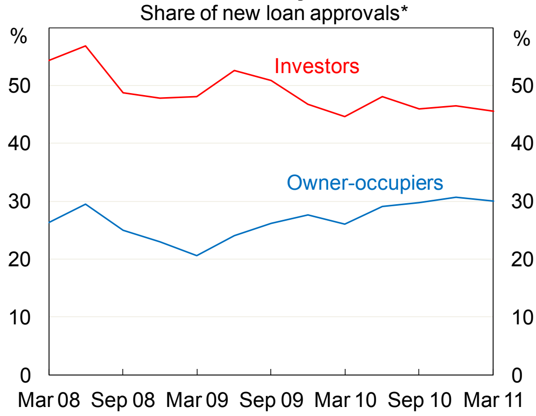



Sources: APRA

**Graph 2**

**Interest-only Loans**

Share of new loan approvals*



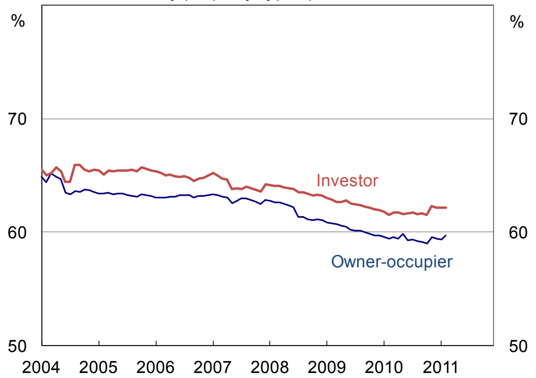

* Includes mortgages with 100 per cent offset accounts
Sources: APRA

A higher share of investor loans tend to be made on an interest-only basis (Graph 2). This in part reflects the tax benefits available to investors.  Because of this, the average LVR of outstanding investor loans may be higher than that of owner-occupier loans, despite the former initially being more highly leveraged on average. Indeed, this is the case for securitised loans (Graph 3). Tax Office data shows that the proportion of investors using gearing has tended to increase over time (Graph 4) and that investor debt servicing burdens have tended to increase over time.

**Graph 3**

**Average Current LVR**

By property type, per cent*

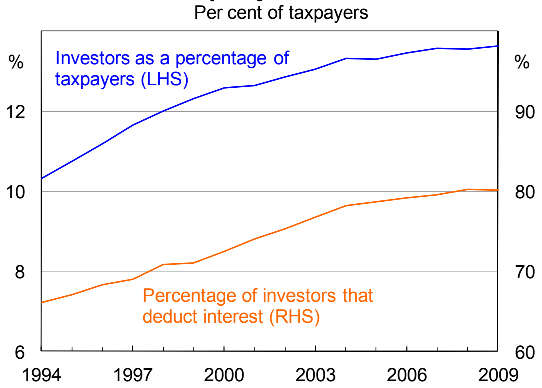



* Full-doc and low-doc loans securitised by all lenders. Excludes self-securitisations.
Sources: Perpetual; RBA

**Graph 4**

**Property Investors***

Per cent of taxpayers




* Investors defined as taxpayers that receive gross rental income
Source: Australian Taxation Office

Investor loans have also tended to comprise a slightly higher share of loans with low-documentation than owner-occupier loans, possible because the lending decision hinges more around the ability of the investment to cover the mortgage repayments rather than the credit worthiness of the the borrower.

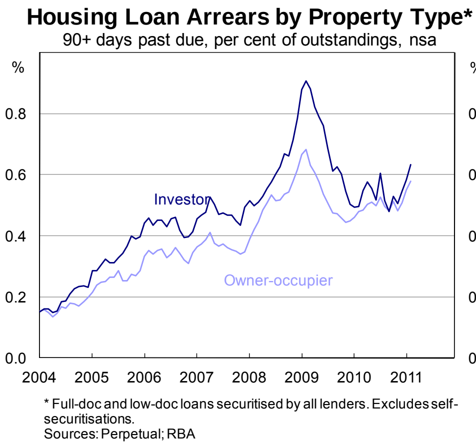
It is difficult to say which type of lending is more risky based solely on these loan characteristics. From a loss given default perspective, although owner-occupier loans are initially more leveraged, their risk diminishes more quickly than investor loans as the loan amortises. To get a better understanding of the probability of default, we need to take a closer look at the characteristics of the borrowers themselves.

**How have investors performed over the global financial crisis compared to owner-occupiers?**

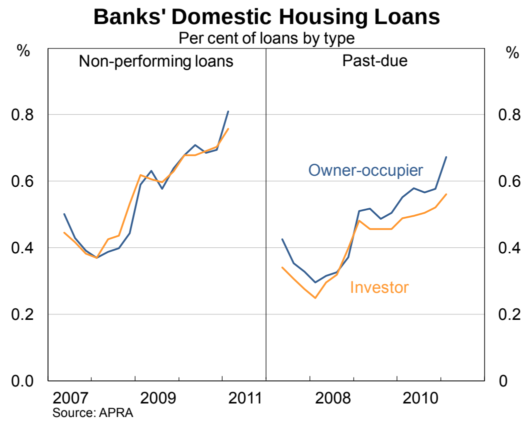
*Aggregate*

For securitised mortgages, the 90+ day arrears rate has consistently been higher for investor loans than for owner-occupiers loans, although the gap has narrowed since 2010 (Graph 5). Recent liaison with suggested that for insured loans, the investor delinquency rate is roughly double that of owner-occupiers. In contrast, investor loans on banks' balance sheets have performed in line with owner-occupier loans (Graph 6). This is despite both sources having a similar compositional split between investor and owner-occupier loans. This suggests that the quality of securitised and insured investment loans is particularly poor, even compared to the quality of securitised and insured owner-occupier loans (which themselves are likely to be lower quality on average than on-balance sheet loans).

**Graph 5**




**Graph 6**



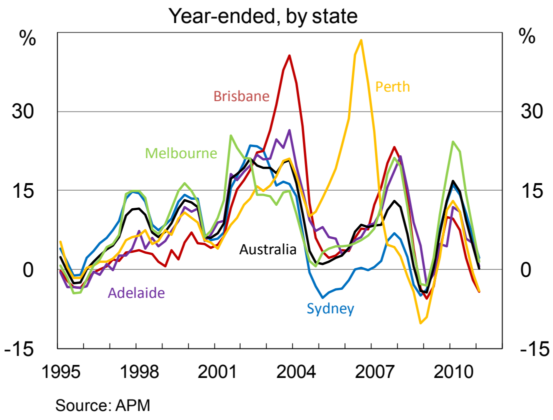

attributed some of the weakness in the investor loans to considerable speculation by investors in the housing market prior to 2005, with investors looking for rapid capital gains. thought that the more recent higher arrears rate for investor loans reflected a level of over commitment by investors. Contributing factors were house price declines, vacancy periods that were not factored into mortgage servicing and interest rate increases.

It is therefore not clear whether investor loans have performed more poorly than owner-occupier loans over recent years. But, even in the data sources that suggest that they have performed relatively worse, arrears rates have still remained low by international standards.

*By state*

State level data suggests that investor lending is more pro-cyclical than owner-occupier lending. For example, both Queensland and Western Australia saw a more rapid growth in investor than owner-occupier approvals during their periods of strong house price growth between 2002 and 2008 Approvals then dropped off significantly once property price growth in these states weakened. Similarly, in NSW investor approvals grew rapidly up to 2004, but levelled off after as property prices remained broadly flat. However, there is little evidence that investor loan arrears are more pro-cyclical than owner-occupiers; securitised arrears rates by state show similar trends for both.

**Graph 9**
**House Prices Growth**



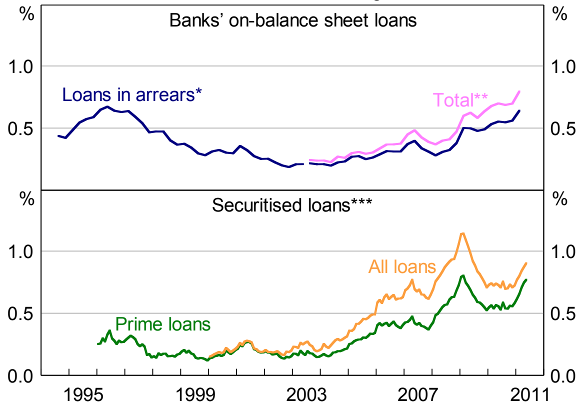
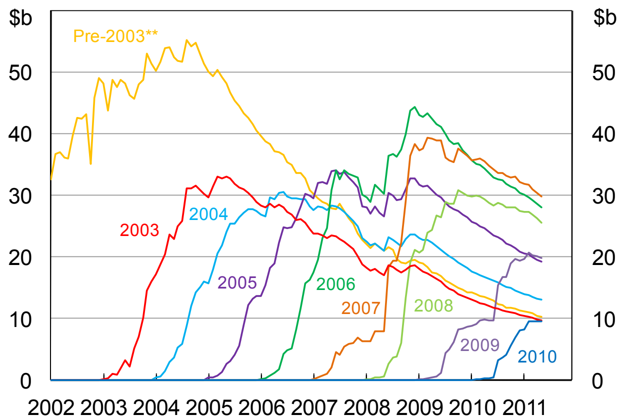
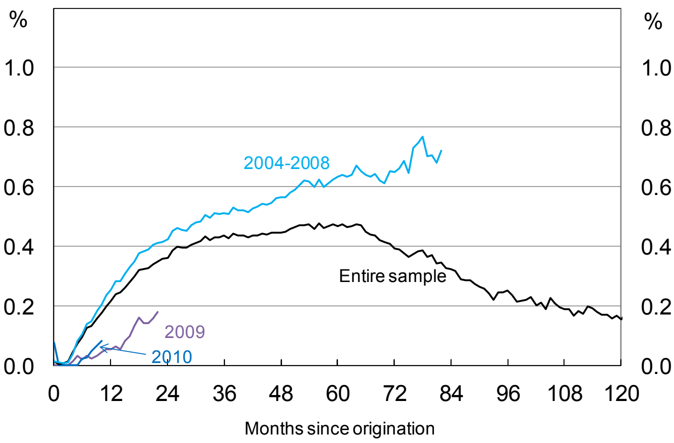

## Conclusion

Although property investors have certain characteristics that suggest that they might be higher risk than owner-occupier loans, there is no strong evidence to suggest that their performance has differed markedly in recent years. However, new investor lending does seem to be more pro-cyclical than new owner-occupier lending. This could amplify cyclical house price movements and therefore the losses on loans backed by residential property, even in the absence of investor loans directly performing more poorly than owner-occupier loans.

