Commentary

An Overview Of Australia's Housing Market And Residential Mortgage-Backed Securities

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An Overview Of Australia's Housing Market And Residential Mortgage-Backed Securities

Investors in Australian residential mortgage-backed securities (RMBS) continue to benefit from the strong credit performance of the underlying residential mortgage portfolios. The uptick in new issuance observed in 2013 continued in 2014, with a range of issuers tapping domestic and, to a lesser extent, offshore markets. (Watch the related CreditMatters TV segment, "As Interest Rates Drop, What's the Outlook for Australia's Housing and RMBS Markets?" dated March 4, 2015.)

Any further increase in issuance is in part dependent on credit growth in Australia and the continued confidence of offshore investors, who held close to two-thirds of Australian RMBS when the total outstanding RMBS were at their peak in 2007.

Economic growth has been more subdued in recent quarters as the Australian economy continues to rebalance itself away from the mining sector. Despite this, residential property prices in the more populous capital cities have risen during the past 12 months (charts 23-29). Households have remained more cautious with their financial management than before the financial crisis, and housing-loan market participants--industry bodies and regulators--have taken measures to restore investor confidence, including strengthening lending practices and regulations, simplifying debt structures, providing additional creditor protection, and finding ways to enhance information flow and transparency.

This article on the market's operating environment, structure, and performance provides an overview of:

- Australia's economy and demographic trends;
- The Australian housing market;
- The Australian residential mortgage loan market;
- The role of lenders' mortgage insurance in Australian RMBS;
- Australian housing loan product types;
- The Australian legal and regulatory systems applicable to RMBS;
- The key structural issues of offshore RMBS issuance; and
- The performance history of Australian RMBS.

To enhance market transparency, Standard & Poor's Ratings Services also publishes its rating methodology and assumptions, periodic RMBS performance updates, commentary articles, scenario analysis, and presale reports detailing its analytical rationales supporting the ratings assigned (see references under Related Research).

### Key Influences On Australian RMBS

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### Australian RMBS Outlook

#### Issuance levels

New issuance volumes have picked up recently after declines in 2008, 2009, and 2012. Investor demand remains strong, with new issuance margins for prime RMBS continuing to narrow.

Chart 1 shows the issuance volumes of Australian RMBS by market placement from 1994 to 2013.
We believe the strong increase in RMBS issuance in the past two years is due to a variety of factors. These include increased domestic and offshore investor interest, mainly due to a lack of supply in other markets; a search for stronger yields; the Reserve Bank of Australia (RBA) allowing senior prime RMBS to be an eligible asset under its committed liquidity arrangement, attracting strong interest from balance-sheet investors; the continuing strong performance of Australian RMBS during and after the financial crisis; originators' prudent underwriting and lending practices; and Australia’s sound economic outlook.

While new issuance volumes have picked up in recent years, we do not expect new issuance to reach the levels observed in 2006, when total issuance in the Australian RMBS market exceeded A$60 billion. Before the financial crisis, many Australian RMBS issuers met strong investor demand by issuing fewer transactions, with larger volumes and tight margins. At the peak of issuance, more than 60% of the RMBS issues were placed with offshore investors, but these markets essentially closed to Australian RMBS issuers in mid-2007 because offshore investors had limited ability to invest. Furthermore, some of the investors who were active in the Australian RMBS market before 2007 no longer exist, such as structured investment vehicles. The emergence of covered bond issuance as a funding source in Australia has also reduced the need for some lenders to securitize.

Issuance during 2014 was predominantly Australian dollars, mainly because of the high cost of currency swaps, as well
as offshore investors' willingness to invest in Australian-dollar issuance.

**Australian Government Support**

**Australian Office of Financial Management**
The new issuance between 2007 and 2011 was predominantly to domestic investors and the Australian government through its Australian Office of Financial Management (AOFM).

The AOFM set up a program in 2008 to purchase up to A$8 billion of RMBS to support competition in Australia's mortgage markets.

The program was extended by A$8 billion in October 2009 and A$4 billion in April 2011 under the government's Competitive and Sustainable Banking Package. This initiative supported the livelihood of smaller lenders in the market.

As of April 2013, the Australian government ended the AOFM RMBS Investment Program citing that the market had sufficient private-sector support to operate on its own, although the AOFM would continue to hold any securities already purchased until their maturity. The AOFM's decision reflects a return of investor confidence and interest in the market, particularly for nonbank originators and regional banks, which had been mostly dependent on support from the AOFM. Recent sales by the AOFM, made through reverse inquiry, also suggest secondary market activity is increasing.

**Reserve Bank of Australia**
To improve liquidity in a number of domestic markets, the RBA expanded the range of securities eligible for its repurchase operations (repo-eligible), which include 'AAA' rated RMBS. A number of lenders, particularly financial institutions, have structured repo-eligible RMBS to meet their liquidity needs since 2008.

The RBA in October 2012 announced new eligibility criteria for RMBS. Issuers of eligible RMBS will be required to provide loan-level data, security level data, and cash-flow waterfall data for repo-eligible transactions on a monthly basis. These data requirements will become mandatory as of June 30, 2015.

**Australia's Economy And Demographic Trends**

**Economic fundamentals**
Australia is a democratic country, with a diverse, open, and resilient economy. Its sovereign creditworthiness is strong. It has a mature and stable institutional framework, and political consensus on fiscal, monetary, and exchange-rate policies. Previous reforms have produced flexible labor and product markets, and a deregulated financial system.

The Commonwealth of Australia also benefits from significant flexibility in fiscal and monetary policy. We believe these factors provide Australia with a strong ability to absorb large economic and financial shocks, as demonstrated during the global recession in 2009. Moderating these strengths are Australia's high external imbalances, dependence on commodity exports, and high household debt.
Table 1

<table>
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<tr>
<th>Australia’s Key Economic Indicators</th>
<th>Year Ended June 30</th>
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<tbody>
<tr>
<td>Population (millions)</td>
<td>23.5</td>
</tr>
<tr>
<td>Seasonally adjusted gross domestic product growth (% change)*</td>
<td>2.7</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>6.1</td>
</tr>
<tr>
<td>Consumer prices (% change)</td>
<td>3</td>
</tr>
</tbody>
</table>


Australia is a wealthy economy, with GDP per capita of about US$67,000 in 2013. Australia’s economic resilience reflects decades of reforms, its diverse economic structure, and flexible labor and product markets. In recent years, investment in the mining sector has largely spurred economic growth. With mining investment having now peaked, and becoming a drag on growth as it declines, the economy faces a slightly bumpy path on its way to a needed rebalancing of growth drivers. Australia's GDP growth continues to trend at around 3%, buoyed by reasonably solid consumption and still-strong real exports. Investment growth remains subdued, reflecting the ongoing rebalancing away from the mining sector and the slowdown in Chinese growth ("Asia-Pacific Credit Outlook 2015: The Turning Of The Tide," published Dec. 8, 2014).

Growth in national income is likely to remain under pressure in the near term. Australia's terms of trade are likely to continue to decline as prices for the country's key commodity exports continue to weaken, largely due to rising Australian and global production.

**Interest-rate trends**

The RBA is responsible for the country's monetary policy, with the primary objective of maintaining inflation within a target range of 2% to 3% during the course of the economic cycle. It has kept inflation within this target band on average, through adjustments to the overnight cash rate.

Chart 2 shows the target cash rate from 1996 to 2015. After a significant reduction in the early 1990s, the rate was steadily raised from 4.25% in December 2001 to 7.25% in March 2008. We believe the extended period of monetary contraction preceding the expansionary measures through 2008 tempered the sizable growth in asset prices and helped to avoid the sharp downward declines evident in peer countries during the financial crisis.
As the deterioration in global financial markets and economic conditions started to weaken the domestic economy, the RBA lowered the cash rate in rapid steps from September 2008 to a 49-year low of 3% by April 2009. At the time, the RBA said it considered the then-record decrease in the cash rate to be an "emergency" level that would no longer be warranted as the economy recovered. As the economy started to recover, the RBA began to raise the cash rate, increasing it to 4.75% between October 2009 and November 2010 to balance sustainable growth in economic activity and a consistent inflation rate compared with the RBA target in the years ahead.
The RBA again lowered the cash rate between late 2011 and February 2015, when it reached its current level of 2.25%. However, in recent years, we have seen some lenders adjusting interest rates out of step with the RBA due to tight funding markets resulting in higher mortgage rates than 2009 (see chart 3). The differential between the cash rate and standard variable rates widened to a peak of 3.70% in March 2013 before contracting to its current differential of around 3.45%. This highlights the discretionary nature of standard variable rates and the ability of lenders to move out of step with the RBA.

The most recent rate cut by the RBA, in February 2015, reflects lower domestic demand growth and the RBA's assessment that the rate of unemployment will peak a little higher than expected, as outlined in its most recent Statement of Monetary Policy. While the unemployment rate is not expected to deteriorate significantly during 2015, wage growth is likely to continue to be subdued because labor market conditions remain soft and many businesses face pressure to contain costs.

Population demographics
Australia has an estimated population of about 23.1 million, and is divided into six states and two mainland territories. Most of Australia's population is concentrated in coastal regions, particularly in the southeast and east. Most people in these regions live in urban centers, mainly in and around the capital cities (chart 4).
Chart 4

Australian Population Distribution

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Local currency rating as of December 2014</th>
<th>Population as of June 2013</th>
<th>Population as of June 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>AAA</td>
<td>7.4 million</td>
<td>7.5 million</td>
</tr>
<tr>
<td>Victoria</td>
<td>AAA</td>
<td>5.7 million</td>
<td>5.8 million</td>
</tr>
<tr>
<td>Queensland</td>
<td>AA+</td>
<td>4.7 million</td>
<td>4.7 million</td>
</tr>
<tr>
<td>South Australia</td>
<td>AA</td>
<td>1.7 million</td>
<td>1.7 million</td>
</tr>
<tr>
<td>Western Australia</td>
<td>AA+</td>
<td>2.5 million</td>
<td>2.6 million</td>
</tr>
<tr>
<td>Tasmania</td>
<td>AA+</td>
<td>0.5 million</td>
<td>0.5 million</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>AAA</td>
<td>0.4 million</td>
<td>0.4 million</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>Not rated</td>
<td>0.2 million</td>
<td>0.2 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>23.1 million</strong></td>
<td><strong>23.5 million</strong></td>
</tr>
</tbody>
</table>

Source: Australian Bureau of Statistics.
© Standard & Poor’s 2015.
Australia's population grows by an average of about 1.4% each year. In the 12 months ended June 30, 2014, however, the population grew by an average of 1.7%. We attribute the growth in population to strong net migration to Australian and higher-than-average birth rates. We expect the growth to continue, though at a lower rate. An aging population meanwhile will see the age distribution of the Australian population change, with a growing percentage of people aged over 65. The Australian Bureau of Statistics has forecast a population of 38 million by 2056, based on a set of assumptions about future levels of fertility, mortality, and overseas and interstate migration.
Australian household structures are showing noticeable trends. The number of households in Australia has increased. At the same time, the average household size has decreased, while the diversity of households has increased. These changes in household structure, combined with the above-average increase in population could continue to push up demand for residential properties.

