

Consultation Paper:

Adjustments to restrictions on high-LVR residential mortgage lending

The Reserve Bank invites submissions on this Consultation Paper by August 10 2016. Please ensure that responses are sent in before the closing date. Submissions received after this date cannot be considered.

Submissions and enquiries about the consultation should be addressed to:

Attention:
Head, Macro Financial Department
Reserve Bank of New Zealand
PO Box 2498
Wellington 6140

Email: macroprudential@rbnz.govt.nz

When responding, please state whether you are doing so as an individual or on behalf of an organisation.

Please note that a summary of submissions may be published. If you think any part of your submission should properly be withheld on the grounds of commercial sensitivity or for any other reason, you should indicate this clearly

July 2016

Introduction

1. The Reserve Bank considers a sharp correction in house prices to be a key risk to the financial system, and one that is increasing the longer the current boom in house prices persists. A severe downturn in house prices could have major implications for the banking system, with more than 55 percent of bank assets secured by residential property. Household debt is also now at record levels relative to income, suggesting that a housing downturn could have major adverse effects on households and the broader economy.
2. The Reserve Bank put in place temporary restrictions on high loan-to-value ratio (LVR) bank lending in October 2013, and tightened these restrictions for Auckland investors in November 2015. Reduced availability of high-LVR loans has resulted in (i) an ongoing improvement in credit risk on bank mortgage portfolios and (ii) a temporary slowing of credit demand and house price inflation. In line with the objectives of macro-prudential policy, these effects have worked to reduce the financial system impact of a severe housing downturn.
3. Despite the financial stability benefit imparted by the current LVR policy, growth in house prices and credit have remained elevated. As a result, the risk of a future correction in house prices has continued to increase. This consultation paper sets out the following proposed changes to the LVR restrictions, in order to further mitigate risks to financial stability:
 - a. Applying a nationwide speed limit for all investor lending, permitting no more than 5 percent of lending at an LVR greater than 60.
 - b. Applying a nationwide speed limit for all owner-occupier lending, permitting no more than 10 percent of commitments with an LVR of greater than 80.

These changes simplify the current LVR policy by removing the distinction between lending in Auckland and rest of New Zealand. Compared to the current policy, there is a large tightening in credit availability for investor lending, and a small tightening for owner-occupiers in the rest of New Zealand. Exemptions allowed under the current LVR policy will continue to operate, including for construction lending.

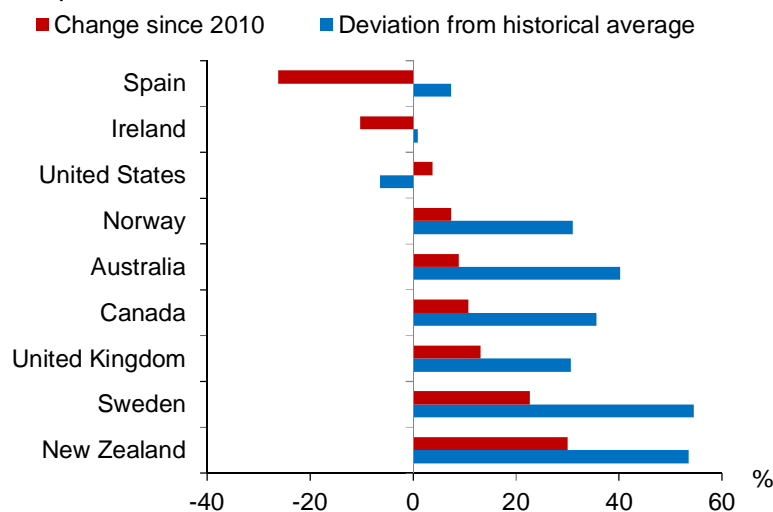
4. The Reserve Bank will continue to explore whether additional macro-prudential measures may be necessary to mitigate growing risks around the housing market. Possible future measures could include a limit on high debt-to-income lending and/or additional capital overlays. However, rapid growth in house prices fundamentally reflects an imbalance between underlying housing demand and supply, particularly in Auckland. Broader measures are required to reduce these imbalances, with the relevant policy areas extending well beyond financial policy and the responsibilities of the Reserve Bank (Spencer (2016)). While these measures continue to be developed by central and local government, the Reserve Bank's policies are aimed at increasing financial system resilience, and also act to reduce housing demand at the margin.
5. Risks associated with the housing market have increased for a much longer period than expected at the time that the LVR policy was introduced in 2013. However, the policy remains a temporary measure that will be removed at the appropriate time. There are a range of criteria that will guide the removal decision, including that house prices and credit return to a more sustainable path, and that the risk of a resurgence in housing pressures following removal is acceptable. In addition, the Reserve Bank will continue to monitor for signs that the policy is creating significant

market distortions, such as a material and growing share of mortgage credit being financed by non-bank institutions that are not subject to the policy.