Rob Johnson
Financial Stability
8 July 2011

12 July 2011

## 1. HOUSEHOLD ARREARS AND STRESS

| Comments | Links | Graph |
| --- | --- | --- |
| | | **Non-performing Housing Loans**<br>Per cent of outstandings<br><br><br>* Loans that are 90+ days past-due but otherwise well secured by collateral<br>** Includes 'impaired' loans that are in arrears (or are otherwise doubtful) and not well secured by collateral<br>*** Loans securitised by all lenders, 90+ days past-due; excludes 'self-securitisations'<br>Sources: APRA; RBA; Standard & Poor's |
| | | **Housing Loans Outstanding***<br>By origination year<br><br><br>* Prime loans securitised by all lenders, including self-securitisations.<br>** Loans originated between 1995 and 2002<br>Sources: Perpetual; RBA |
| | | **Securitised Housing Loan Arrears by Cohort***<br>90+ days past due, per cent of outstandings<br><br><br>* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations<br>Source: Perpetual |

12 July 2011

| Comments | Links | Graph |
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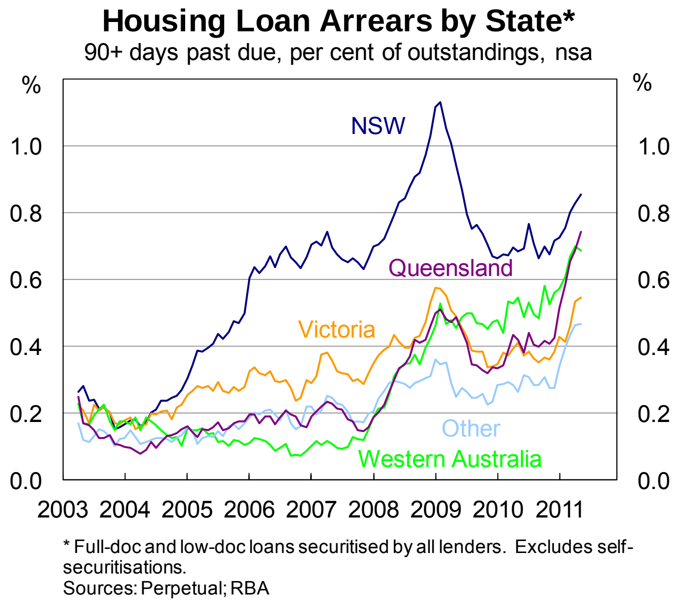
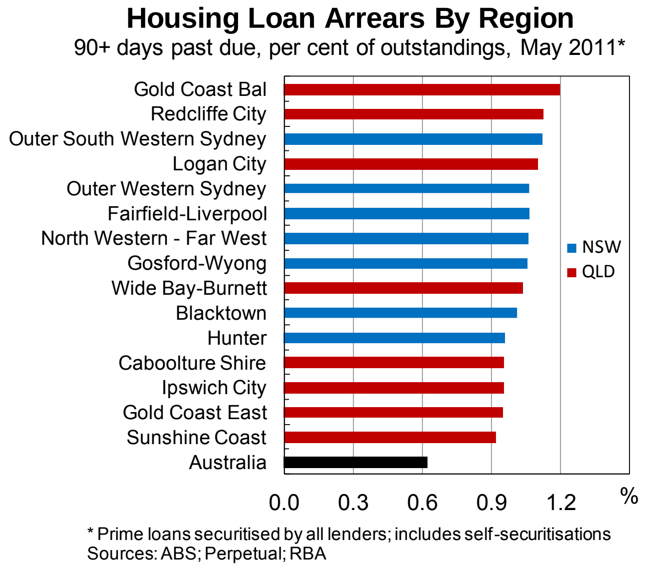
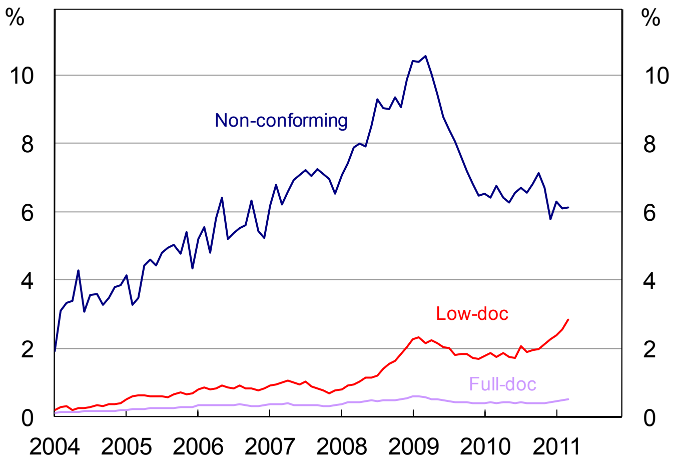
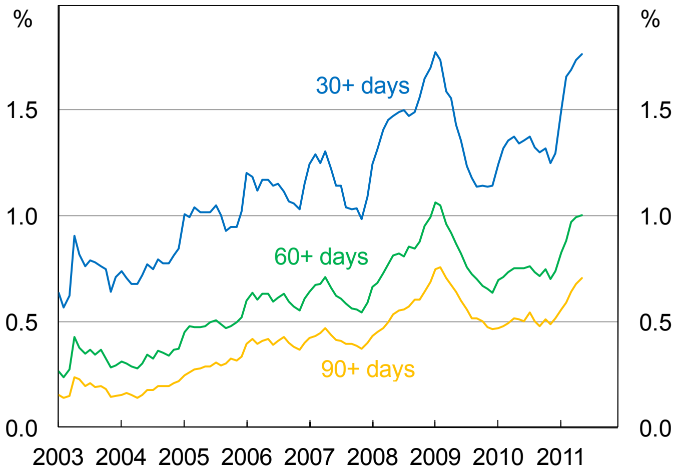
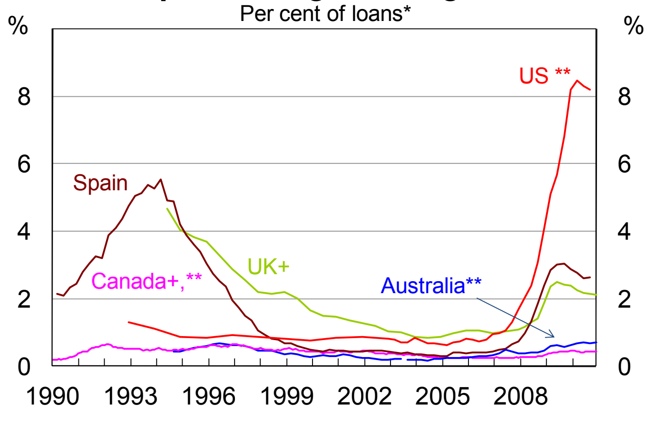
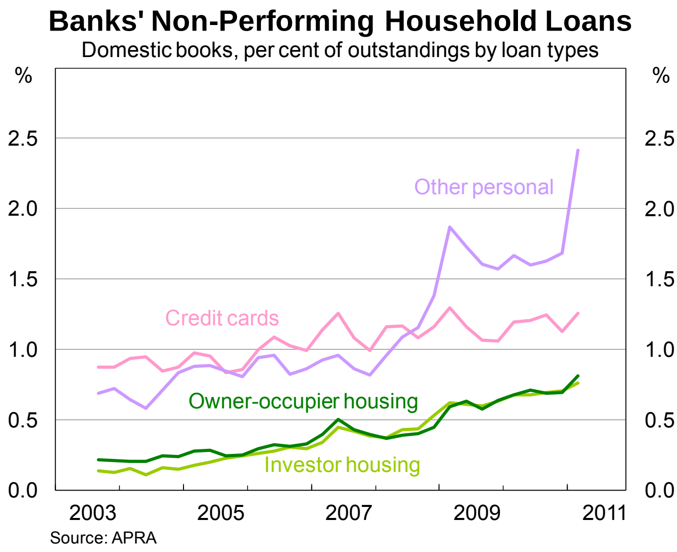
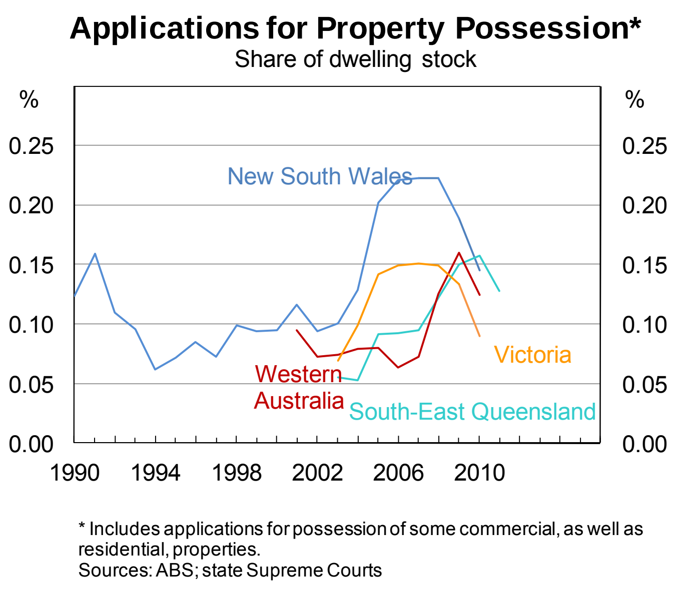
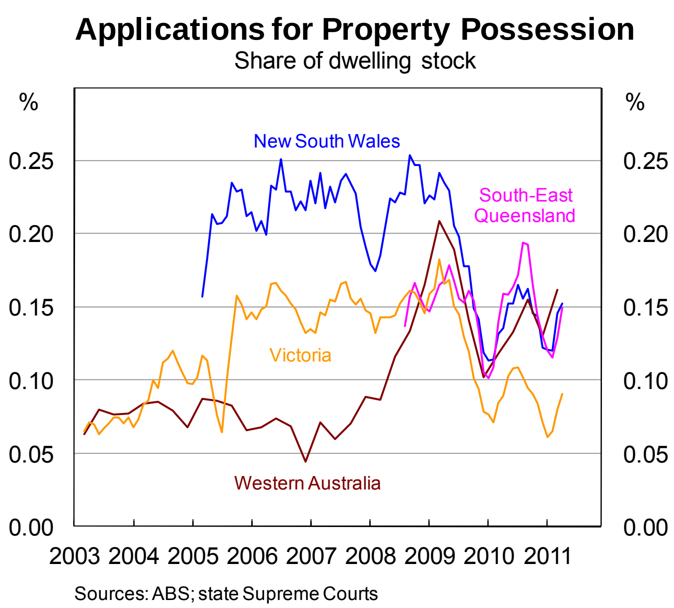
| | |  |
| | |  |