**Population migration analysis**

Interstate and overseas migration rates are key drivers in the demand for residential properties and housing finance in Australia. People move between states and territories for reasons such as employment, lifestyle, and the cost of housing. Table 2 shows interstate and overseas migration by state for the year ended June 30, 2014.

**Table 2**

<table>
<thead>
<tr>
<th>State</th>
<th>Net overseas migration</th>
<th>Net interstate migration</th>
<th>Net population gain (including natural increases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>73,300</td>
<td>-6,857</td>
<td>109,135</td>
</tr>
<tr>
<td>Victoria</td>
<td>59,358</td>
<td>8,783</td>
<td>106,660</td>
</tr>
<tr>
<td>Queensland</td>
<td>30,270</td>
<td>5,753</td>
<td>70,535</td>
</tr>
<tr>
<td>South Australia</td>
<td>11,166</td>
<td>-2,968</td>
<td>15,216</td>
</tr>
<tr>
<td>Western Australia</td>
<td>32,270</td>
<td>1,045</td>
<td>54,382</td>
</tr>
</tbody>
</table>
Table 2

<table>
<thead>
<tr>
<th>State</th>
<th>Net Immigration</th>
<th>Net Departure</th>
<th>Total Migrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasmania</td>
<td>1,322</td>
<td>-1,168</td>
<td>1,662</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>2,983</td>
<td>-3,344</td>
<td>2,538</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>2,017</td>
<td>-1,244</td>
<td>4,705</td>
</tr>
<tr>
<td>Australia</td>
<td>212,686</td>
<td>NA</td>
<td>364,833</td>
</tr>
</tbody>
</table>

Source: Australian Bureau of Statistics. N/A—Not applicable.

More people are moving to Australia than leaving the country to live overseas. This underpins the relatively strong demand for housing. The most common states for immigrants to enter Australia are New South Wales and Victoria, followed by Queensland and Western Australia. This is significant because the point of entry has a big impact on where migrants decide to reside permanently.

Chart 7

Victoria recorded the highest net interstate migration in 2014. This is a reversal from previous years, when Queensland and Western Australia recorded periods of strong net interstate migration, reflecting the dynamics of the mining boom at the time. The slowdown in net interstate migration in both of these states reflects the cooling off in mining activity in recent years.
Urbanization
Australia’s population is concentrated in suburban, urban fringe, and inner-city regions, particularly in state capital cities. About 65% of Australians live in capital cities. This figure has been steady since the early 1980s, and we expect it to remain so. The southeast and eastern coastal regions, along with the southwest coastal areas to a lesser extent, have high population concentrations. Sydney and Melbourne remain the key population centers. Many areas experiencing strong growth in population are located on the fringes of capital cities, according to the Australian Bureau of Statistics, where more land tends to be available for subdivision and housing development.

In our opinion, this high-density living, combined with the growth in population and net immigration, has helped to maintain high demand for property and contributed to the avoidance of a major property-market collapse in a major urban area. House prices have increased materially across all states in recent years, and asset-price depreciation that has occurred prior to 2013 has been moderate, with only minimal declines to flat growth.

Employment trends
According to the Australian Bureau of Statistics "Forms of Employment" publication in April 2013, about 80% of Australians are salaried employees, a level that has remained relatively stable during the past decade. This provides a level of stability to the income of borrowers and their ability to repay their debt obligations. The income and cash flows of self-employed borrowers tend to be more volatile because they are more vulnerable to business cycles and competition.
Australia's unemployment rate began declining after the early 1990s recession to reach a historical low of 4.1% in early 2008. The unemployment rate began to rise in mid-2008 to around September 2009, reflecting weakening economic conditions. After reaching 6.0% in October 2009, the unemployment rate has hovered around 5.0% to 6.0% since September 2010. It has been between 5.5% and 6.0% in more recent times.

We expect employment growth to be relatively flat in the short to medium term, reflecting the more subdued labor-demand conditions outside of the mining sector. Chart 8 shows Australia's historical unemployment rate between 1978 and November 2014. The highest unemployment levels experienced in the data period are during the early 1980s and early 1990s recessions. In both periods, the unemployment rate exceeded 10%, with the highest level at about 10.9% in December 1992. During both recessions, the unemployment rate increased rapidly and recovered at a slower rate.

**Home ownership**

Home ownership is an important goal for many Australians. This is reflected in a high rate of home ownership, free and clear of mortgages (refer to the Housing Ownership section of this report). Many Australians consider it important to retain their own homes and, therefore, meet their obligations under housing loans, even if they are experiencing financial stress. This predilection makes housing affordability a politically sensitive issue.
Personal bankruptcies

The level of personal bankruptcies in Australia has been consistently lower than in the U.S. and Canada (chart 9).

Chart 9

<table>
<thead>
<tr>
<th>Personal Bankruptcies In Australia, Canada, U.K., And U.S.</th>
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</thead>
<tbody>
<tr>
<td><img src="chart.jpg" alt="Chart showing personal bankruptcies in Australia, Canada, U.K., and U.S." /></td>
</tr>
</tbody>
</table>

Underpinning Australia's historically low level of personal bankruptcies are the:

- Traditionally strong willingness of Australians to repay debt;
- Severe consequences of bankruptcy under Australian law;
- Stigma in Australia associated with bankruptcy; and
- Difficulty in accessing finance after bankruptcy.

Even in bankruptcy, housing-loan lenders continue to have recourse to borrowers to pursue outstanding debts alongside a borrower's other creditors after the security property is sold.

Consumer credit culture

There are a range of consumer credit options in Australia, including housing loans, personal loans, and continuing credit arrangements such as overdrafts and credit cards. Housing-loan products incorporate features that allow consumers to redraw prepaid principal, which may be used for any reasonable purpose. Some housing-loan products also allow consumers to conduct transaction banking through their loan accounts. Check and credit card transactions may be cleared through a consumer's housing-loan account.
The benign economic environment, strong growth in household disposable income, and strong asset appreciation before the global financial crisis saw consumers become more willing to use credit rather than savings to achieve their lifestyle goals. Credit was more readily available and at a lower cost due to lower interest rates and heightened competition in the housing-loan and consumer finance sectors. A number of new players entered the housing-loan and credit card markets. Lenders expanded their customer bases and, with the assistance of lenders’ mortgage insurance, became more willing to lend to people who traditionally found it difficult to secure housing and other finance, such as the self-employed. As a result, there has been a material increase in total consumer credit as a percentage of total household assets, which also partly fuels house-price appreciation. RBA statistics show that household indebtedness as a percentage of annual disposable household income increased to a peak of 152% in 2007 from 70.6% in 1996. As of 2014, the figure is 150%.

Chart 10

Household debt as a percentage of household disposable income has broadly declined in Australia, the U.S., and U.K. since 2007. Chart 10 shows the level in Australia followed similar trends to the other three countries being compared; however, the level has been declining at a slower rate than in the U.K. and U.S., while Canadian household indebtedness has continued to rise.

Debt levels rose rapidly across the U.S., U.K., and Canada due to the effect of financial deregulation in the 1980s, plus
low interest rates and low inflation. Australia's household debt did not increase dramatically until interest rates and inflation reached low levels in the 1990s, improving consumer confidence.

Australian household debt increased rapidly from the early 1990s, particularly after the early 1990s recession, though from a low base (chart 11). During the past decade, household debt in Australia as a percentage of disposable income has caught up to the levels of the U.K., U.S., and Canada.

**Chart 11**

![Graph showing Household Assets And Liabilities In Australia](chart11)

Most of the increase in household debt was used to buy assets. Chart 11 shows the increase of assets and liabilities of Australian households from 1990 to 2013. The proportion of housing credit to total debt has increased significantly, while other personal debt has halved as a proportion of total debt. Owner-occupied housing debt is consistently the largest component during the period. Liabilities for investor housing have increased during the same period.

The ratio of total debt (housing credit and other personal credit) to total assets (financial assets and nonfinancial assets) also has increased. An increase in asset prices during 2010 and since the beginning of 2012 has moderated the rise in the total debt-to-asset ratio to around 17%. About 33% of new loans approved by Australian deposit-taking institutions (ADIs) had a loan-to-value (LTV) ratio of more than 80% as of September 2014, according to the "Quarterly ADI Property Exposure" publication. The figure has been relatively consistent over the past seven years.
The increase in household assets and liabilities since the 1990s—even though they have come off a low base—potentially exposes the household sector to adverse economic consequences, such as falling asset prices or rising interest rates. However, the currently low inflation and relatively low interest rates suggest that there is a low risk this will occur in the near term.

A few factors suggest that an economic slowdown may have a limited impact on the overall default level, including:

- A majority of Australian housing loans are based on discretionary variable-rate loans, which can subject borrowers to payment shocks should interest rates increase rapidly. As such, borrowers generally prefer to repay home loans as fast as possible to reduce the potential exposure. Furthermore, the variable-rate feature enhances the effectiveness of expansionary monetary policy. A majority of borrowers are ahead in their payment obligations and have increased their net savings.
- In Australia, unlike loans to investors, loans to owner occupiers do not benefit from tax deductions to offset interest payments on their mortgage loans. As a result, owner occupiers have an incentive to pay down their loans rapidly, creating further borrower equity in the security properties.
- Current mortgage interest rates are generally low.
- The change in economic conditions in some sectors and decline in asset values in 2008 and 2009 have seen some impacted households either readjust their financial positions or default when they were more financially extended. Most borrowers who worked through that period seem to be in a more robust position. In addition, the labor market has remained comparatively strong and supportive of household debt servicing.
- A range of structural features in the Australian housing market likely have helped to make borrowers and lenders more conservative. For example, because housing loans are full recourse, borrowers have a stronger incentive to avoid overcommitting themselves and to avoid default. Furthermore, there is a strong social stigma attached to default and limited options for credit-impaired borrowers.
- The Responsible Lending Conduct Obligations of the National Consumer Credit Protection Act ensures minimum standards in verifying consumer information and assessing borrower capacity by credit providers.
- Regulators continue to reinforce prudent lending standards, as outlined in the Australian Prudential Regulation Authority’s (APRA) latest "Prudential Practice Guide APG 223," released on Nov. 5, 2014.

The key concern that could worsen arrears and defaults would be a substantial increase in unemployment and associated decrease in disposable income, which can quickly change a borrower’s position relative to the factors stated above.

