RISK IN THE AUSTRALIAN MORTGAGE MARKET

LOOKING BEYOND THE AVERAGE

AUTHORS
David Howard-Jones, Partner
Onan Gunoz, Senior Manager
Australia’s housing market garners a lot of international attention, but analysis is frequently plagued by misconceptions and simplifications. Perhaps the most worrying misconception is the full-recourse fallacy. “The Australian housing market risk differs from the US because Australian mortgages are full-recourse, whereas US mortgages are non-recourse,” so the argument goes. The inference drawn is that one should be less concerned about Australian mortgage risk because of the recourse nature of the market. This is not a sufficient reason for confidence, because nearly half the US states are full-recourse, and among the full-recourse states one finds delinquency rates equal to the highest across the nation.

Investors in Australian mortgage securities should focus on granular data to understand risk. Proper debate regarding Australia’s residential property market is hobbled by the frequent use of averages, such as the average loan-to-value ratio (LVR). But by focussing mostly on averages, the discussion around mortgage securities risk glosses over how the Australian market would perform in a downturn scenario – a critical determinant of losses. It means that in an environment where Australian assets are seen as “risk on” all assets are tarred with the same brush. There are pockets of weakness in the market for sure, but there are also pockets of strength. The overall picture we believe is favourable, a view we have seen expressed recently by the RBA Governor in his addresses on the matter. Yet coming to this view should result from an accurate assessment of risk, not assertion or average; analysis of the market must include a granular view of the underlying collateral.

Investors know they must look beyond tranche-level credit ratings, which are imperfect guides to portfolio performance. Tranches of residential mortgage-backed securities (RMBS) are typically assigned credit ratings based on their collateral, correlation and structure. Yet empirical evidence proves that the underlying collateral alone can be a significant determinant of subsequent bond performance. In the US, fully twice as many Alt-A backed AAA tranches from certain vintages were downgraded compared with those that were backed by prime collateral. Once again, tranche ratings are important, but looking beyond them is essential in order to gain a more detailed understanding of likely performance.

Increased data access and readily available tools can help boost investor understanding of mortgage securities, improving their investment strategies and ultimately contributing to the perception and growth of securitisation in Australia. Simple stress scenarios can demonstrate the importance of analysing collateral based on more dimensions than just average LVR. In a market deemed “risk on” based on assertion, data access and tools can prove crucial. By demystifying Australian assets, the industry can improve investor understanding and transparency of securitisation, and ultimately attract greater liquidity to the sector.

This will not be an easy journey and demands effort from loan originators, yet it is a matter of “when”, not “if”. Originators already find it costly to meet the private requirements put to them by the agencies, due to legacy systems and processes. Yet the global market is increasingly seeing transparency as a standard rather than a nice to have, and Australia should try to lead the way. Investors are bound to demand it – the question is “when”, not “if”.

Copyright © 2012 Oliver Wyman
INTRODUCTION

It has been called the last great housing bubble. Australia’s residential property market attracts significant domestic and international attention because of its 20-year bull run that, along with the broader economy, was scarcely affected by the recent global financial crisis and economic downturn.

This asset appreciation has been driven by strong economic fundamentals, including the prolonged mining boom, but also increased foreign-investor interest in Australian residential property, rather than simple credit expansion alone.

Yet for some time many analysts have been warning that the market is due for a significant correction. In March 2011, Gerard Minack, a global strategist at Morgan Stanley, suggested that Australian home prices were 30-40% above fair value, noting that buyers had been ignoring basic fundamentals such as prices relative to average income. “The classic signs of an asset bubble,” he said. In November 2011, The Economist’s house-price index showed that, compared to its long-run average, Australia’s housing market was overvalued 53% relative to rents and 38% relative to incomes.

Indeed, over the past 18 months, the market has softened. According to a recent survey by NAB, national home prices fell 2% in the three months to June 2012, with the biggest declines in Victoria and New South Wales. These declines are confirmed by data from the ABS for the June quarter and other indexes, e.g., RP Data-Rismark. Home prices are expected to decline a further 0.7% in the year to June 2013.