12 July 2011

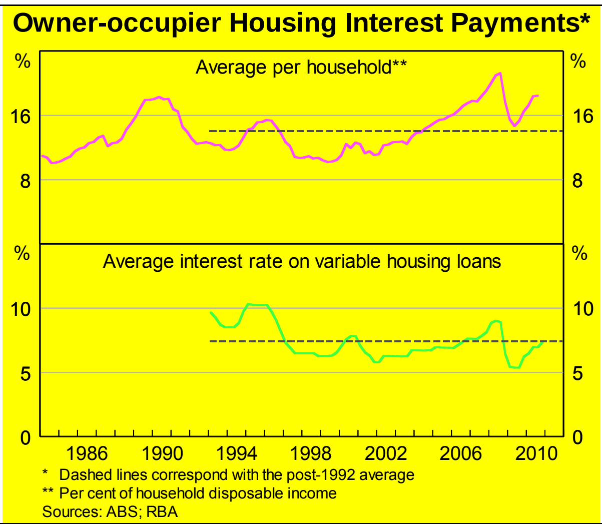
| Comments | Links | Graph |
|---|---|---|
| | | **Housing Loan Arrears by Loan Type***<br>90+ days past due, per cent of outstandings<br><br><br>* Securitised loans<br>Sources: Perpetual; RBA; Standard & Poor's |
| | | **Securitised Housing Loan Arrears***<br>Per cent of outstandings, nsa<br><br><br>* Full-doc and low-doc loans securitised by all lenders. Excludes self-securitisations.<br>Source: Perpetual |
| | | **Non-performing Housing Loans**<br>Per cent of loans*<br><br><br>* Per cent of loans by value. Includes 'impaired' loans unless otherwise stated. For Australia, only includes loans 90+ days in arrears prior to September 2003.<br>** Banks only.<br>+ Per cent of loans by number that are 90+ days in arrears.<br>Sources: APRA; Bank of Spain; Canadian Bankers' Association; Council of |

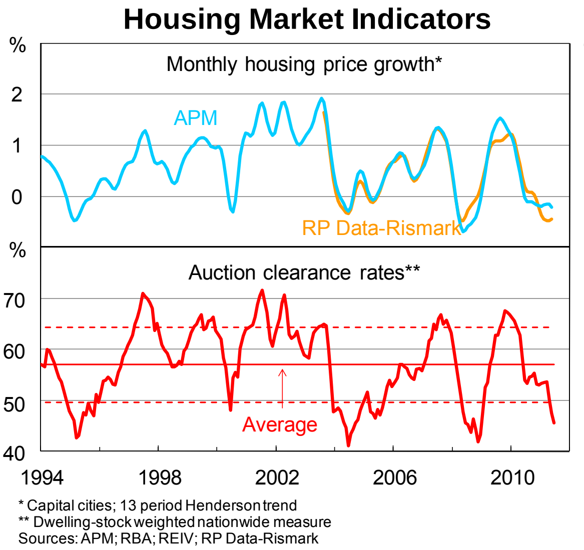
12 July 2011

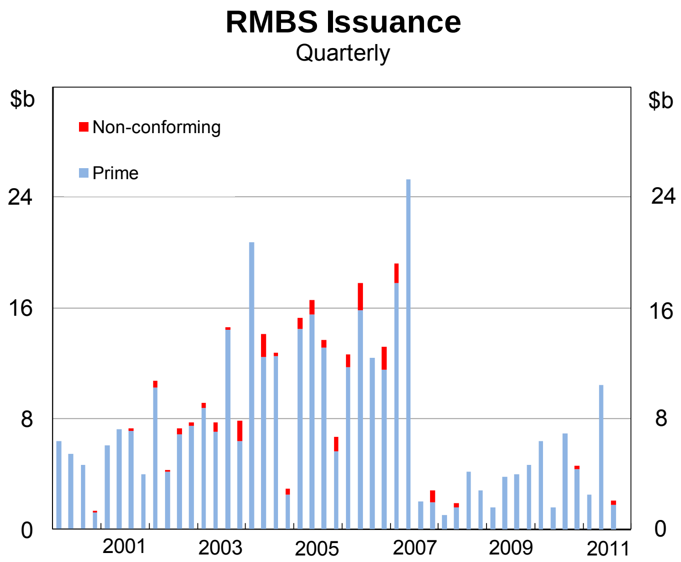
| Comments | Links | Graph |
|---|---|---|
| | |  |
| | |  |
| | |  |

12 July 2011

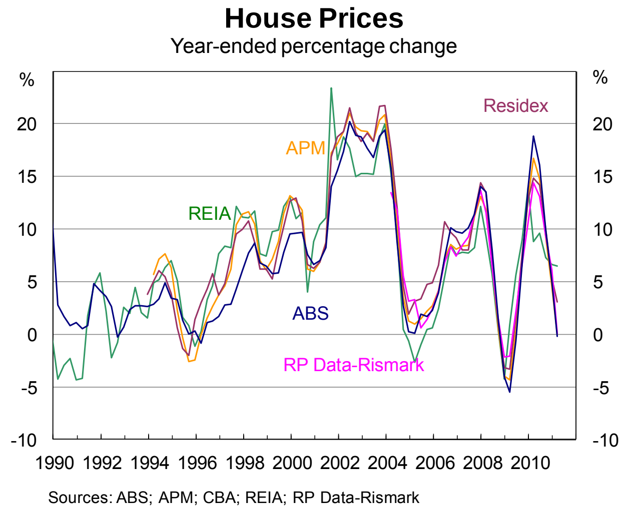
## 2. HOUSING MARKET INDICATORS



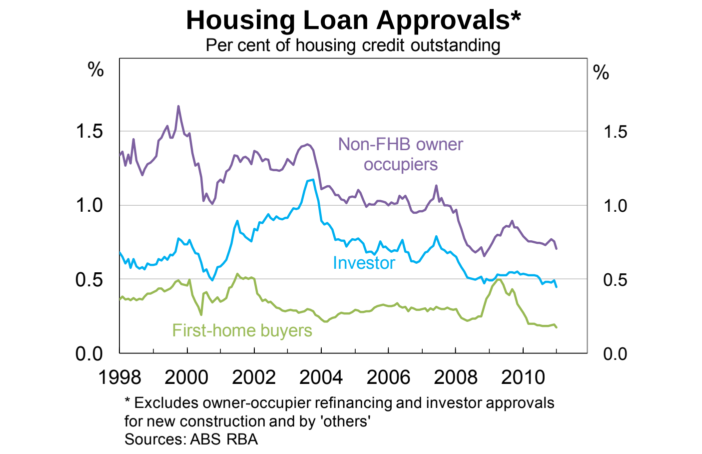



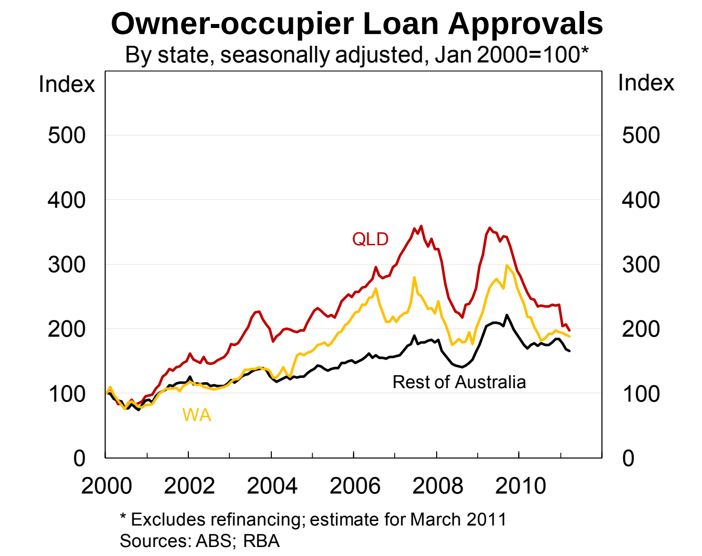
12 July 2011


House Prices
Year-ended percentage change
%
%
Residex
APM
REIA
ABS
RP Data-Rismark
20
15
10
5
0
-5
-10
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010
Sources: ABS; APM; CBA; REIA; RP Data-Rismark

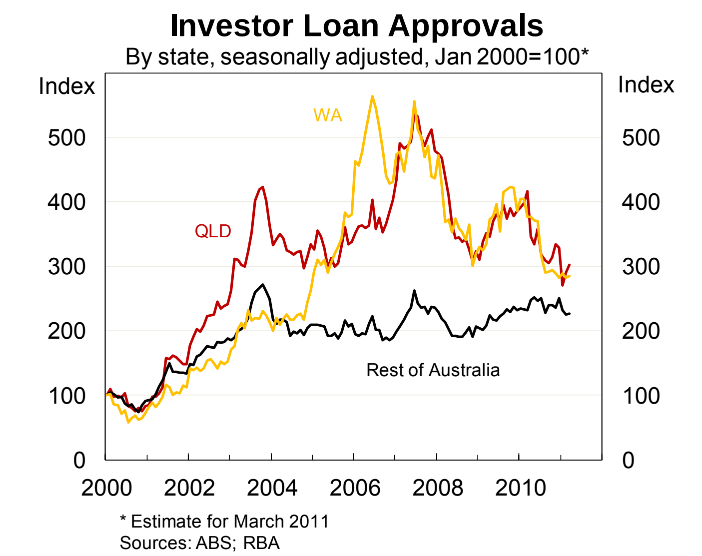
12 July 2011



Housing Loan Approvals*
Per cent of housing credit outstanding
%
%
1.5
1.0
0.5
0.0
Non-FHB owner occupiers
Investor
First-home buyers
1998
2000
2002
2004
2006
2008
2010
* Excludes owner-occupier refinancing and investor approvals for new construction and by 'others'
Sources: ABS RBA

Owner-occupier Loan Approvals
By state, seasonally adjusted, Jan 2000=100*
Index
Index
500
400
300
200
100
0
QLD
WA
Rest of Australia
2000
2002
2004
2006
2008
2010
* Excludes refinancing; estimate for March 2011
Sources: ABS; RBA

Investor Loan Approvals
By state, seasonally adjusted, Jan 2000=100*
Index
Index
500
400
300
200
100
0
WA
QLD
Rest of Australia
2000
2002
2004
2006
2008
2010
* Estimate for March 2011
Sources: ABS; RBA

12 July 2011

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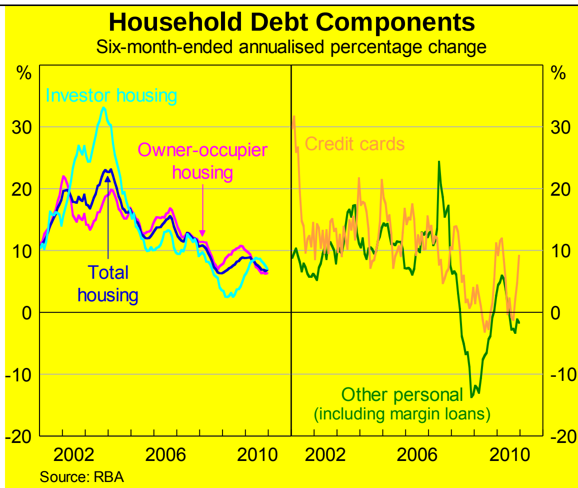