The Australian Housing Market

Dwelling types and locations

According to 2011 census data from the Australian Bureau of Statistics, 75.6% of all Australian dwellings are stand-alone, detached houses, down from 76.6% in 2006. The remainder are semidetached or duplex houses, row or terrace houses, townhouses, project homes, flats, units, and apartments. The small change from 2006 is due to an increase in the proportion of medium-density dwellings from 9.2% to 9.9% and high-density dwellings from 13.1% to 13.6%.

In RMBS pools, property locations are identified by a postcode, which is a four-digit number that identifies each of the postal service’s delivery areas. In metropolitan areas, a single postcode can cover several suburbs. In very remote
areas, a single postcode can cover many thousands of kilometers due to the much lower population densities. Standard & Poor's separates postcodes into inner-city, metropolitan, and nonmetropolitan locations to analyze the elements of RMBS pools that are likely to be affected by a location's characteristics. ("Australian RMBS Postcode Classification Assumptions", July 10, 2013)

Housing ownership
More than 67% of Australian households live in owner-occupied dwellings. Of these, 46% own their properties outright, without a mortgage loan. The proportion of homeowners without a mortgage has decreased, contributing to an increase in household indebtedness in the Australian economy. The percentage of homeowners with and without mortgages is summarized in chart 14. The latest available data are from the Housing Occupancy and Costs Survey of 2011-2012, produced by the Australian Bureau of Statistics.

Chart 12

The number of homes owned free and clear of mortgages remains robust. We believe this would provide firm support for the Australian housing market during a severe economic downturn, when owners with mortgages may be forced to sell their houses if they are unable to service their mortgage loans. However, the falling level of free-and-clear ownership, the ratio for which has decreased by 10 percentage points in 12 years, would exacerbate the effects of a severe downturn. The composition of Australian households by home ownership, as determined by the Australian
There is a strong market for private rental accommodation in Australia. Rental vacancy rates are currently at low levels. State governments also supply public housing to a small proportion of the population with low incomes.
Historical house prices
Australia's housing market reflects rises and falls in the country's economic cycles. The house price increases of the late 1980s were the result of a variety of factors, including the deregulation of the financial services sector that led to a relaxation in interest-rate controls on housing loans, which were previously capped at 13.5%. This had the effect of increasing the amount of housing finance available. Other key factors were a rise in demand for investment properties after the 1987 stock market correction, higher overseas immigration, the trend toward smaller households, and housing demand by children of the baby-boomer generation.

Chart 14

While the 1991–1992 economic recession was the most severe economic downturn in Australia in many years, residential property values have experienced more severe declines in other periods. Chart 14 maps the Australian Bureau of Statistics' Established House Price Index against the consumer price index (CPI), Australia's principal inflation measure. As the chart shows, property prices declined from March 2008 to March 2009 before increasing again until June 2010. The 4.25% reduction in the official cash rate from September 2008 to April 2009, together with the First Home Owner Grant (FHOG) provided by the Australian government in late 2008 and changes to the foreign-investment screening arrangements brought into force by the government in early 2009, contributed to the increase in property prices during that period.
The heightened demand driven by the above measures abated as measures themselves changed in 2010, including an increase in the cash rate. The FHOG from the Commonwealth scheme ceased at the start of 2010, though some state-based support continues at a lesser amount for those wishing to build or purchase new homes. The foreign-investment rules also were tightened for residential housing in April 2010.

A number of macroeconomic, social, and government policy factors contributed to the house-price increase in the early 2000s. These include pent-up demand released due to low interest rates, demographic changes, increased investor demand for residential property, the introduction of the FHOG, and contracting lending margins. Although these factors are still relevant today, we believe housing affordability also will be a key contributing factor to future price trends.

Recent house price trends and outlook
Property price movements in some areas of Australia have been greater than is indicated by the index. In addition, some parts of the market, such as Sydney and, to a lesser extent, Melbourne, have continued to experience strong growth, while other areas experienced price depreciation.

The Sydney property market has been a focal point in the past 12 months, with the total value of credit approvals for investor loans in New South Wales being about 130% higher in 2014 than in 2008, as outlined by the RBA.

The recent strong appreciation in home prices has coincided with the RBA's reduction of cash rates from a recent high of 4.75% in October 2011 to a low of 2.25% as of February 2015. The low interest-rate environment has contributed to a strong increase in investor housing lending. The strong growth in investor housing loan approvals since 2011 is reflected in the current share of investor lending outstandings as a proportion of total lending outstandings for housing, which is around 35% as of January 2015, according to APRA. Despite this, the total value of housing loans advanced by Australian financial institutions has seen slower growth since 2009, as Australians repay loans and boost savings instead of borrowing for housing.
As shown in chart 15, the percentage increase in the value of residential building work done has trended below population growth on average since 2004. This suggests potentially constrained housing supply when considered in the context of population growth.

The data from the National Housing Supply Council Reports, from 2011 and 2012, indicate that the underlying demand for housing continues to outpace supply. The reasons for this imbalance are multifaceted. Underlying the supply-side constraints is Australia’s high population growth, due to strong net migration and higher-than-average birth rates. The growing population places pressure on housing availability, particularly in the capital cities, where land supply is limited. This forces many new dwellings to be built on the outer fringes of capital cities, where a lack of supporting infrastructure and service deliveries has impeded the rate of housing development.

Contributing to property demand are high population growth, an increase in investor demand due to a strong rise in self-managed superannuation fund investment in residential property—A$10 billion in 2008, rising to A$19.5 billion in 2014, according to the Australian Tax Office—and a low interest-rate environment that provides attractive rental yields. Growth in the number of first-home buyers has remained low since the First Home Owner Grant ceased at the Commonwealth level at the beginning of 2010. Rules pertaining to foreign investment in real estate that were relaxed in 2008 have since been tightened, given concern over the upward pressure that increased foreign investment placed
on property prices and overall housing affordability for Australian residents. The Foreign Investment Review Board's current stance is that foreign investment in residential real estate should increase Australia's housing stock and the supply of new housing.

As the population ages, the undersupply of housing is likely to increase. The number of lone-person households and households of couples without children is projected to grow faster than the number of households with families and children. This is expected to result in greater demand for apartments rather than homes, and place more pressure on rental yields. Any imbalance will have a greater impact in the private rental market on lower-income households, who are increasingly locked out of the property market.

The Australian Residential Mortgage Loan Market

Banks are the main providers of housing-loan finance to individuals in the Australian market, accounting for about 94% of the housing-loan market. The standard loan product is a 25- to 30-year, fully amortizing, variable-rate loan, secured by a first-registered mortgage over residential property.

Before the global capital market dislocation, the market could be characterized by:

- A high level of competition;
- Contracting lending margins;
- A very low level of loans in arrears;
- Product innovation;
- Evidence of stabilizing real property prices after a period of rapid increases in the early 2000s;
- The level and rate of refinancing, which remains high; and
- The establishment of a formalized, nonconforming RMBS market in Australia.

Since the capital market dislocation, the market has seen some marked changes in conditions, including:

- Some lenders that are highly dependent on securitization have significantly reduced origination volumes, while major banks have gained market share.
- The lending margins have increased, reflecting higher costs of funds. Loans arrears increased until January 2012, and have since been declining.
- Credit rationing among lenders has resulted in reduced loan-to-value (LTV) ratios and less lending for properties in certain geographic locations. In addition, borrowers with adverse credit histories or currently experiencing financial stress find it difficult to refinance.
- Property prices have experienced greater movements, with some pockets of Australia and development properties being affected to a greater extent.
- The nonconforming and subprime RMBS market contracted rapidly.
- The decline in the cash rate since 2011 has seen a strong increase in the rate of growth of investor housing lending.

Size of the market

There are now more than A$1.4 trillion worth of home loans outstanding in Australia, of which about 7.3% are securitized. The percentage of home loans securitized has decreased from a high of 24% in 2007 due to the amortization of RMBS issued before June 2007, and the much smaller volumes of RMBS issued since then. Chart 16 shows the value of Australian housing finance--securitized and nonsecuritized--and the percentage of loans securitized
from 1990 to 2014.

Chart 16

Value Of Australian Housing Finance And Securitized Mortgages

Source: Australian Bureau of Statistics.

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Lenders

Chart 17 shows the proportion of loans advanced by lender type from 1984 to 2014.
Banks continue to be the main providers of housing finance in Australia. In the past two years, they have materially grown their market share back to levels not seen since the 1990s. After falling to 77% in 2002, banks now account for 94% of housing finance commitments. Wholesale lenders’ share declined to 0.95% in 2011 before rising to 2.24% in 2014, due to their limited ability to fund new mortgages as a result of restricted funding.

The four large commercial banks dominate Australia’s banking sector, collectively accounting for about 85% of residential lending. Regional banks, other small banks, building societies, and credit unions have traditionally made up the remainder of the market. The major Australian banks use securitization to varying degrees, mainly as a source of funding diversification and liquidity. Australia's regional banks, which are common issuers of RMBS, tap securitization markets for funding and funding diversification, liquidity, and regulatory capital relief.

Before the global economic slowdown, nonbank lenders accounted for a significant proportion of new advances, up from a negligible amount a decade earlier. The nonbank sector, mainly comprising prime lenders, began to include specialist nonconforming, subprime, and high LTV ratio lenders in the 2000s. As a result of the growth in the nonbank sector, competition increased, consequently driving down interest margins across the housing-loan sector. Growth in the nonbank sector slowed abruptly due to the global economic downturn, which reduced access to funding and increased the cost of funds. Consequently, nonbank originators have reduced their origination volumes, and some have
revised their business models to depend less on securitization.

One distribution channel used in the market is mortgage originators, also known as mortgage brokers or mortgage managers. These are companies or individuals who refer borrowers to lenders in exchange for a commission from the lender. Brokers in Australia have access to a wide range of products from different lenders, usually assist borrowers with the application process, and liaise with lenders about required information and approval decisions. The emergence and influence of mortgage brokers led to substantial changes in the residential mortgage market. Although it is difficult to accurately quantify, around 40% of new loans were sourced through brokers before the capital market dislocation, with some lenders significantly more reliant on this distribution channel. Credit rationing by lenders due to the economic slowdown saw a material reduction in broker-sourced origination. However, anecdotal evidence shows that broker volumes have been increasing recently, though the incentives offered to brokers have decreased as lenders have made commission conditions more stringent.

Banks, building societies, and credit unions are regulated by the Australian Prudential Regulatory Authority (APRA).