But before taking sides investors should note that the broad market debate and discussion is riddled with questionable assumptions and even fallacies, and typically conducted at the level of averages rather than details. This paper will explore some of them and show why a proper assessment of Australian mortgage securities risk requires a much more granular understanding of the market, particularly collateral quality. To really understand what is going on we must look beyond the average.
THE FULL-RECOURSE FALLACY

Perhaps the most worrying fallacy that emerges when analysts and commentators compare Australia’s residential property market to overseas markets is that of full-recourse. “Australian housing market risk differs from the US because Australian mortgages are full-recourse, whereas US mortgages are non-recourse,” so the argument goes.

This fallacy contains two errors. First, the claim that US mortgages are non-recourse is a broad generalisation. In fact, lending in 23 of the 50 states is also with recourse. While it is true that in many of these the legislation is not as favourable to the lender as it is in Australia, the simple generalisation is simply untrue. Second, the fallacy suggests that housing market risk differs between jurisdictions with full-recourse lending and those with non-recourse lending. The experience of the US, however, indicates that the risk may be more similar than is commonly thought. This is largely because even in ostensibly full-recourse jurisdictions it is quite practical to walk away from one’s debt. Ultimately this might require entering bankruptcy, but the key thing is that separate assets can be protected and extracted and life can carry on, perhaps not quite as normal, but certainly without handing everything to the bank. Indeed what we see is that in full-recourse states third-party advisors, such as www.youwalkaway.com, have sprung up to inform borrowers exactly how to abandon their mortgage for a ruthless default.

Partly as a result, delinquency rates in some of the full-recourse states, such as Florida, Illinois and New Jersey, were among the worst in the country, as high as in the most badly affected non-recourse states (see Exhibit 1). Moreover the Federal Reserve Bank of Richmond, in their detailed study of recourse\(^1\) concluded that, “for properties appraised at less than $200,000 (at origination, in real 2005 terms) there is no difference in the probability of default across recourse and non-recourse states.” While the effect of being in a non-recourse jurisdiction does appear to increase default rates for larger properties, in total the empirical evidence from the US suggests that for many properties a recourse clause will have no impact on mortgage risk\(^2\).

Exploring this fallacy shows that when analysing mortgage risk, it is problematic to compare different geographies based on high-level characteristics alone. A more in-depth analysis of on-the-ground realities and a granular look at the quality of underlying collateral is essential.

EXHIBIT 1:

RE COURSE STATES IN THE US

Source: http://www.mortgagereliefformula.com/recourse/ CoreLogic 90+ day delinquency rates (quoted from The Real Deal, May 1st, 2012)

DELINQUENCY RATES

---

1 “Recourse and Residential Mortgage Default: Theory and Evidence from U.S. States,” Federal Reserve Bank of Richmond (Revised: June 2010)
2 http://www.richmondfed.org/publications/research/working_papers/2009/wp_09-10R.cfm

Copyright © 2012 Oliver Wyman
MISSING THE TREES FOR THE FOREST: THE PROBLEM WITH AVERAGES

In addition to fallacies that persist in the debate, proper, granular analysis of Australia’s residential property market is hobbled by the frequent use of averages. For instance, house prices are regularly compared to average family income. Rental yields are described as low in relation to their long-run average. Finally, some analysts worry that the average loan-to-value ratio (LVR) offered by Australia’s big banks has risen, even as households are feeling the strain of higher living costs and – for some – negative household equity.

While averages are useful for high-level, multi-year comparisons, they can also mask the reality of what happens when conditions worsen. Consider for example average LVR. In 2009-10, the average LVR in the US was 69% while Australia’s was 65%. On average, both countries require a decline of asset values in excess of 30% for the mortgage market to be in negative equity on average. However, although average LVRs are similar across both countries, loan performance differs significantly. From 2008 to 2010 the US saw its housing non-performing loan (NPL) ratio rise consistently to hit 8%; Australia’s housing NPL, however, stayed broadly constant at under 1% (see Exhibit 2).