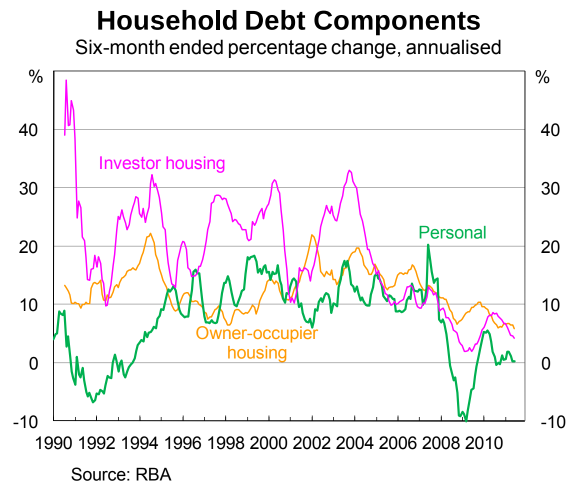

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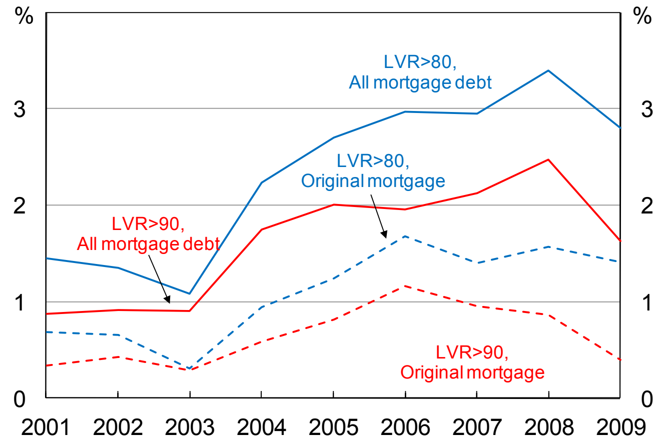
**Households With Low Equity and High Repayments**

Per cent of households with owner-occupier debt*

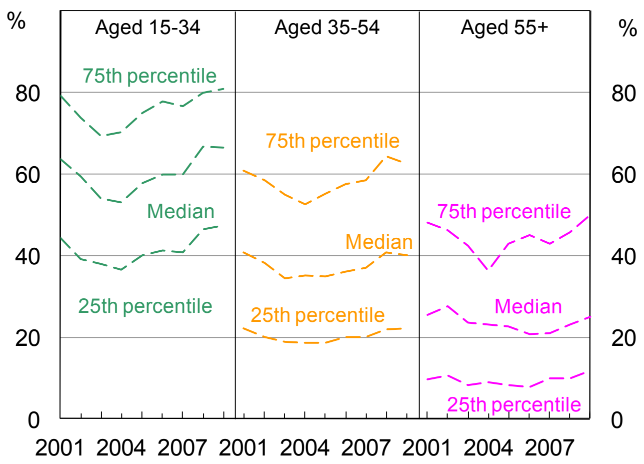



* Repayments on corresponding debt greater than 50 per cent of household disposable income

Source: HILDA Release 9.0

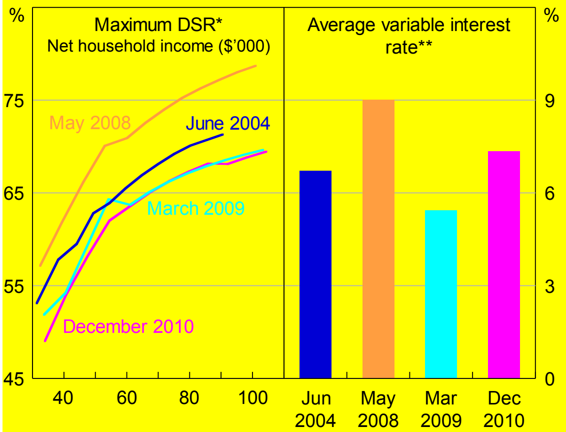
**Loan-to-valuation Ratios**

Indebted owner-occupiers by age




Source: HILDA Release 9.0

**Maximum Debt-servicing Ratio and Interest Rates**




* Loan repayments as a share of net income; single individual, 20 years; assuming constant repayments

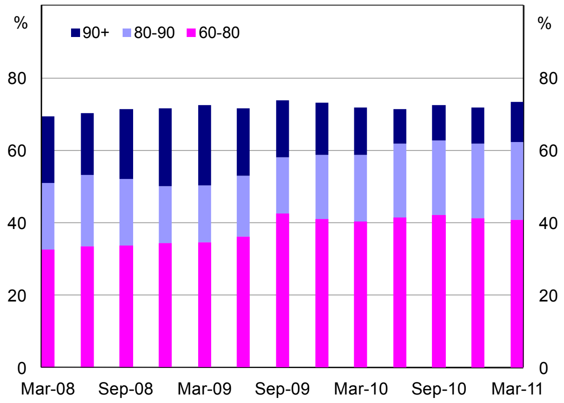
** On full-doc housing loans

Sources: ATO; RBA; company websites

12 July 2011

**Banks' Origination LVRs**

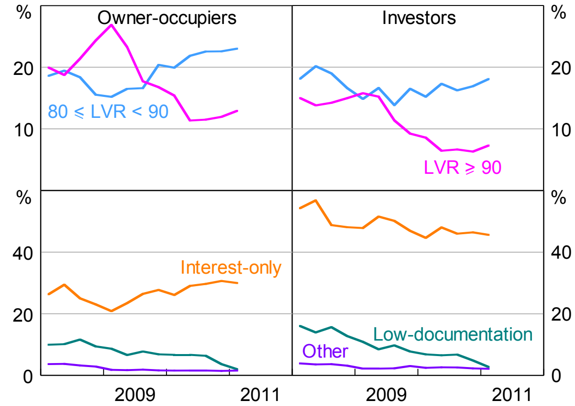
Per cent of housing loans originated in the quarter




Source: APRA

**Banks' Housing Loan Characteristics***

Share of new loan approvals

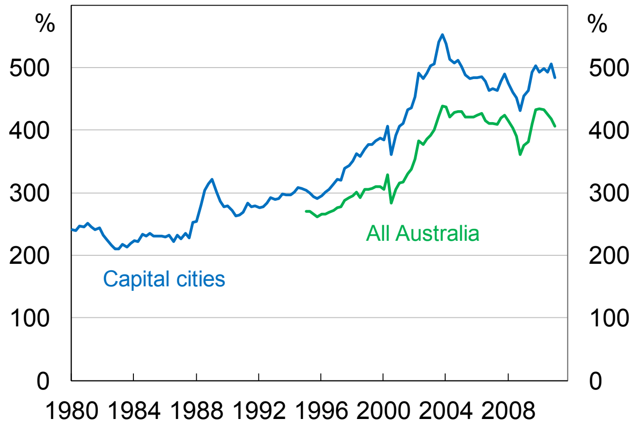



* LVR = loan-to-valuation ratio; 'Other' includes loans approved outside normal policies, and other non-standard loans; 'Interest-only' includes mortgages with 100 per cent offset accounts

Source: APRA

**Dwelling price-to-income ratio**

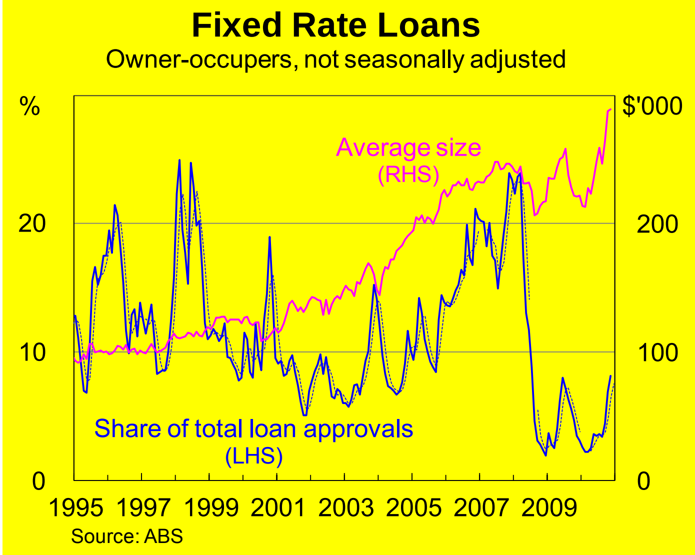
Per cent to average household disposable income*



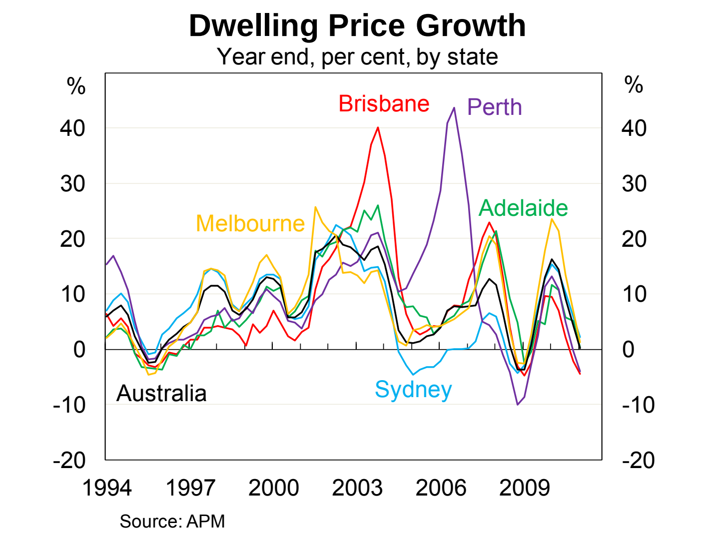

* Household disposable income after tax and before interest payments, excluding unincorporated enterprises

Sources: ABS; APM; REIA; RBA;

12 July 2011



Fixed Rate Loans
Owner-occupers, not seasonally adjusted
%
$'000
Average size
(RHS)
Share of total loan approvals
(LHS)
20
10
0
200
100
0
1995 1997 1999 2001 2003 2005 2007 2009
Source: ABS

Dwelling Price Growth
Year end, per cent, by state
%
%
Brisbane
Perth
Melbourne
Adelaide
Australia
Sydney
40
30
20
10
0
-10
-20
1994 1997 2000 2003 2006 2009
Source: APM

**LOMAS, Phil**

**From:** JOHNSON, Robert
**Sent:** Monday, 18 July 2011 18:06
**To:** Notes policy groups
**Subject:** Securitised housing loan arrears - May 2011 [SEC=UNCLASSIFIED]

**Key points:**

- Arrears rates on securitised housing loans continued to increase in May. The 90+ days arrears rate is now around 20 basis points higher than at the end of 2010 and only 3 basis points below its peak in early 2009. Seasonal factors are only a small contributor to the recent increase, which is also evident when self-securitised loans are included in the pool.
- Although the arrears rate on fixed-rate loans has trended up since the end of 2007, the increase in the arrears rate over 2011 has been much sharper for variable-rate loans. This suggests that interest rates may be a key factor behind the recent increase in arrears rate. However, loans made since 2009 have performed relatively well given their seasoning, reflecting the tightening in lending standards in late 2008 and early 2009.
- The 90+ days arrears rate on low-doc loans, which now account for less than 8 per cent of the prime securitised mortgage pool, remains around five times the arrears rate on full-doc prime loans.
- The 90+ days arrears rate rose in all states in May, with the exception of Western Australia where it moderated by 1 basis point. The increase was largest in Queensland, taking the cumulative increase in its arrears rate to 32 basis points since the start of the year. Queensland now has the second highest arrears rate after New South Wales. Some of this increase likely reflects the recent natural disasters in this state.