**Loan life cycle**

A typical Australian housing loan will follow a similar course during its life cycle. Broadly, the stages of a typical loan would include:

- **Loan application by borrower**--this could be made directly by the borrower to the lender, or could be via a third party channel such as a mortgage broker.
- **Verification**--the information provided on the loan application is checked to verify the accuracy of the information including but not limited to the borrowers identification, credit history, savings history, and income.
- **Loan approval**--the application is then sent to credit officers with delegated lending authorities for assessment of the application according to the lenders' lending policies. The approval process can be centralized or decentralized, and may incorporate automated credit decisioning if certain criteria are met. If a loan requires mortgage insurance, it is typically referred to the insurance provider for approval, unless the lender has a delegated underwriting authority from the insurer.
- **Letter of offer**--upon final approval, an indicative letter may be issued to the borrower with a final offer conditional on satisfactory valuation of the security property and that general insurance is taken on the security property by the borrower.
- **Valuation**--the lender will obtain a valuation of the property.
- **Settlement**--if conditions are met and the borrower accepts the letter of offer, the lender settles funds and lodges titles at the Land and Title Office.
- **Servicing**--the ongoing maintenance typically includes but is not limited to borrower information updates, redraws, top-ups, and interest rate adjustments depending on the loan features. If a loan is fully repaid or refinanced, then the loan is discharged.

For loans that fall into arrears, and are unable to become current, the following steps may also become a feature of the loan life cycle:

- **Loan in arrears**--if a loan falls into arrears, then the servicing of the loan will also include contacting the borrower to discuss payment or alternatives, for example, short-term assistance through a hardship relief program.
- **Mortgage in possession**--if arrears cannot be rectified, then the lender may issue a statutory notice or statement of claim, and apply to the Supreme Court for judgment and eviction. The lender will through its agent take possession,
obtain an updated valuation, market and sell the property.

• Realization of property--maintenance work may be required prior to marketing of the property, and proceeds of the
  sale would be applied to any fees and expenses associated with taking possession and selling the property, and the
  repayment of outstanding interest and principal due on the loan.

• Mortgage insurance--for insured loans, a claim is lodged for outstanding amounts not covered by the property sale
  proceeds. For loans where mortgage insurance applies, the mortgage insurer is kept informed throughout the
  realization process.

In general, the time period from a loan falling into arrears to realization of the security property through sale can take
between 8 and 12 months on average. However, this can depend on the property location and market conditions
prevailing at the time. Other factors that may extend this process may be legal disputes or disputes relating to hardship
programs.

Underwriting standards
The underwriting policies and procedures of bank and nonbank lenders for residential mortgages are of a relatively
uniform and high standard throughout Australia. This is primarily due to Australia's prudential regulatory framework,
consumer credit legislation, the nature and maturity of Australia's mortgage market, and the extensive use of lenders'
mortgage insurance. The standards mainly focus on establishing a borrower's capacity and willingness to pay, and the
quality and value of the underlying security. The mild stress experience in Australia through 2008 and 2009 has tested
some newer products, including low-documentation (low-doc) loans as well as lending to nonconforming borrowers,
though these products represent less than 2% of securitized loans rated by Standard & Poor's and overall loss
experience remains low.

Borrower income and serviceability
Australian lenders generally verify a borrower's income by using a number of standard methods, such as sighting two
recent pay slips, reviewing bank statements for regular cash flows, or by obtaining a letter from the borrower's
employer. Self-employed borrowers tend to provide tax-assessment notices and returns and financial statements as
proof of income, and are generally required to have been in business for a minimum period of two years. The
exception is for "reduced documentation" or low-doc products, where borrowers usually declare their income to the
lender without full verification of the borrowers' income from traditional source documents. However, more recently
the standard for low-doc verification was broadly raised after the introduction of the responsible lending conduct
obligations of the National Consumer Credit Protection (NCP) Act. Reduced documentation products are described in
further detail in the Reduced Documentation Loans section.

Serviceability is typically determined by one of two methods, with the appropriate method determined by the lender.
One method involves ensuring that debt commitments do not exceed a certain percentage of a borrower's gross
monthly income, usually about 30% to 40%. The other method involves calculating surplus income by deducting living
expenses and debt repayments (with a 1% to 2% interest-rate buffer) from monthly income net of tax. The minimum
level of surplus income required for a loan to be approved generally ranges from a 1:1 ratio—that is, net monthly
income less living expenses and debt repayments equal zero—to a 1.25:1 ratio, so the monthly surplus after debt must
be 25% of net income. The calculation of living expenses depends on the lender, but many use the University Of
Melbourne's Henderson Poverty Index or a multiple of it.
Savings verification

Australian lenders traditionally required borrowers to prove that they have a regular savings pattern. Standard & Poor's believes that it would be prudent for a lender to review a borrower's savings history because this indicates a borrower's ability to forego a portion of net income and decreases the likelihood of payment shock when mortgage repayments are required. While such standards across the industry are changing (mortgage insurers currently require genuine savings for loans at certain LTV ratio levels), Standard & Poor's believes that the majority of borrowers have demonstrated a regular savings pattern.

Credit reporting

The ability to access the historical credit performance of a borrower is generally an integral part of the decision to extend credit. Veda, the primary credit-reporting agency in Australia, has a database covering about 20 million individuals and companies. Most Australian lenders conduct a credit check of a potential borrower as part of their underwriting processes.

Credit-reporting agency subscribers include banks, financial institutions, other credit providers, telecommunication companies, utilities, and parties with an interest in the payment patterns of nonperforming customers. Subscribers provide credit-reporting agencies with details of any application for credit, loans repaid, and accounts overdue by 60 days or more.

The integrity of the credit-reporting agency's database depends on diligent reporting of relevant information by subscribers. Most subscribers, particularly credit providers, provide the required information to the agency, though delays may occur and defaults may not be notified until outstanding accounts exceed 120 days, or when legal action to recover the debt has been undertaken. Therefore, borrowers who are irregular for up to 120 days may not be captured by the agency.

In Australia, the Privacy Act regulates the use of consumer credit information. The Act prevents a credit provider from disclosing the satisfactory credit performance of a borrower to a credit-reporting agency. As a consequence, Australia has a negative credit-reporting environment, where the information available from an agency is confined to credit enquiries made by prospective borrowers, defaulting accounts, court judgments, or bankruptcies.

The government on May 23, 2012, introduced a bill to parliament to amend the Privacy Act. Reforms subsequently have been made, regulated by the new Part IIIA of the Privacy Act, and a Credit Reporting Code of Conduct coming into effect in March 2014. The reforms are broadly designed to:

- Increase the transparency and accountability of credit providers and credit-reporting agencies in their dissemination, use, and the accuracy of information collected on individuals.
- Make it easier for individuals to access and correct their credit reporting information; and
- Give new enforcement powers to the privacy commissioner to further investigate complaints about a credit reporting dispute.

The amended Privacy Act and the new Credit Reporting code have moved Australia from a negative credit-reporting environment to a new comprehensive credit-reporting environment, in line with many other Organisation for Economic Cooperation and Development (OECD) countries. However, it is likely to take some time to develop robust, positive credit-reporting systems in Australia. Veda has already introduced a VedaScore ranking—a number between
one and 1,200—that summarizes where an individual stands on their credit history at a specific point in time. The higher the VedaScore, the better an individual's credit worthiness. Over a longer term, this will aid lenders' underwriting processes.

**Property-valuation methods**
When underwriting a mortgage loan, Australian lenders will value a property using one of several methods. For loans with primary lenders’ mortgage insurance (LMI), the minimum valuation requirements will be determined by the LMI provider. When loans are originated without primary LMI, such as loans that are ultimately covered by a pool insurance policy when the loan is securitized, the valuation method initially will be at the discretion of the lender, and reviewed by the LMI provider if pool cover is requested.

Full property inspections by a qualified valuer tend to be undertaken for riskier loans or properties. A full valuation gives a valuer the best opportunity to understand the specific conditions of the property that may affect the future sale value. Some lenders also rely on "kerb-side" or "drive-by" valuations, which involve a valuer estimating the value of a property by viewing it from the street. This is less comprehensive than a full valuation. Electronic valuations are now also in use with a variety of valuation models and approaches available to lenders. They include using a statistically based valuation through to a registered valuer utilizing satellite photos, site photos, and street maps to value the property from a desktop, with the option of conducting a full onsite valuation if this information does not provide sufficient clarity.

Many lenders have "no valuation" policies that rely on other methods to determine the realizable value of a security property for loans with lower LTV ratios. These include relying on the contract of sale for "arms-length" transactions, valuer-general assessments, council rate notices, or databases of historical sale prices to substantiate borrower estimates of property values. Standard & Poor's believes that the methods under the "no valuation" policy approach are less precise than a full valuation, leading to less certainty concerning the realizable value of the security property.

Nonconforming and subprime lenders generally require full valuations from a registered valuer and, in some cases, obtain a second or "check" valuation for a sample of loans on more specialized properties.

**Residential mortgage loan servicing**
In the Australian market, servicing is generally undertaken by the originator of the mortgage loans, though outsourcing some or all of the servicing functions to third parties is becoming more common.

A number of servicer transitions have occurred, particularly in the subprime and nonconforming sector, during the past few years, following the exit of some lenders from this market sector.

The servicer transitions that have occurred in some subprime transactions have not led to any deterioration in the performance of these transactions. Instead, we have observed that the transitions have typically led to the stabilization of the transaction's performance. In our operational reviews of replacement servicers to date, we have observed that the transition to new servicers has been managed well, with minimal disruption to existing processes and an orderly migration to new servicing platforms. Furthermore, as nonconforming lenders seek to diversify their business revenue given the downturn in origination volumes, there has been no shortage of quality back-up servicers willing to assume responsibility for the servicing and special servicing of subprime portfolios when incumbent servicers are removed.
Servicing in Australia is generally of a high quality, by global standards. The extensive application of technology and electronic funds transfer arrangements are features of the Australian market.

Servicer evaluations performed by Standard & Poor’s indicate that most servicers involved in securitization transactions maintain a relatively high standard. Out of nine residential servicers with Standard & Poor's public rankings, 89% are ranked STRONG and 11% ABOVE AVERAGE.

The Role Of Lenders' Mortgage Insurance

In Australia, the majority of prime residential mortgages securitized through the RMBS market are fully mortgage insured under either a primary or pool mortgage insurance policy. Under the primary policy, LMI providers typically underwrite each loan individually. A pool policy is a policy taken out mainly for securitization purposes, and, as the name suggests, is underwritten on a pool basis, and generally where the loans have LTV ratios below 80%.

A limited number of lenders may have delegated authority to underwrite in accordance to LMI providers' guidelines under an open policy; LMI providers do a sample audit of the underwriting of such policies. Almost all policies are provided by an insurer with a financial strength rating of at least 'A+', such as Genworth Financial Mortgage Insurance Pty Ltd. (Genworth Australia) and QBE Lenders' Mortgage Insurance Ltd. (QBE LMI). However, a few lenders insure through captive insurers that are rated lower than the 'AA' category or are unrated. The underwriting and servicing standards imposed by the mortgage insurers have a strong bearing on the policies and procedures of lenders using the RMBS market, particularly for the nonbank lenders who rely on securitization for funding. The ratings on Genworth Australia and QBE LMI remain higher than their parents’ core operating companies' ratings as we consider them to be partly insulated subsidiaries. This view is largely supported by Australia's robust regulatory regime, which we believe affords these entities with a degree of protection from financial deterioration at the group level.