Part of this difference shows that for a relatively modest increase in average LVR, losses can get a lot worse in aggregate; part is driven by the different outcomes in housing market valuations. It also shows that by focussing mostly on averages, the debate around mortgage securities risk glosses over how the Australian market would perform in a downturn scenario – a critical determinant of losses. What matters is not so much the average but both the average and the distribution: how many loans in a given pool have LVR above 90% directly determines the negative equity implications of a 10% housing price correction, independently of the pool average LGD. As a result, in order to accurately assess risk, analysis of the market must go beyond the average and include a more granular view of the underlying collateral that can provide more insight on the risk profile.

EXHIBIT 2: NON-PERFORMING HOUSING LOANS AND LOAN-TO-VALUE RATIOS, US AND AUSTRALIA

2008-2010

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-performing loans (% of total loans)¹</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Loan-to-value ratio²</td>
<td>75</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: RBA, Freddie Mac, Fannie Mae, Oliver Wyman Analysis
1 Non-performing loans for banks, by value
2 Avg. LVR at application

Copyright © 2012 Oliver Wyman
WHAT TRANCHE-LEVEL RATINGS CAN AND CAN’T DO

In addition to fallacies and the overuse of average measures, investors in Australian mortgage securities should also be aware the limitations of tranche-level ratings. Credit ratings provide an essential piece of market infrastructure and are based on detailed analysis by the agencies. Tranches of residential mortgage-backed securities (RMBS) are assigned credit ratings based on their collateral, correlation and structure, subject to detailed processes and guidelines published by the agencies. Importantly, these tranche-level ratings do not and are not intended to directly reflect the quality of the underlying assets alone. Therefore, attempts to measure mortgage securities risk based on credit ratings alone are bound to be problematic in some instances. Here, again, the experience of the US housing market over the past decade is instructive.

During the period from 2004-2006 in the US, overall pools of mortgages being issued, packaged and sold off were worsening in quality, while average FICO credit scores and other tranche-level indicators were static. Yet while tranche ratings were relatively static at the time of issue, bond valuations were starting to differ significantly in the secondary market as certain tranches were downgraded. This created a serious blind-spot in investors’ analysis—mark to market investors took significant write-downs which could have been avoided by better questioning the underlying collateral. For instance, by comparing AAA-rated RMBS of different collateral types in the US, it becomes clear that while none of these investments performed well, those with prime collateral performed markedly better in each vintage (see Exhibit 3).

It is a similar situation in the UK. “There have been no prime UK RMBS downgraded to date,” said Peter Dossett, Head of RMBS surveillance at Fitch Ratings, in 2009. “By contrast, in the UK non-conforming RMBS market, there have been 35 AAA tranches that have been downgraded.”

As a result, tranche-level ratings alone cannot be relied on to provide a dynamic, updated assessment of investment quality. Investors need to look beyond the pool to gain a more detailed understanding of underlying collateral in order to forecast the likely performance of RMBS.

EXHIBIT 3: PERCENTAGE OF US RMBS DOWNGRADED FROM AAA TO BELOW INVESTMENT GRADE

<table>
<thead>
<tr>
<th>% DOWNGRADED</th>
<th>100</th>
<th>50</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>Subprime</td>
<td>Alt-A ARM</td>
<td>Alt-A fixed</td>
</tr>
<tr>
<td>2006</td>
<td>Prime ARM</td>
<td>Prime fixed</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AAA tranches with Prime collateral perform better in each US vintage

There have been no AAA prime UK RMBS downgraded to date. By contrast, in the UK non-conforming RMBS market, there have been 35 AAA tranches that have been downgraded.

Peter Dossett, Head of RMBS surveillance, Fitch Ratings (from The Road to CredibilityInternational Financing Review, 2009)
THE IMPORTANCE OF DATA ACCESS AND TOOLS

Given these observations on assertion and averages, it is clear that investors need better data access and tools in order to formulate their view on Australian RMBS. A simple real-world example illustrates the analytical power of effective tools.

Exhibit 4 shows real (but de-identified) data from currently outstanding RMBS issued by a major bank and a mutual respectively. The simple weighted average statistics suggest that the two pools are extremely similar. For instance, the bank pool has a LVR of 64.27%, barely different from the mutual pool’s LVR of 63.98%. Also, both pools are 100% Full Doc, and arrears rates are almost identical. On the surface, the two pools might appear to be of identical quality.