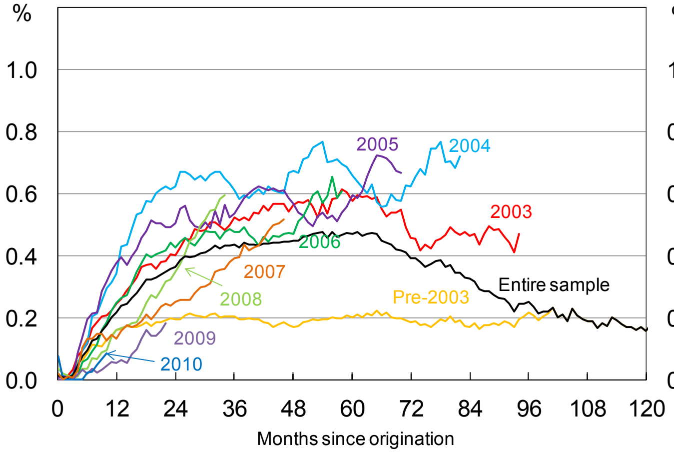
For more information, please see D11/134402

**Rob Johnson** | Senior Analyst | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
p: +61 2 9551 8546 | f: +61 2 9551 8052 | w: www.rba.gov.au

**Graph 1**

**Securitised Housing Loan Arrears by Cohort***

90+ days past due, per cent of outstandings

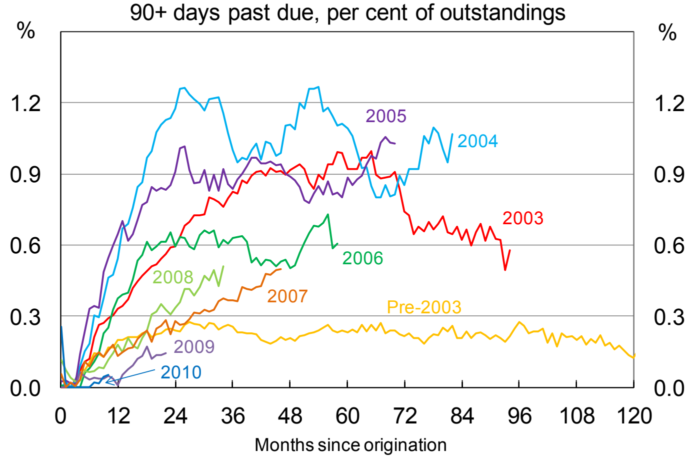



* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

**Graph 2**

**Securitised Housing Loan Arrears by Cohort**
**New South Wales***

90+ days past due, per cent of outstandings

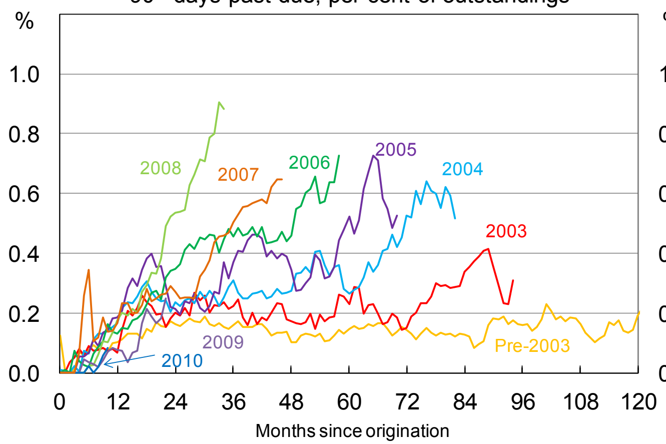



* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

**Graph 3**

**Securitised Housing Loan Arrears by Cohort**
**Queensland***

90+ days past due, per cent of outstandings

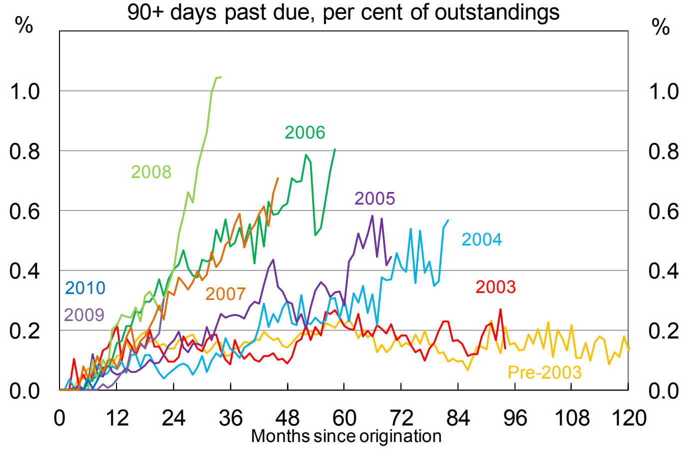



* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

**Graph 4**

**Securitised Housing Loan Arrears by Cohort**
**Western Australia***

90+ days past due, per cent of outstandings




* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations
Source: Perpetual

**From:** VAN UFFELEN, Luke
**To:** ELLIS, Luci; THOMPSON, Chris
**Cc:** DONOVAN, Bernadette; BAILEY, Owen; TELLEZ, Eduardo
**Subject:** Bank of Queensland Basel II Pillar 3 Disclosure - May 2011 [SEC=UNCLASSIFIED]
**Date:** Thursday, 28 July 2011 17:46:24

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# Bank of Queensland Basel II Pillar 3 Disclosure – May 2011

Bank of Queensland released its May Quarter 2011, Basel II Pillar 3 disclosure yesterday. The key points are:

- The ratio of non-performing loans was 2.9 per cent, up from 2.7 per cent in the previous quarter. Specifically, the ratio of non-performing residential mortgages increased to 1.5 per cent from 1.4 per cent while the ratio of 'other' (i.e. business and personal) non-performing loans increased to 6.9 per cent from 6.1 per cent over the quarter.

Luke Van Uffelen
Financial Stability Department
28 July 2011

**LOMAS, Phil**

**From:** VAN UFFELEN, Luke
**Sent:** Thursday, 28 July 2011 17:46
**To:** ELLIS, Luci; THOMPSON, Chris
**Cc:** DONOVAN, Bernadette; BAILEY, Owen; TELLEZ, Eduardo
**Subject:** Bank of Queensland Basel II Pillar 3 Disclosure - May 2011 [SEC=UNCLASSIFIED]

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Luke Van Uffelen
Financial Stability Department
28 July 2011