LMI was introduced in Australia in 1965 to cover lenders against losses on loans secured by mortgages. This type of insurance became popular because lenders were often unwilling to provide home loans with an LTV ratio in excess of 80%, and due to the Australian Prudential Regulation Authority's (APRA) prudential framework including lower capital requirements for insured mortgages of smaller financial institutions. Mortgage-insured loans with LTV ratios of up to 95% are common today. The availability of insurance to cover the additional risk of lending to this level allowed lenders to be less restricted in determining acceptable loan profiles, thereby giving residential property buyers greater access to the housing-loan market. The Australian LMI experience initially mirrored the U.S. practice, in which cover was restricted to the top 20% of the principal loan balance applying only to owner-occupied residential lending. The industry has since diversified, and 100% insurance coverage for the residential market, including residential investment, is standard practice in Australia today.

Mortgage insurers' product suites include reduced or low documentation loans, high LTV loans, large loans, and loans to borrowers with minor credit impairments. However, LMI providers were quick to alter criteria and reduce their exposures to risky loans under slowing economic conditions, such as by reducing LTV ratios for some products, particularly low-doc lending.

With the LMI market now heavily concentrated toward QBE LMI and Genworth Australia, there is investor sensitivity
about the over-reliance of the RMBS market on LMI providers. However, our analysis of 723 classes of RMBS shows that this dependency diminishes over time because the LMI cover is not the only form of credit enhancement in a transaction. For further detail of this issue, refer to "Scenario Analysis: 2013 Update To Lenders’ Mortgage Insurance Sensitivity Analysis Of Australian Prime RMBS," published on Nov. 25, 2013. The claims-payout ratio remains high, at 90% or higher. However, claims adjustments occurred during the 2008 and 2009 stress period because of misrepresentation; illegitimate claims, such as penalty interest; excessive property maintenance costs; and very limited cases of claim reduction due to borrower- or broker-related fraud. Although the overall cases remained low, these cases were the first to be revealed in Australia’s securitization history and attracted heightened attention.

Standard & Poor’s has revised its methodology for assessing LMI as a form of credit enhancement in global RMBS, global covered bonds, and debt ratings in the U.S. municipal housing sector, which became effective on Feb. 2, 2015 (see "Criteria: Methodology For Assessing Mortgage Insurance And Similar Guarantees And Supports In Structured And Public Sector Finance And Covered Bonds," published Dec. 7, 2014). In Australia, the rating impact is likely to be mainly driven by the changes to the claims-adjustment assessment and predominantly affect the subordinated tranches in Australian RMBS, for which LMI is in many cases the only source of hard credit support.

Housing-Loan Product Types

The home-lending market has been subject to high levels of competition, and product innovation has become one of its key features. Most lenders offer standard housing-loan products with a wide range of options. Initiatives such as reduced-documentation loans and reverse mortgages have emerged. However, these newer products have lost their popularity because funding has become more challenging for mortgage originators, who have generally reduced their origination and tightened lending standards.

Standard housing loan
The standard housing loan in Australia is a fully amortizing principal-and-interest loan, with a term of 25 to 30 years, secured by a first-ranking registered mortgage over the borrower’s home. The interest rate on the standard housing loan is a variable rate that may be altered at any time at the lender’s discretion. For competitive reasons, however, most lenders tend to only adjust interest rates when the RBA adjusts monetary policy and announces an adjustment to the overnight cash rate. However, in recent years, we have seen some lenders adjusting interest rates out of step with the RBA due to the tight funding markets. It is common practice for Australian lenders to qualify borrowers at a rate of 1% to 2% above the current variable rate, as a buffer, when assessing the debt-servicing capacity of a prospective borrower.

The buffer tends to be higher in a weaker economic environment, coupled with an interest-rate environment in which future increases in interest rates are likely and could introduce financial stress to borrowers. On the other hand, the buffer tends to narrow in a strong economic environment, in which borrower serviceability is strong and competition among lenders intensifies.

Interest-rate options
Borrowers generally have a choice of interest-rate options, depending on the loan product in question. Common options include:
• Fixing the interest rate. This is usually done for a period of up to five years, though some lenders do offer fixed rates for longer periods. From the fixed-rate expiry date, the standard variable rate applies, unless the borrower elects to refix at the then-current rate for a further period. It is common practice in Australia for lenders to charge full economic break costs in relation to fixed-rate loans if a loan is repaid during the fixed-rate period.

• Discounting the interest rate for a period of up to one year at the commencement of the loan, before reverting to the standard variable rate. These rates are known as “honeymoon,” “discount,” or “teaser” rates.

• Selecting a “split rate,” whereby the borrower may separate a loan into two or more accounts, and the rate on each account may be either fixed or variable, or principal and interest, or interest only.

Interest rates tend to vary among loan products, with higher rates for products with more features, investment-purpose loans, line-of-credit loans, subprime or nonconforming loans, and reduced documentation or low-doc loans.

**Repayment options**

Borrowers usually have the option to make principal and interest repayments, or to select an interest-only period, usually for up to 10 years. After an interest-only term, the scheduled repayments are adjusted to ensure that the loan fully amortizes over the remaining term of the loan. A small number of lenders offer “bullet” repayment loans, under which a borrower is required to repay either all or a significant portion of the principal on the loan maturity date.

Borrowers are usually able to prepay their loans in full or in part without significant penalties from lenders.

**Loan purposes**

Borrowers in Australia use the proceeds of residential mortgage loans for a variety of purposes. The most common reason is to purchase residential properties, either for owner-occupation or investment purposes. The second most common reason for taking out a loan is to refinance an existing housing loan. Other common reasons include debt consolidation, using equity in property to release cash for investments and consumer purposes, and housing construction. For low-doc loans, it is a cost-effective means for some borrowers to obtain funding for their small businesses.

**Property occupancy**

Housing loans can be secured for properties used for owner occupancy or investment. In Australia, loans secured for investment properties have performed no worse than loans secured for owner-occupied properties. Historical lenders' data suggest that investor loans have performed better than owner-occupied property loans. However, we have seen evidence that borrowers globally in times of stress are more likely to default on loans for an investment property than a home. This could be the case for investment loans secured over medium- to high-density apartments, which are more susceptible to speculative activity.

**Redraws, payment holidays, and further advances**

Repayments on standard housing loans are set at amounts that will fully amortize the outstanding balance during the term of the loan. Borrowers may make additional payments at any time to reduce the expected life of the loan. Most variable-rate housing loans include redraw facilities that permit borrowers to redraw, for any purpose, any funds paid ahead of the scheduled amortized balance of the loan. Many institutions allow borrowers to make redraws indirectly by taking a "payment holiday," whereby loan repayments are capitalized to the account until the current balance equals the scheduled balance. At this point the borrower must resume making payments. The repayments, term, and scheduled amortization curve of the loan are unaffected by redraws and payment holidays.
A further advance allows a borrower to request additional funds through a variation of the mortgage. The lender undertakes a new credit assessment at the time of the further advance. Historically, an originator has often decided to remove a loan from a securitized pool when the further advance increases the total amount drawn beyond the scheduled amortized balance of the original loan. More recently, however, many issuers have begun to accommodate further advances within the transaction structure.

**Line-of-credit loans**

Line-of-credit or home-equity loans have been a feature of the Australian lending landscape for some time. Under these loans, borrowers receive a line of credit secured against their homes. The limit is generally fixed, though it may be structured to amortize over a nominated term. Borrowers often have transactional access to the account, to draw up and down against the limit as they please. The interest-rate options are similar to those available under a standard housing loan, though repayments may be irregular because the loan operates like a revolving credit facility.

**Interest-offset accounts**

Housing loans offered by deposit-taking institutions, such as banks, often provide an interest-offset account directly linked to the loan. An interest-offset account is a noninterest-bearing deposit account held by the lender. The lender notionally reduces the balance of the loan account by the amount of funds held in the offset account for the purpose of calculating the interest payable on the loan account.

In RMBS deals, the seller usually pays the interest-offset amount into the trust during each payment period. When this arrangement is not in place, increased liquidity support and interest-rate mechanisms, such as basis-swap or threshold mechanisms, are used to mitigate against liquidity and yield risks.

**Reduced-documentation loans**

Reduced-documentation loans—also known as low-doc, stated income, or partially verified loans—have been designed primarily for self-employed borrowers. With low-doc loans, the usual savings and income-verification requirements are relaxed. Most originators of reduced-documentation loans use a signed income declaration from the borrower when calculating loan serviceability. Historically, some only required a signed statement from the borrower, stating that the borrower could afford the loan repayments. More recently, however, changes in Responsible Lending Conduct Obligations of the National Consumer Credit Protection Act require credit providers to make reasonable inquiries and take reasonable steps to verify information, and make a final assessment as to whether the consumer has the capacity to repay the loan without experiencing financial hardship. As a result, standards for verifying information and assessing borrower capacity have generally been raised for reduced-documentation loans.

Underwriting requirements vary from lender to lender, but they typically impose lower maximum LTV ratios. Standard interest rates for these loans had been more common until 2008. Lenders charged an interest-rate premium after an initial period to account for the higher risks associated with these loans. The practice of charging an interest-rate premium is again becoming more widespread. LTV ratio restrictions are often the prime underwriting mechanism to address the perceived high risk for loans of these types due to the reduced availability of information.

**Nonconforming loans**

Nonconforming loans are residential mortgage loans that would not typically qualify for a loan from a traditional prime lender and are generally not eligible to be covered by LMI. Nonconforming loans may include low-documentation
loans and subprime loans. Subprime loans are loans to borrowers with adverse credit histories. The nonconforming and subprime lenders (specialist lenders) generally impose more robust underwriting standards and processes, reflecting the added risks associated with this specialized market.

**Reverse-mortgage loans**
These loans enable borrowers to access equity in a property by borrowing against the value of the house. Repayment of the loan is not required until the property is sold. Sale of the property will occur at the earlier of the death of the homeowner, when the owner ceases to occupy the home, or a contractual breach.

Typically, these loans are offered to retirees as lump sums, periodic payments, or lines of credit, and are secured by a first-registered mortgage over residential property. There remains no publicly rated reverse-mortgage securitization in the Australian market, but the aging of the Australian population is increasing interest in reverse-mortgage loans.

Reverse-mortgage loans are not included in a typical RMBS transaction.