However, in reality they possess a very different risk profile. This is where the ability to see the underlying granular LVR reveals a more nuanced story. Based on LVR average alone the mutual transaction might appear modestly safer. However, based on LVR distribution, illustrated here through data sourced from MARQ Analytics3, the bank deal shows more robust characteristics (see Exhibit 5) with fewer loans in riskier high LVR buckets.

Moreover, scenario analysis reveals that these variances in risk profile can significantly impact portfolio performance, even in a mild downturn. Consider the scenario where house prices decline by 10%. This will result in less than 1% of the major bank’s pool facing negative equity. The impact on the mutual portfolio, however, is much more severe – some 4.7% of the portfolio is left underwater (see Exhibit 5).

This simple scenario underlines the importance of analysing collateral based on more dimensions than just average LVR. In a market where debate is too often characterised by generalisations, simplifications and opaque information, data access and tools can prove crucial.

### EXHIBIT 4: LVR DISTRIBUTION

<table>
<thead>
<tr>
<th></th>
<th>POOL A</th>
<th>POOL B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding Balance</td>
<td>$929 MM</td>
<td>$432 MM</td>
</tr>
<tr>
<td>WAV LVR</td>
<td>64.27%</td>
<td>63.98%</td>
</tr>
<tr>
<td>Full Doc</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Arrears</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current to ≤ 30d</td>
<td>99.79%</td>
<td>99.71%</td>
</tr>
<tr>
<td>&gt;30d to ≤ 60d</td>
<td>0.21%</td>
<td>0.10%</td>
</tr>
<tr>
<td>&gt;60d to ≤ 90d</td>
<td>0.00%</td>
<td>0.13%</td>
</tr>
<tr>
<td>&gt;90d</td>
<td>0.00%</td>
<td>0.06%</td>
</tr>
<tr>
<td>Total Arrears &gt;30d</td>
<td>0.21%</td>
<td>0.29%</td>
</tr>
</tbody>
</table>

Source: www.MARQAnalytics.com.au

---

EXHIBIT 5: “MILD-DOWNTURN” SCENARIO WITH 10% DECLINE IN HOUSE PRICES

POOL A

% OF BALANCE

0 40 80 120

LVR%

% OF BALANCE

0 40 80 120

LVR%

Negative equity remains below 1%

Negative equity increases to 4.7%

Source: www.MARQAnalytics.com.au
CONCLUSION

Australia’s housing market will continue to face different structural challenges. Macroeconomic headwinds include the risk of a China slow-down, a worsening of the EU sovereign debt crisis and the continued implications of an ageing population.

Regulatory changes, among other things, new superannuation rules, planning laws and bank capital rules, introduce another level of complexity.

Yet equally there are positives. Australia may soon be one of the few currencies with Yuan convertibility; our economy is strongly geared to “inflation protected” commodities; housing supply continues to lag demand in important areas.

Against this uncertain backdrop, there is little doubt that Australia’s economy will benefit from the growth of securitisation. This is particularly accentuated by the financial services sector’s challenges in meeting the intermediation needs between long-term savers and borrowers.

However, given the fallout from the global financial crisis, fear continues to hold the upper hand over greed in global markets and Australia is seen as aligned with the new world and hence “risk on”. Attracting capital into the Australian RMBS market will therefore be easier if the underlying collateral can be more readily understood. Confidence in Australian securitisations will grow with the development of data access and tools that allow a more granular analysis of portfolios. By demystifying Australian assets, these tools improve investor understanding and market transparency, and ultimately contribute to greater liquidity in the sector. Moves are already underway in several global markets to provide this transparency. We look forward to playing a role in helping Australia lead the way.
Oliver Wyman is a global leader in management consulting that combines deep industry knowledge with specialised expertise in strategy, operations, risk management, organisational transformation, and leadership development.

For more information please contact the marketing department by email at info-FS@oliverwyman.com or by phone at one of the following locations:

ASIA PACIFIC
+65 6510 9700

EMEA
+44 20 7333 8333

AMERICAS
+1 212 541 8100

www.oliverwyman.com