RESERVE BANK OF AUSTRALIA

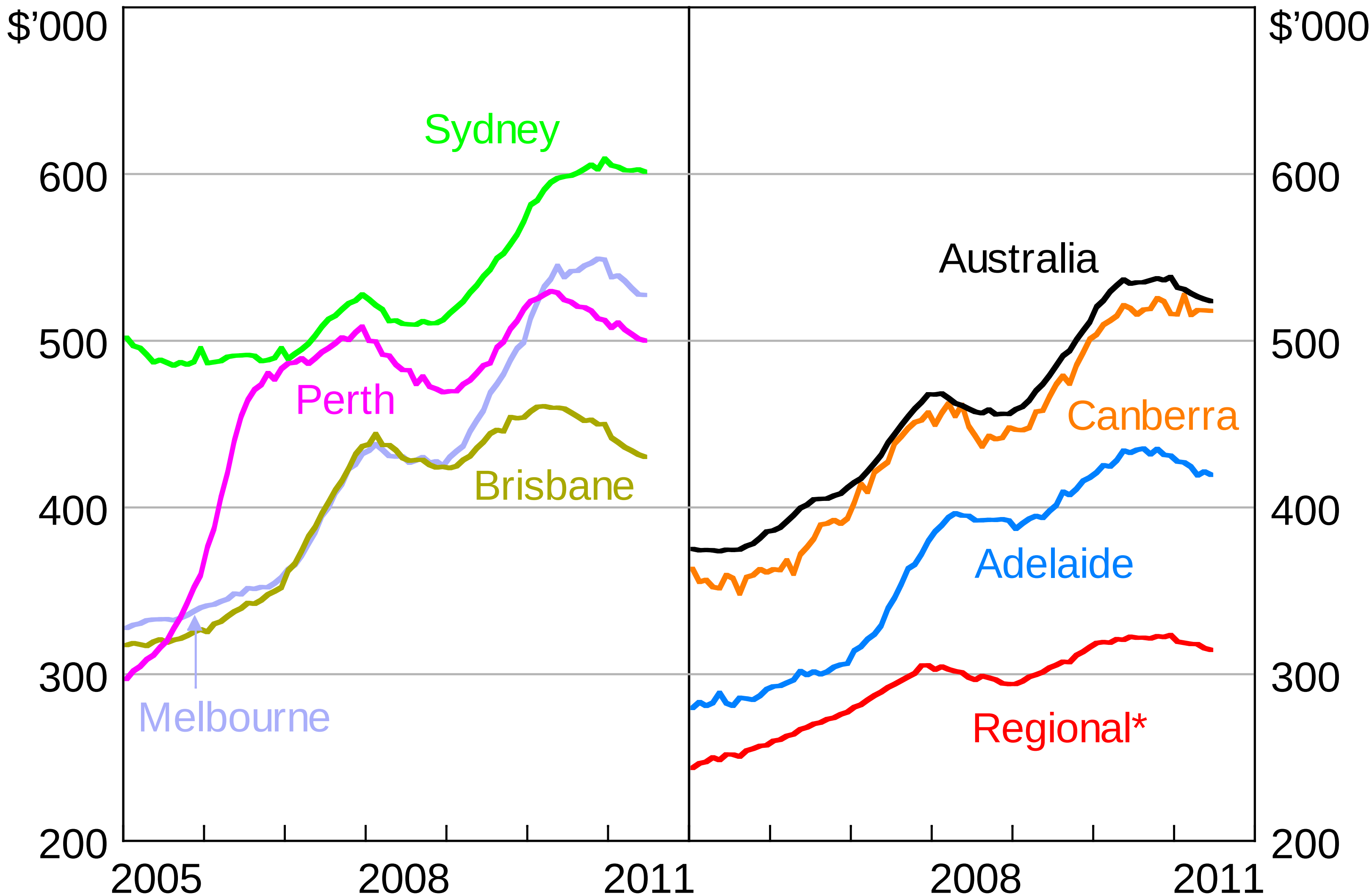
# Financial Stability Overview

Presentation to ADI Supervisors' Conference, 3 August 2011

Luci Ellis, Head of Financial Stability
Reserve Bank of Australia

# Macroeconomic Environment

# Dwelling Prices

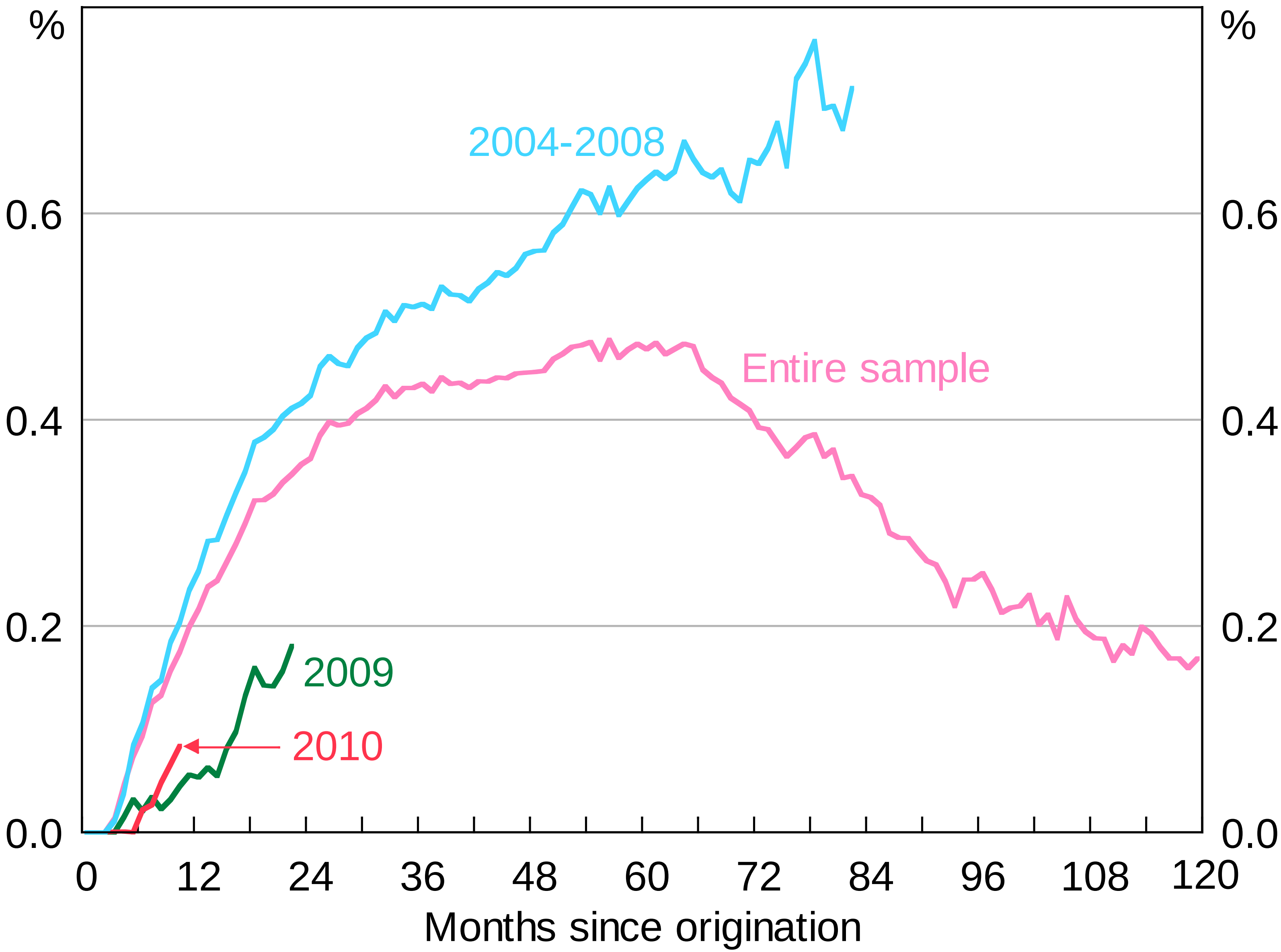



* Excluding apartments; measured as areas outside of capital cities in New South Wales, Queensland, South Australia, Victoria and Western Australia

# Conditions in the ADI Sector

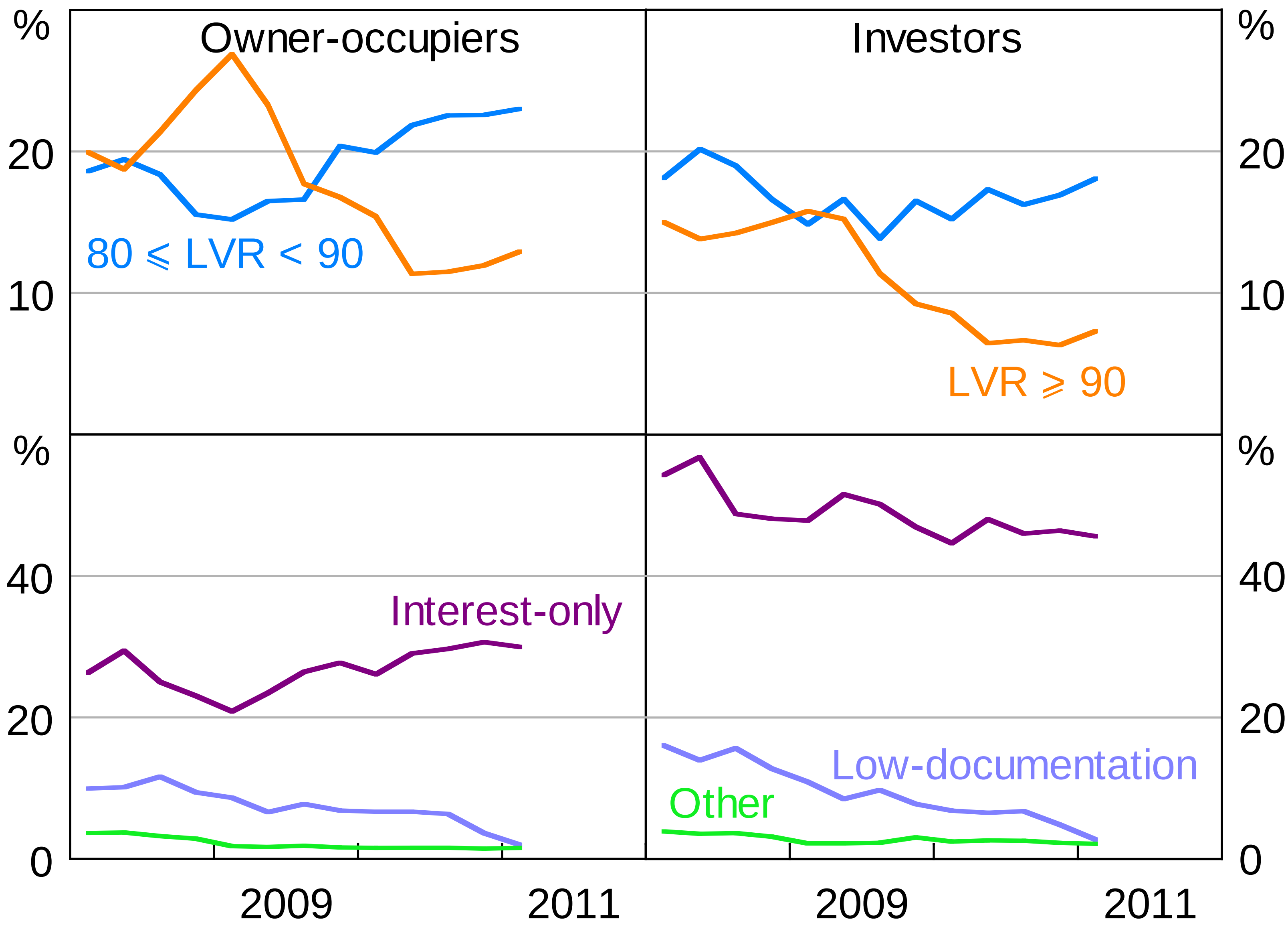
# Securitised Housing Loan Arrears by Cohort

90+ days past-due, per cent of outstandings



# Banks' Housing Loan Characteristics

Share of new loan approvals

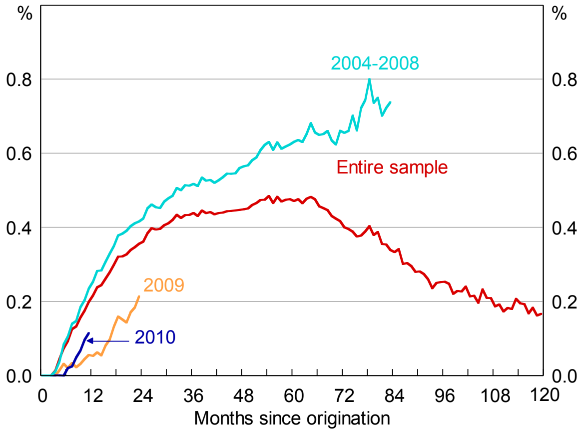


**From:** JOHNSON, Robert
**To:** Emma Doherty
**Cc:** Lamorna Rogers; Susan Stiehm
**Subject:** RE: Graphs for Ric [SEC=UNCLASSIFIED]
**Date:** Friday, 5 August 2011 10:08:14
**Attachments:** Doc1.docx

Securitised housing loan arrears in Australia by cohort – 4 lines: 2004-08, entire sample, 2009, 2010 - FS