**Construction loans**
Investors in Australian RMBS have limited exposure to loans that fund the construction of individual houses as these loans have been included in very few RMBS transactions. Historically, the risks introduced by these loans, which include the possibility of cost overruns, builders' time delays, and builder defaults resulted in the assets being excluded from RMBS transactions by arrangers. Standard & Poor's considers applying additional stresses when assigning assumed losses to factor in the increased risk.

**Australian Legal And Regulatory Systems Applicable To RMBS**

Generally speaking, the Australian legal system is a common-law system similar to the U.K., comprising statutory law and case-law components. Property and consumer-lending laws regulate the rights and obligations of borrowers and lenders. Despite recent consumer-friendly reforms, the law generally favors lenders because it provides a conclusive registration process for real property and a prescriptive but efficient enforcement process.

**Land title and registration**
Most privately owned land in Australia is recorded on a comprehensive, state-based register with a unique title registration number assigned to each parcel of land known as the Torrens Title system.

All dealings with land, such as the transferring or granting of a mortgage should be noted on the title. A registered interest can only be defeated if it was registered with fraudulent intent. The priority between competing interests in land typically will be determined by referring to when they were registered. In most cases, the first interest to be registered will prevail.

The title-registration process ensures a low-risk environment for purchasers and lenders, providing basic due diligence is undertaken. In most cases, the due diligence process is performed by an approved solicitor, the lender’s staff, or a title insurer. Due diligence primarily involves obtaining and checking the registrar’s copy of the certificate of title and other publicly available information.

Most residential properties are held on freehold title except in the Australian Capital Territory, which has long-term
leasehold interests. Different forms of titles, such as strata and leasehold titles, also can be included in securitized pools. Strata titles are similar to the U.S. condominium titles. When they are included in securitization pools, leasehold titles typically have terms that are at least 15 years in excess of the term of the securitized mortgage.

**Enforcement process**

Australian real property legislation prescribes a process for enforcement and recovery of defaulted mortgages. This involves the issuance of written default notices and giving the borrower a maximum timeframe to remedy the default. If the default is not remedied within the prescribed time, the lender is entitled to sell the property and recover the debt. Standard & Poor's assumes that the entire recovery process will take no longer than 12 to 24 months for a weighted-average pool. The Australian process has some stringent procedural requirements, but is generally more favorable to the lender than the equivalent U.S. process.

**Personal Property Security Act (PPSA)**

In Australian securitizations, the Special Purpose Entity (SPE) typically grants a security for the benefit of the holders of the rated security. This security previously was by way of a fixed and floating charge. When the Personal Property Securities Act came into force in January 2012, fixed and floating charges were essentially replaced with general security agreements that also require registration to perfect the security.

**Personal recourse**

In Australia, lenders have personal recourse or "full" recourse against borrowers for any shortfalls in their recoveries of mortgage loans. Lenders have the right to obtain court orders to access any of a borrower's other assets or to have the borrower declared bankrupt.

**Set-off**

In the context of residential mortgage lending, set-off can occur in two ways:

- Equitable set-off, which may be exercised at any time; or
- Insolvency set-off, which may be exercised on the insolvency of one of the parties.

Most mortgage loans seek to avoid the risk of equitable set-off by including a term whereby the borrower agrees not to set off any payments due under the loan against any amounts due by the lender to the borrower. The transaction parties obtain confirmation from their legal representative—a copy of which is usually provided to Standard & Poor's—that such an agreement is effective and mitigates set-off risk in a securitization transaction. Generally, we understand a well-drafted clause will be effective unless the borrower maintains an account with the lender that is in some way connected to the loan, and a clean legal opinion about the set-off risk of a transaction cannot be given.

In the absence of a waiver of set-off clause in the loan documentation, the deal structures may seek to mitigate this risk. A borrower's equitable right to a set-off crystallizes when the borrower is notified that his or her loan has been assigned to a third party. This means that the borrower remains entitled to exercise an equitable right to set off deposits up to the time of notice, but is not entitled to set off amounts deposited after receiving the assignment notice. Typically, these accounts are transaction accounts that have high turnover rates that quickly reduce set-off exposures.

Insolvency set-off can occur when a deposit-taking institution lends money to a borrower who has funds deposited with that institution. If the lender becomes insolvent, the borrower may set off his or her deposit against the
outstanding loan. However, a borrower's right to insolvency set-off will be eliminated on assignment of the loan to a special-purpose entity. The assignment breaks the required mutuality between the borrower and the lender.

**Taxation issues**

*Stamp duty* Depending on the states and territories involved, purchases and sales of real estate in Australia may be subject to stamp duty. The rate of stamp duty varies among states and territories, but in most cases it is levied on the gross purchase price. Depending on the state or territory in which a property is located, the duty may be as high as 6% of the purchase price.

*Interest deductibility* Interest on mortgage loans used to finance owner-occupied properties in Australia is not tax deductible. This increases the incentive to repay home loans faster. In contrast, interest paid on loans used to finance investment properties that generate rental income are tax deductible, and this may lead to a slower rate of repayment. Empirical data collected by Standard & Poor's on portfolios indicate that this distinction does not significantly affect the default frequency.

*Capital-gains tax* Any gains realized on the sale of a borrower's primary place of residence are free from tax. However, any gain realized on the sale of an investment property is subject to capital gains tax, with the tax rate higher if the property is sold within 21 months. The costs associated with transferring property, including stamp duty and capital-gains tax, mitigate the risk of widespread speculative activities.

*Home-ownership incentives and disincentives* Over the years, Australia's federal and state governments have offered numerous incentives to encourage home ownership. Recently, the federal government offered a series of grants and bonuses available for certain time periods to first-home buyers. In addition to these grants, some state governments reduce the amount of stamp duty payable for first-home buyers, though some of these incentives have been rolled back in certain states.

**Key regulations governing the Australian mortgage market and RMBS**

*National consumer credit regime* Recent consumer credit law reforms have resulted in a single national consumer credit regime governed by the National Credit Protection Act 2009 (Cth) (NCCP) administered by the Australian Securities and Investments Commission (ASIC).

The NCCP includes the National Credit Code (NCC), which applies to Australian credit license holders with respect to credit contracts entered into on or after July 1, 2010. The NCC replaces previous state-based consumer credit codes and the Uniform Consumer Credit Code (UCCC), but largely replicates the previous UCCC. It applies to all contracts for the supply of credit to individuals or strata corporations for the following:

- Personal, domestic, or household purposes;
- To purchase, renovate or improve residential property for investment purposes; or
- To refinance such debt.

The NCC imposes a code of conduct on lenders, which dictates a range of conditions, such as minimum disclosure requirements. Other conditions cover interest-rate charging and adjustment mechanisms; procedures for contract variations, including on the basis of financial hardship as a result of illness, unemployment or other reasonable causes; and enforcement procedures.

*Unfair contract terms* Under the NCC, the terms of an "unjust" contract may be reassessed by a court in certain circumstances, such as when a lender has used unfair tactics, or when a lender knew or failed to determine that the borrower could not afford to repay the loan. An unfair contract term will be void, but the contract will continue if it is
capable of operating without that term.

**Hardship provisions** In 2009 the Australian government established a set of principles to assist borrowers experiencing financial difficulty. The principles provide guidance for consumers and the retail banks, credit unions, and building societies that have adopted them.

Unlike other jurisdictions, current Australian financial hardship relief measures do not contemplate reductions in loan interest rates or principal amounts. This would maintain the expected income of Australian RMBS transactions even if more borrowers defaulted to access the scheme to their advantage ("Higher Hardship Claims May Have Limited Impact on Australian RMBS," March 2, 2010). The hardship claims dispute resolution process involves consultation with the Financial Ombudsman, and while waiting for a resolution can lengthen the period in which loans are in arrears.

A breach of any of the key requirements of the NCC may lead to criminal sanctions and severe civil penalties. However, a contravention of the legislation will generally not affect the validity of the credit contract or related mortgage or guarantee.

**Banking regulation - APS 120** The Australian Prudential Regulation Authority (APRA) regulates securitization activities of authorized deposit-taking institutions (ADI) through its Prudential Standard APS 120. The Prudential Standard requires ADIs to adopt prudent practices to manage the risks related to securitization and to ensure that appropriate capital is held against that risk. Under the standard, ADIs are not allowed to provide implicit support to a securitization, both traditional and synthetic.

This applies to all roles undertaken by the ADI in a securitization, including but not limited to when the ADI is an originating ADI, provides a facility and derivatives to a securitization, and through investment in securities issued by the securitization transaction. ADIs must hold regulatory capital for credit risk against all securitization exposures.

APRA recently suggested further changes to APS 120 may be in the pipeline. A discussion paper outlining the changes is expected in early 2014. The main changes proposed are the promotion of simplified two-tranche funding-only structures, simpler requirements for ADIs seeking capital relief and the intention to allow the use of master trusts. However, these high-level points are still subject to a formal discussion paper and consultation process, and the proposed changes have not yet been confirmed.

**Recent regulatory initiatives in the Australian mortgage and RMBS markets**

There have been a number of regulatory initiatives that have been implemented in the securitization industry to increase transparency, understanding, and ultimately improve investor confidence in this sector. Some of the more recent initiatives directly impacting securitization include:

- The development of criteria to help identify asset risk, structural risk, and fiduciary risk in securitizations. The Task Force on Securitisation Markets (TFSM) was established in 2014 by the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO) to identify factors that may be hindering the development of sustainable securitization markets and to develop criteria to identify and assist in the financial industry's development of simple and transparent securitization structures (BIS Consultative Document: Criteria for identifying simple, transparent and comparable securitizations, Dec. 11, 2014.)
- APRA "APS 120" latest developments: APRA released a discussion paper in April 2014 that outlines changes to the existing APS 120 framework. The main changes proposed are the promotion of simplified two-tranche funding-only
structures, simpler requirements for ADIs seeking capital relief, and the intention to allow the use of master trusts. APRA has stated it does not intend to finalize any reforms to its prudential framework for securitization until, at least, the completion of the Financial System Inquiry.

- RBA data reporting requirements: The RBA announced in October 2012 that it will require detailed transaction-related data, including loan-level data on the underlying assets in relation to RMBS eligible for its purchase. This initiative is designed to increase transparency, standardization of data, and greater regulatory consistency to enable more enhanced analysis of securitization transactions. This requirement is effective from July 2015.

- Dodd Frank 17g-5 and 17g-7: Exemptions for both rules may apply to Australian issuance. Rule 17g-5, requiring certain disclosures on a password-protected website, has exempted "non-U.S. transactions" since its inception. The current exemption runs until Dec. 2, 2015. Rule 17g-7 requires certain disclosures in relation to representations, warranties, and enforcement mechanisms available to investors. Dodd-Frank will provide an exemption to non-U.S. issuers or obligors when the transaction is outside the US.

The Australian Securitisation Forum (ASF) is the peak industry body in Australia, representing participants in the Australian securitization market. The ASF is responsible for coordinating and implementing appropriate market standards and practices to increase transparency and investor confidence in Australia's securitization market.

In addition to the initiatives outlined above, a number of regulatory initiatives have been announced over the past 12 months that were aimed at reinforcing sound lending practices in the Australian mortgage industry. These include:

- Prudential Practice Guide APG 223 Residential Mortgage Lending (APG 223): APRA released this prudential practice guide for ADIs on sound risk-management practices for residential mortgage lending in November 2014. The publication of this practice guide was to reinforce sound lending practices. As part of this exercise, APRA has indicated it will be further increasing the level of supervisory oversight on mortgage lending, paying particular attention to higher-risk mortgage lending, the strong growth in lending to property investors, and loan affordability tests for new borrowers.

- Update to ASIC's guidance on responsible lending: ASIC has updated its "Regulatory Guide 209 Credit licensing: Responsible lending conduct (RG 209)" to make it clear that credit licensees cannot solely rely on benchmark living expense figures when determining borrower serviceability; they must inquire into the borrower's actual living expenses. ASIC also announced on Dec. 9, 2014, that it will be undertaking surveillance into the provision of interest-only loans as part of a broader review by regulators into home-lending standards.

- Financial System Inquiry (FSI): The FSI released its "Final Report" in December 2014. Its objective was to examine how the financial system could be positioned to best meet Australia's evolving needs and support the nation's economic growth. Some of the more pertinent recommendations in the report that would have a direct impact on the level of competition in the mortgage industry if implemented include narrowing the differences in risk weights in mortgage lending between ADIs using internal ratings-based risk-weight models and those using standardized risk weights.

**Key Structural Issues Of Offshore RMBS Issuance**

**Cross-jurisdictional issues**

Any securitization that issues into the U.S. or Euro markets also must address numerous cross-border issues, such as sovereign risk, foreign-currency risk, and cross-border taxes, all of which are not present in a domestic transaction.
Sovereign risk
Australia currently has foreign and local currency unsolicited ratings of AAA/Stable/A-1+.

Cross-currency swap
Australian RMBS transactions issue securities denominated in currencies other than Australian dollars. Cross-currency swaps are entered into to hedge the obligations on the notes and the Australian-dollar cash flows on the underlying mortgages. In an adverse credit cycle, the counterparty risk becomes a more prominent factor in influencing the credit quality of a transaction. For example, global RMBS transactions with multicurrency obligations expose all noteholders, including Australian dollar-denominated obligations, to currency-swap counterparty risk.

Withholding tax
An Australian resident issuer may be required to deduct withholding tax from payments of interest to a foreign-resident investor unless the specific exemptions provided for in section 128F of the "Income Tax Assessment Act 1936" (and subsequent amendments) apply to the payments. Satisfaction of the exemption requirements is relatively straightforward, and most transactions are structured to include them, with the result that offshore investors receive all payments free and clear of Australia-levied taxes.

Trustee roles
Most transactions use a separate trustee for the trust and security trustee. For offshore transactions, an additional note trustee may be appointed because the investors may be located offshore while the supporting collateral is in Australia. The security trustee is generally concerned with the maintenance and exercise of the secured assets, and usually will be based in Australia. The trustee is generally concerned with ensuring compliance with the note terms and conditions on behalf of the investors. If a separate note trustee is appointed, they fulfill some of these responsibilities and are likely to be domiciled in the U.S. or Europe to better coordinate with investors. Reporting lines between the trustees are typically documented. The note trustee typically provides instruction to the security trustee to take action under the security when required.

Performance Of Australian RMBS
Performance of Australian residential mortgage loans
Australian RMBS continue to perform well, with very low arrears and loss levels relative to outstanding loan balances. Total prime RMBS arrears remain low, as demonstrated by Standard & Poor's Performance Index (SPIN) for Australian mortgages. Leading indicators showed deterioration in loan performance, such as claims on mortgage insurers, and reported arrears increased between 2007 and 2012, compared to earlier periods where arrears remained largely below 1%. However, there was a reduction in claim frequency and claim severity in 2013 for insured loan amounts and a corresponding fall in arrears. While arrears increased during the 2007-2009 economic slowdown, the overall level remained low, at less than 2%. Arrears decreased significantly between January 2009 and December 2009 as a result of the expansionary monetary policy and fiscal stimuli. Arrears 30 or more days past due then started to trend upward, reaching a peak of 1.69% in January 2012 before steadily decreasing to the current level of 1.01% as of December 2014.

A more significant level of arrears is concentrated in nonconforming and portfolios and low-doc loans. Borrowers in
these portfolios are more susceptible to changing economic conditions and find it difficult to refinance when lenders
either exclude or impose a high standard, such as a lower LTV ratio, for these borrower types. Since the global
financial crisis, however, specialist lenders have also tightened their underwriting standards and decisively managed
default situations. More nonconforming pools now have a mixture of full-documentation loans to prime borrowers in
addition to low-documentation loans and more traditional subprime loans to borrowers with adverse credit histories.

Some of the fundamental characteristics of the Australian market that underpin the credit quality of residential
mortgage loans are:

- The full-recourse nature of loans to borrowers, which promotes borrower accountability.
- The consumer credit legislation promotes lender accountability, with recent amendment to Commonwealth and
  state legislation to further emphasize responsible lending obligations.
- The uniformity and high standards of the underwriting policies and procedures of bank and nonbank lenders for
  residential mortgages. This is primarily due to Australia's prudential regulatory framework, consumer credit
  legislation, the nature and maturity of Australia's mortgage market, and the extensive use of lenders' mortgage
  insurance.
- A strong home-ownership ethos and a high free-and-clear ownership rate.
- The rarity of severe downturns in nominal property prices across the country.
- The taxation system, which encourages rapid repayment of housing loans and acts as a disincentive to speculative
  behavior; for example, a high entry cost through stamp duty and capital gains tax, especially at a higher rate for
  investment properties sold within 12 months of acquisition.
- The strong population demographics, such as net immigration, natural population growth, an increasing number of
  households, and a shortfall in new home supply, support the underlying demand for new and existing residential
  properties.

Management and measurement of arrears

The two most common ways of measuring and managing arrears in Australia are the "scheduled-balance"
approach--also known as the "Australian arrears method"--and the "missed-payments" approach. The
scheduled-balance approach is used by most banks, credit unions, and building societies. The missed-payments
approach tends to be used by nonbank lenders that want to establish regular cash inflows to match their payment
obligations to investors who hold securities issued under their RMBS programs. The nature of missed-payments
reporting can be a leading indicator of potential future losses. Under this approach, a loan is in arrears the day a
payment is missed, regardless of whether the borrower is ahead of his or her scheduled loan balance by virtue of
having made early repayments.

There can be considerable differences between the levels of arrears measured under the two approaches. This can
often result in significant variances in the reported arrears position of a mortgage portfolio. Investors should be aware
of the distinction between the two measures. The missed-payments approach produces a higher but more conservative
measure of arrears.

The scheduled-balance approach involves measuring and managing arrears by reference to the scheduled amortization
curve of each loan. A loan is only deemed to be delinquent when the outstanding balance of the loan exceeds the
scheduled amortization balance. A loan will not be delinquent simply because a number of scheduled payments may
have been missed. This approach gives borrowers the flexibility to manage repayments to suit their needs on the

condition that the balance of the loan remains at or less than the scheduled amortization balance. Failure to make a loan repayment when the scheduled amortization curve is above the current loan balance is referred to as a "payment holiday."

The missed-payments approach deems a loan to be delinquent when a scheduled payment is not made, even though a borrower may be substantially ahead of the scheduled amortization balance. This approach is designed to ensure that borrowers establish a regular payment pattern, and it can provide an early warning of borrower credit issues, such as unemployment or marriage breakdown, which may affect a borrower's ability to meet loan repayments. This early warning provides the lender and borrower with more time to develop strategies to make losses less severe than they would be otherwise.

There is a wide range of lending products and the reporting of arrears figures can vary across participants. Investors should be aware that while consistency in reporting of arrears amounts is desired by Standard & Poor's, differences in measuring balances in arrears may result in a degree of incomparability between issuers.

The SPIN measures the weighted-average arrears—30 or more days past due—across prime and subprime RMBS transactions (chart 18a to chart 18c).

**Chart 18a**

**Australian RMBS Prime SPIN**

<table>
<thead>
<tr>
<th>Performance History</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-60% (left scale)</td>
</tr>
<tr>
<td>61-90% (left scale)</td>
</tr>
<tr>
<td>90+% (left scale)</td>
</tr>
<tr>
<td>Total current loan balance (right scale)</td>
</tr>
</tbody>
</table>

(Bil. A$)

Source: Standard & Poor's.

© Standard & Poor's 2015.
The prime SPIN in January 2009 peaked at 1.53% after an extended period at an average of about 1%. The SPIN declined to a low of 1.06% in late 2009, following a number of rate cuts, before trending upward again. It reached a high of 1.69% in January 2012 due to the effect on some borrowers’ financial conditions caused by weather-related occurrences, particularly significant flooding in Queensland. The SPIN has since steadily declined to 1.01% as of the end of December 2014.

Chart 18b

The nonconforming SPIN peaked at 17.09% in January 2009, reflecting the deteriorating economic conditions globally and domestically. The subprime SPIN eased as the Australian economy began to recover and stabilize. Arrears have since continued to decline. As of Dec. 31, 2014, arrears are at a low level of around 5.4%. While this is partly due to the resolution of the foreclosure process for some borrowers in default, there remains an underlying improvement in arrears levels.

The improvement in nonconforming arrears also reflects the inclusion of prime loans, some of which are insured, in more recent vintages of nonconforming transactions. By way of example, in 2006 approximately 53% of loans underlying nonconforming transactions were low documentation and the remainder were full-documentation loans. By contrast, more than 60% of loans underlying nonconforming transactions in 2014 were full-documentation loans.
Given the small volume of subprime and nonconforming loans now outstanding, we expect the subprime SPIN to exhibit greater volatility in percentage terms than the prime SPIN.

**Chart 18c**

**Australian RMBS Prime Low-Doc SPIN Performance History**

The low-doc SPIN peaked at 6.62% in January 2012. It was 4.72% as of Dec. 31, 2014. The relatively high percentage of arrears is a function of the decreasing outstanding balance of low-doc loans, while the dollar amount of loans in arrears has declined more slowly. Self-employed borrowers make up a larger proportion of the low-doc SPIN compared with the full-doc SPIN. These borrowers are more susceptible to mortgage stress in weaker economic climates because their businesses, and therefore cash flows, are generally more sensitive to periods of subdued economic activity, resulting in less available cash flow to meet borrowing costs.