## Securitised Housing Loan Arrears by Cohort*

90+ days past-due, per cent of outstandings

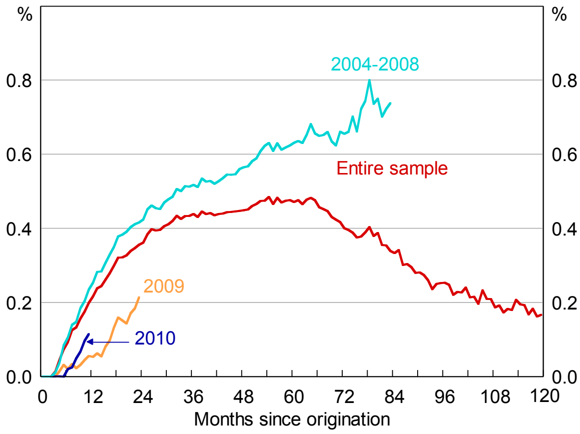



* Full-doc and low-doc loans securitised by all lenders, includes self-securitisations

Source: Perpetual

## Securitised Housing Loan Arrears by Cohort

90+ days past-due, per cent of outstandings



**LOMAS, Phil**

**From:** TELLEZ, Eduardo
**Sent:** Friday, 5 August 2011 09:42
**To:** DONOVAN, Bernadette
**Cc:** BAILEY, Owen
**Subject:** FSR graphs and links - Asset Quality & Credit Growth [SEC=UNCLASSIFIED]

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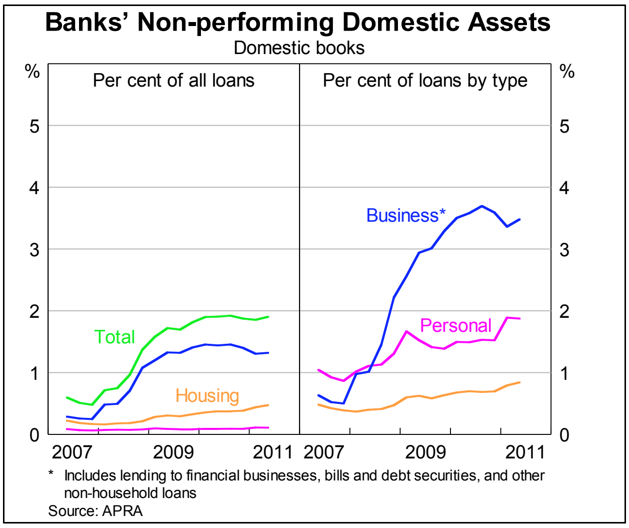
# ASSET QUALITY AND CREDIT GROWTH

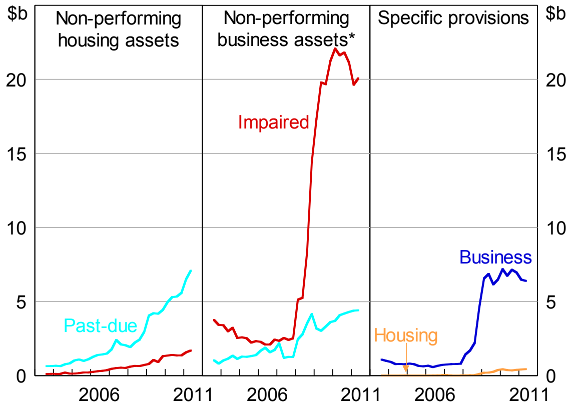
## Board and FSR Graphs

## Asset Quality



## Banks' Asset Quality

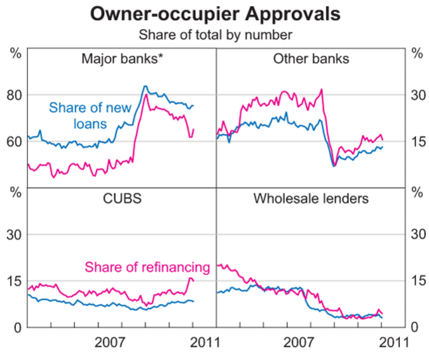
Domestic books




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

Source: APRA

# Credit Growth



* Includes Bankwest from December 2008
Sources: ABS; APRA; RBA

**BENDIGO AND ADELAIDE BANK**
**2011 FULL YEAR PROFIT RESULTS**

Bendigo and Adelaide Bank (Bendigo) today released its profit results for the year ending 30 June 2011.

**Asset quality**

Bendigo commented that their overall credit quality is sound with 90-day arrears for both the bank's residential mortgages and business lending portfolios remaining steady over the year. There was also a fall in credit card and personal loan arrears within the consumer portfolio.

Source: Bendigo and Adelaide Bank's full-year 2011 results presentation.

Luke Van Uffelen and Luke Cayanan
Financial Stability and Domestic Markets Departments
8 August 2011

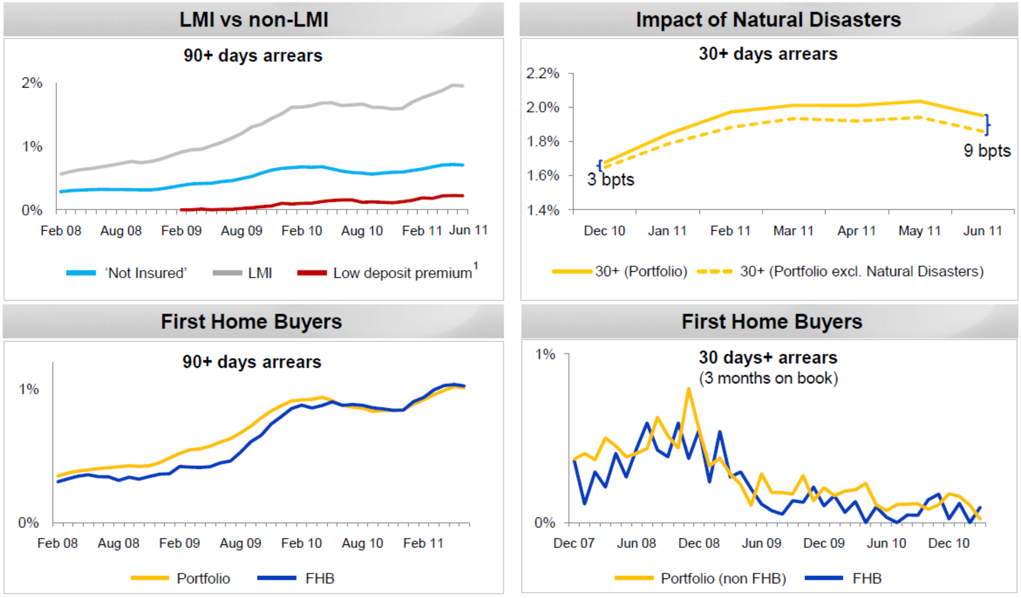
## CBA 2011 FULL-YEAR PROFIT RESULT

CBA today released its profit results for the year ending 30 June 2011.

**Asset quality**

CBA’s 90+ day mortgage arrears rate increased from 1.02 per cent to 1.17 per cent over the full year, with the increase occurring during the second half. The rise in arrears was driven by the elevated volume of loans originated in 2008 and early 2009, the impact of higher interest rates on the monthly repayments of borrowers as well as recent natural disasters. CBA estimates that the natural disasters are adding 9 basis points to their 30+ day arrear rates, as at June 2011 (Figure 1). In additional breakdowns, the performance of First Home Buyers has been very similar to other borrowers over the last year or so. By state, 90+ day arrears are highest in Queensland, followed by WA (Figure 2). CBA also experienced a slight uptick in 90+ day credit card arrears over the year, although the arrears rate improved notably for personal loans.

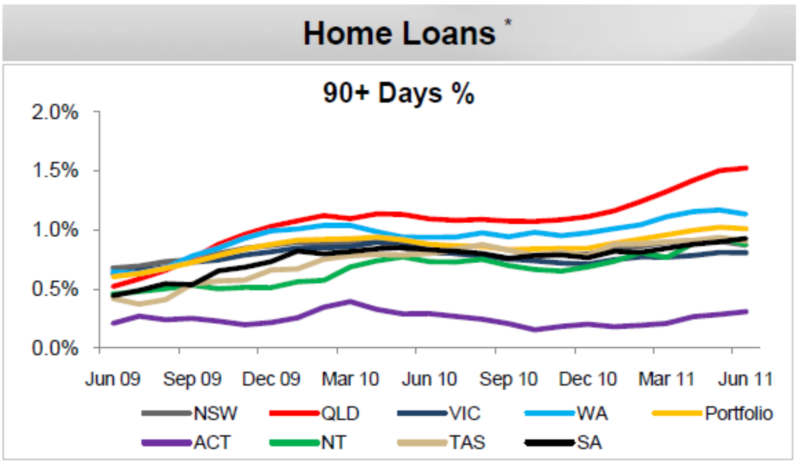
## Figure 1
## Home loan arrears




All graphs are CBA-domestic excluding Bankwest

1. Low Deposit Premium (LDP): Rather than taking out LMI policies for all loans with an LVR>80%, we charge the customer a premium similar to LMI, but take on the risk and use the premium to offset the higher economic capital charge, targeted at low risk customers.

## Figure 2
## Arrears rates, domestic



Luke Van Uffelen and Luke Cayanan
Financial Stability and Domestic Markets Departments
10 August 2011

**GENWORTH INTERNATIONAL MORTGAGE TRENDS REPORT – JUNE 2011**

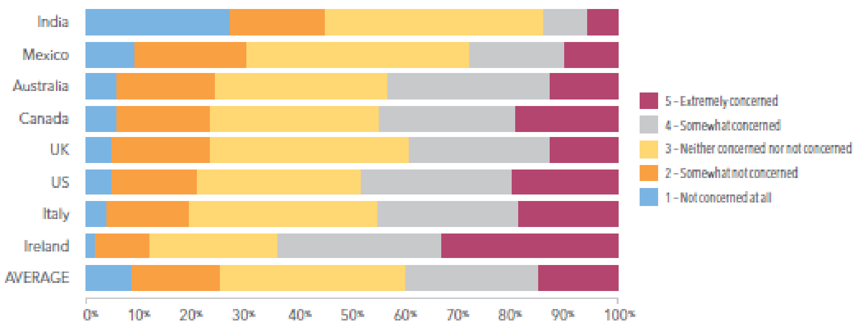
*Genworth published in June 2011 its first International Mortgage Trends Report, with the aim of gaining insight into local market conditions. The report features data on eight countries, including Australia, based on surveys of at least 1,000 respondents in each country.*[1] *The survey were conducted in March 2011.*

*The survey results suggest that Australians have more divergent views of their financial situation than respondents from other surveyed countries. They also had a greater tolerance for high debt levels than most other surveyed countries, although they were more likely to make overpayments on their mortgages. Australian respondents experiencing repayment difficulties tended to attribute this to increased living costs, too much debt and increased repayments.*

**Financial situation**

With the exception of Canada, survey respondents from Australia had more divergent views of their financial situation than the other countries in the sample. While a relatively high share (around 25 per cent) were unconcerned or somewhat unconcerned about their financial situation, over 60 per cent were somewhat or extremely concerned, comparable with proportion of concerned households in Italy and Canada, and higher than the proportion of concerned households in the UK.