Standard & Poor's each month publishes a suite of arrears charts, which are available at http://www.sfsurveillance.com.au.

**Causes of default**

We generally consider the major causes of default in Australia to be:

- Personal crisis, most commonly, marital disputes, illness, and death;
- Loss of income, commonly caused by job loss, a decrease in paid overtime, decrease in commissions, or the loss of
a second job; and
• Loan affordability, predominantly due to interest-rate increases or other commitments.

**Correlation of defaults and economic cycles**
The Australian economy, like all economies, is characterized by its cycles. In Australia, it is common to see a period with a frequency of defaults immediately before low or negative economic growth. The nexus between defaults and economic downturns indicates that borrowers in the years before a downturn expect good economic conditions and sound employment prospects to continue. This level of optimism fuels demand for property, raises prices, and pushes the serviceability of housing loans beyond the capacity of many people.

Expectations about the economy can act as a catalyst for change. When the market overheats, government monetary policy is tightened and the rise in interest rates leads to a decrease in affordability. At the same time, unemployment tends to increase. Higher property prices also trigger revisions to buyers' expectations and reduce demand, which ultimately results in lower property prices.

At the low point in an economic cycle, recession and loss or reduction of income may result. There is also likely to be an increased incidence of default and bigger losses suffered by those people with mortgages written leading up to and at the height of the boom. These loans may not be well enough seasoned to have built up substantial equity; in fact, they may have less equity than when written, as a result of potentially then-prevailing lower property prices.

Although an economic downturn can have severe results, the level of arrears and defaults in Australia during these stressed periods has remained low to date by global standards.

The performance of Australian RMBS through the 2007 to 2009 downturn displayed the correlation of defaults and economic cycles discussed above. The highest cumulative losses experienced have been in the 2004 and 2005 vintages.

**Losses on Australian RMBS pools**
The performance of Australian prime RMBS transactions has been robust to date; there have been no losses or charge offs--post-LMI and excess spread--on any rated notes. All losses as a result of foreclosures on properties secured by defaulted loans have been met by lenders' mortgage insurance, the seller (as damages under its representation and warranties), or excess spread.

Chart 19a and chart 19b show the cumulative loss experiences by vintage.
Chart 19a

Cumulative Net Losses By Vintage Of Origination For Prime RMBS Before LMI Claim

Source: Standard & Poor's.

© Standard & Poor's 2015.
The absolute level of losses on loans in Australian prime RMBS pools has been extremely low compared with the volume of loans that have been securitized. The highest cumulative loss experience is approximately 0.19% for the 2006 vintage, and all losses have been met through either LMI claim, the servicer, or excess spread. The 2010 vintage has seen a spike in the level of losses compared with similar vintages, though at 0.12% it is still low and is due to a single low-doc transaction representing 66% of the total absolute losses in this vintage. The loss amount has been covered by LMI and excess spread.

Chart 19c and chart 19d show the cumulative loss experience by vintage for nonconforming transactions.
Chart 19c

Cumulative Net Losses By Vintage Of Origination For Nonconforming RMBS Before LMI Claim

Source: Standard & Poor's.

© Standard & Poor's 2015.
Although higher than before the downturn, the loss experience remained low through the 2007-2009 economic slowdown. Cumulative losses on subprime loans have stabilized during the past three years for all pre-2009 vintages. Of the A$2.8 billion of nonconforming RMBS outstanding, the 2014 vintage makes up about 40% of the outstanding balance reflecting some refinancing of subprime RMBS, as well as some re-emergence of origination activities. The tightening of lending practices by a majority of lenders has created greater opportunities for nonconforming originators.

Mortgage insurance claims history
The experience of the Australian mortgage-insurance industry has been used to examine the performance of housing loans in Australia. Mortgage insurers have kept statistically significant portfolios and empirical data since 1965. Standard & Poor’s also has used surveillance information collected on rated RMBS programs during the past eight years. However, this represents a relatively stable economic period.
Notable periods in chart 20:

- Loans written after 1989 experienced long periods of decreases in lending rates, with moderate rises along the way.
- Australia experienced recessions during these periods in the early 1980s and again in the early 1990s.
- The stock market crashed in October 1987. More price volatility has been observed in the past decade.

The Australian mortgage insurance industry's claims experience for residential mortgage loans has been relatively low. The average cumulative claims frequency by underwriting year is about 0.6%. This has resulted in an average cumulative loss severity by underwriting year of about 0.2% of the total value of residential mortgage loans insured by Australia's four mortgage insurers from 1973. Chart 22 shows the cumulative claims frequency and loss severity of mortgage insurance claims by underwriting year. Based on our observations, we believe that a significant proportion of losses in a portfolio originated in a vintage tend to occur within the first five years, so the portfolios of more recent vintages have yet to show the full extent of any potential losses.
Loss curves
Prime amortizing mortgage loan pools display a typical loss curve, which is represented in chart 23.

Chart 21

<table>
<thead>
<tr>
<th>Month</th>
<th>Losses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>24</td>
<td>25</td>
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<tr>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>48</td>
<td>20</td>
</tr>
<tr>
<td>60</td>
<td>10</td>
</tr>
</tbody>
</table>

If nominal house prices begin to appreciate more slowly, the risk period could become longer because equity in the property would not accumulate as rapidly as when nominal prices were increasing quickly. The faster payoff rate in Australia, which is due to factors such as there being no tax deductions for interest payments of owner-occupier loans, may partly counter the effect of lower nominal property price inflation on the loss-curve horizon.

The default curves for nonconforming loans are noticeably different compared with the prime assumed default curve, showing higher defaults earlier in the life of the transaction. Based on the performance data of subprime transactions that it rates, Standard & Poor's observed that both higher prepayment rates and more front-end defaults occur in these transactions.

Prepayment behaviors of RMBS pools
By global standards, Australian RMBS pools tend to have relatively high prepayment speeds. The main reasons for this are the rate of refinancing, the existence of a mobile workforce, and the fact that interest on housing loans is not tax deductible. Refinancing rates are influenced by the strength of residential property markets, mobility within the workforce, interstate migration, and competition between lenders.
Conditional prepayment rates (CPRs) vary from program to program. The variation can be caused by high levels of refinancing away from a lender or by the structural features of a transaction that require a lender to repurchase loans in certain circumstances. A common example of this occurs in RMBS programs in which a loan is repurchased from the pool if the borrower seeks an additional loan advance beyond his or her scheduled balance. Another example is when borrowers change loan products after the commencement of a securitization program and their loans are repurchased from the collateral pool by the lender. These structural features vary by transaction.

Standard & Poor’s has developed indices representing the weighted-average annualized quarterly prepayment rates for rated prime and subprime RMBS transactions, known as the Standard & Poor’s Prepayment Index (SPPI). The SPPI is available on a quarterly basis in the Standard & Poor’s publication "RMBS Performance Watch: Australia and New Zealand."

Nonconforming pools tend to have higher CPRs than prime pools due to the high level of refinancing activity because borrowers either become eligible for prime loans with lower interest rates or they default and foreclose on the property to repay the loan. Subprime prepayment rates have slowed since the economic slowdown of 2007-2009, reflecting the difficulty these borrowers face in refinancing their loans, given the reduced competition in this market segment now.

Evidence of prepayment rate ramp behavior
There is strong evidence that the prepayment rate for RMBS pools increases in the first year or two after issuance, before reaching a plateau. Standard & Poor’s produces data showing the weighted-average annualized quarterly prepayment rate (SPPI) on rated RMBS deals by seasoning. Based on our data, strong increases (ramps) in prepayment rates occur during the first two years of a deal, with a slight increase during the third year, before flattening out at a quarterly prepayment rate of between 20% and 30%.
An Overview Of Australia’s Housing Market And Residential Mortgage-Backed Securities

Chart 22

Australian Prime RMBS Prepayment Rates (As Of Nov. 30, 2014)

Source: Standard & Poor’s.

© Standard & Poor’s 2015.
Chart 22b

Australian Nonconforming RMBS Prepayment Rate (As Of Sept. 30, 2013)

Chart 22a and chart 22b display the prepayment rate over time. Prime prepayment rates have settled at approximately 20% in recent times, close to the average seen during the past decade. Nonconforming prepayment rates have fallen consistently over time to around 20%, this is likely due to a combination of the smaller amount of subprime issuance and the inability of nonconforming borrowers to refinance in a post-financial crisis market, in which the availability of alternative financing is constrained.

Standard & Poor's quarterly report "RMBS Performance Watch: Australia and New Zealand" contains the most recent SPPI by deal seasoning.

**Appendix 1: Australian Capital Cities Established House Price Index**
Chart 23

Established House Price Index In Sydney, New South Wales, vs Australian CPI

Source: Australian Bureau of Statistics.

© Standard & Poor's 2015.
Chart 24

Established House Price Index in Melbourne, Victoria, vs Australian CPI

Source: Australian Bureau of Statistics.
© Standard & Poor's 2015.
Chart 25

Established House Price Index in Brisbane, Queensland, vs Australian CPI

Source: Australian Bureau of Statistics.

© Standard & Poor's 2015.
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Chart 27

<table>
<thead>
<tr>
<th>Perth</th>
<th>CPI</th>
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</tbody>
</table>

Source: Australian Bureau of Statistics.

© Standard & Poor's 2015.
An Overview Of Australia’s Housing Market And Residential Mortgage-Backed Securities

Chart 28

Established House Price Index In Hobart, Tasmania, vs Australian CPI

Source: Australian Bureau of Statistics.

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Related Criteria And Research

Related Criteria

- Criteria: Methodology For Assessing Mortgage Insurance And Similar Guarantees And Supports In Structured And Public Sector Finance And Covered Bonds, Dec. 7, 2014
- Criteria: Australian RMBS Rating Methodology And Assumptions, Sept. 1, 2011

Related Research

- Australian Structured Finance Outlook 2015, Feb. 9, 2015
- Asia-Pacific Sovereign Rating Trends, Jan. 21, 2015
- Asia-Pacific Credit Outlook 2015: The Turning Of The Tide, Dec. 8, 2014
- Comparing The U.K., Dutch, Australian, And Japanese RMBS And Mortgage Markets, Sept. 18, 2014
- Credit Conditions: Asia-Pacific Credit Spectrum Remains Varied Despite Broad Economic Stability, Sept. 16, 2014
An Overview Of Australia’s Housing Market And Residential Mortgage-Backed Securities

- Australian Bank Ratings Holding Up As Cheap Money And Rising Residential Property Prices Entice Australian Households, July 28, 2014
- Ratings On Australia Affirmed At ‘AAA/A-1+’ On Monetary And Fiscal Flexibility; Outlook Remains Stable, July 28, 2014

Useful Links

- The Australian government provides detailed reporting and operational notices at http://www.aofm.gov.au/content/rmbs.asp?NavID=60

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