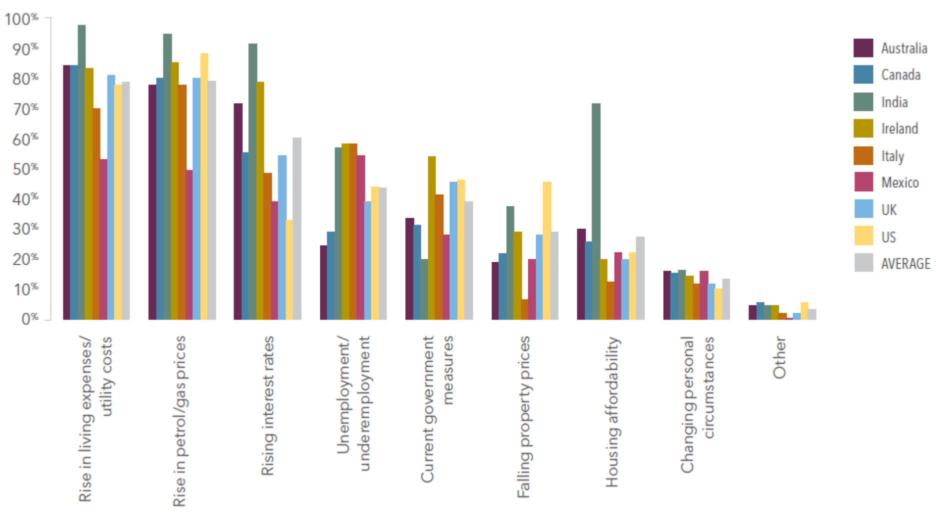
Chart 2: Overall, how concerned would you say you are about your financial situation at the moment?




Source: RFi research conducted on behalf of Genworth in March 2011

Australian respondents that were concerned about their financial positions largely attributed this to the rise in living expenses/utility costs, the rise in petrol/gas prices, and rising interest rates. Australian respondents were generally less concerned about unemployment/underemployment and falling property prices than most of the other countries in the sample, but were more concerned about housing affordability.

Chart 3: Which of the following are you concerned about? (Select all that apply.)



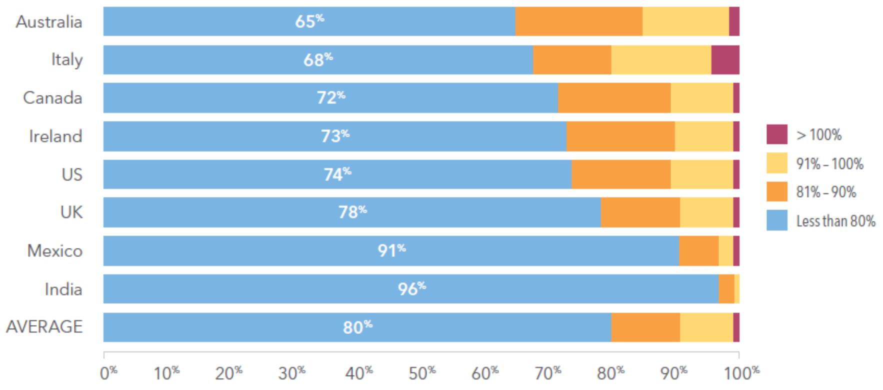

Source: RFi research conducted on behalf of Genworth in March 2011

[1] The other countries in the report were Canada, India, Ireland, Italy, Mexico, the UK, and the US.

**Attitude to debt**

A higher proportion of respondents from Australian were comfortable borrowing more than 80 (and more than 90) per cent of the value of their property than respondents from the other countries in the sample. This comfort with higher debt levels was also evident in the debt servicing levels of Australian households; 39 per cent of Australian respondents were using over half their income to service their debts (this is far higher than in the 2009 HILDA survey, where 9 per cent of indebted owner-occupiers had a debt servicing ratio in excess of 50 per cent).

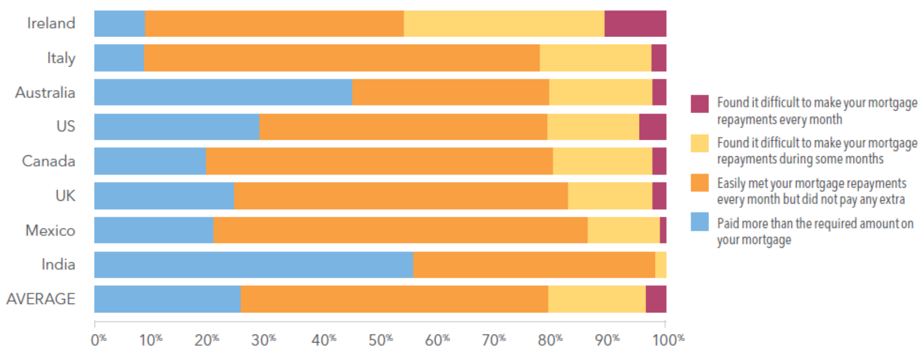
Chart 4: What percentage of the value of your property would you be comfortable borrowing?




Source: RFi research conducted on behalf of Genworth in March 2011

Despite the apparent high indebtedness and high willingness of Australians to take on debt, a very high proportion of Australian respondents (nearly 50 per cent) were able to pay more than the required amount on their mortgage over the previous 12 months. Genworth suggested that this may be explained by the prevalence of variable rate mortgages in Australia, which are more likely to allow borrowers to make overpayments. A significant minority of Australian respondents, around 20 per cent, found it difficult to make their mortgage payments in at least some months. This is a similar proportion to Italy, and is higher than the UK, despite both countries having substantially higher mortgage arrears rates. Canada also had a similar proportion of respondents experiencing some difficulties in making their mortgage repayments, as did the US, although a far higher proportion of US respondents found it difficult to make mortgage payments every month. A slightly smaller proportion of recent first home buyers[2] in Australia were experiencing repayment difficulties compared to other Australian homeowners.

Chart 5: Repayment behaviour over last 12 months

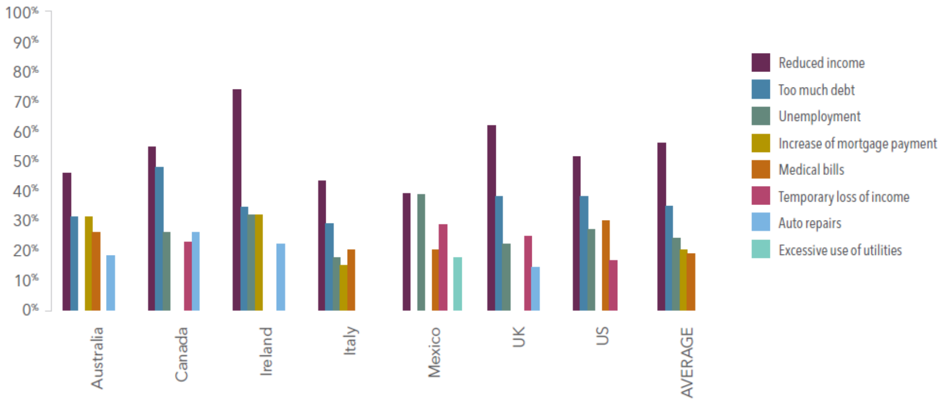



Source: RFi research conducted on behalf of Genworth in March 2011

[2] Those that had bought in the previous 12 months.

The main causes of mortgage repayment difficulty for Australian respondents were reduced income, too much debt and increased mortgage payments. Medical bills and auto repairs also contributed, suggesting some households do not leave themselves with sufficient flexibility to meet unexpected large expenses.

Chart 6: Top five causes of mortgage repayment difficulty

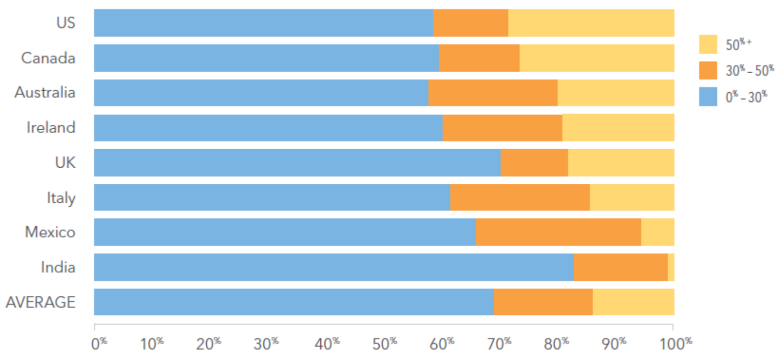



Note: India is not included as the number who had trouble repaying their mortgage was too small.
Source: RFi research conducted on behalf of Genworth in March 2011

## Other

The Report suggested that one in five potential Australian first home buyers were spending at least 50 per cent of their income on debt repayments. This was the highest figure among the surveyed countries, with the exception of the US and Canada. More than 40 per cent of potential Australian first home buyers were spending at least 30 per cent of their income on debt servicing, the highest in the sample.

Chart 8: Percentage of income potential FHBs spend on servicing debt




Source: RFi research conducted on behalf of Genworth in March 2011

In total, 30 per cent of surveyed Australians owned at least one investment property as well as a residential property, and 5 per cent owned at least one investment property but did not have a residential property.

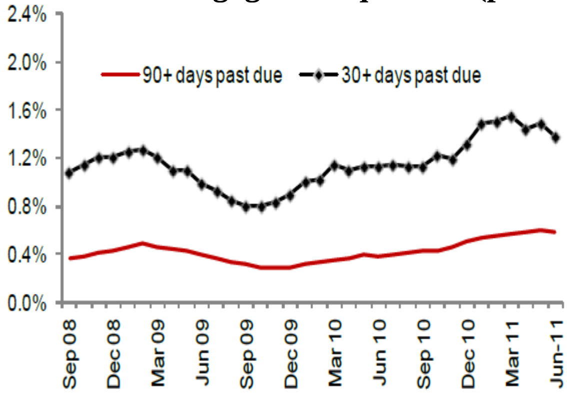
Rob Johnson (x8546)
Financial Stability Department
15 August 2011

**WESTPAC TRADING UPDATE – THREE MONTHS TO JUNE 2011**

Westpac today released its trading update for the three months to June 2011.

Within Westpac's Australian mortgages portfolio, loans over 90 days past due increased 3 basis points to 0.59 per cent (Figure 1). However, loans over 30 days past due fell by 17 basis points as the effects of the natural disasters earlier in the year on borrowers began to ease.

**Figure 1**
**Australian mortgage delinquencies (per cent)**




Source: Westpac's June 2011 quarter trading update.

Westpac also noted that the first home buyer segment continued to perform better than the total portfolio.

Luke Van Uffelen and Luke Cayanan
Financial Stability and Domestic Markets Departments
16 August 2011