Problem definition

6. New Zealand house prices have increased by around 50 percent since 2010, driven by strong immigration, low mortgage rates and sluggish housing supply. With house prices becoming increasingly disconnected from underlying household incomes and rents, there is significant potential for house prices to fall very rapidly if the factors currently supporting the market reverse. Average house prices in New Zealand are now around 6.5 times average household income. When combined with the pre-existing imbalance built up prior to the GFC, the house price-to-income ratio is further from its historical average than in almost any other OECD country (figure 1).

Figure 1
House price-to-income ratios in selected economies



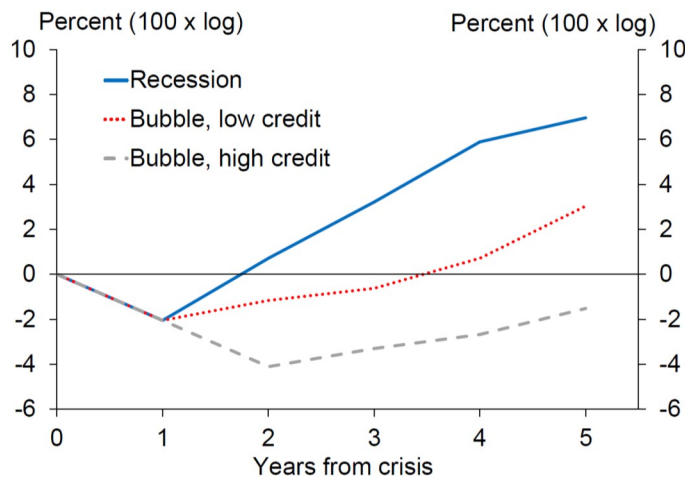
Source: OECD.

Note: Data as of 2015Q4.

7. Unprecedented levels of household debt magnify risks associated with the housing market. The aggregate household debt-to-income ratio has now reached 163 percent, slightly above its pre-crisis peak. Based on private reporting data from major banks, the debt-to-income ratio on new lending is significantly higher, with around 30 percent of mortgage commitments extended at a ratio exceeding six times income. Although low interest rates are currently supporting loan servicing ability, elevated debt ratios leave the household sector more vulnerable when lending rates return to more normal levels or economic conditions deteriorate.
8. The Reserve Bank is concerned that the risk of a sharp fall in house prices poses a growing threat to the stability of the financial system. A severe housing downturn can directly place banks under pressure by creating rising mortgage loan losses, especially if unemployment increases. Several advanced economies experienced rapid rises in mortgage losses following the GFC, with losses reaching more than 5 percent of mortgage loans in both the US and Ireland. There is less evidence of residential mortgage losses having a large impact on bank balance sheets in earlier financial crises, possibly reflecting that the exposure of households and banks to the housing market was significantly lower (Kragh-Sorenson and Solheim (2014)).

9. A sharp decline in house prices could also indirectly place the financial system under stress (Thornley (2016)). Housing busts tend to be associated with a large and persistent decline in economic activity, especially if preceded by strong increases in house prices and above average credit growth (figure 2). There is strong evidence that sharp reductions in consumption by highly indebted households played a role in exacerbating housing downturns during the GFC. Severe housing downturns can also result in increased losses on lending to other sectors exposed to the housing market, such as property development.

Figure 2
Paths of GDP after housing bubbles in selected advanced economies
(1870 – 2013)



Source: Jorda et al, 2015.

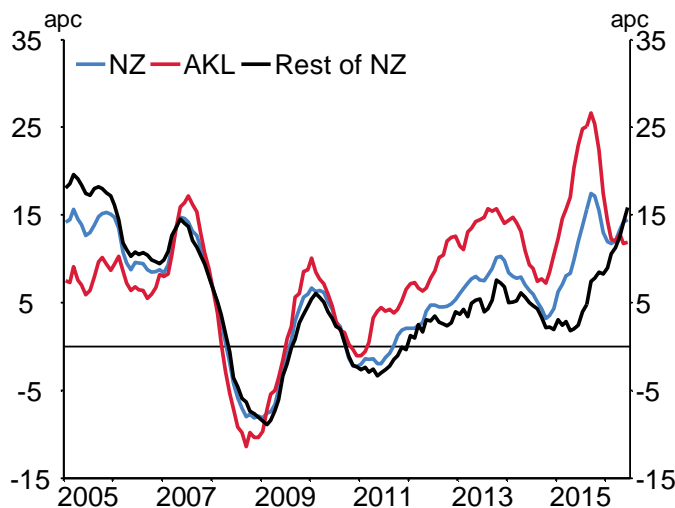
Note: A house price 'bubble' is defined as a period where house prices grow above their long-term trend, and there is an eventual price correction. 'Low' and 'high' credit refer to whether credit growth is above average.

10. Stress tests conducted by the Reserve Bank, in conjunction with the Australian Prudential Regulatory Authority, suggest that banks would remain solvent under stress scenarios involving a severe downturn in the housing market. However, the tests also highlight the likelihood that banks would remain solvent partly by cutting back on new lending. This would tend to exacerbate the downturn in the housing market by making it more difficult for prospective house buyers to access credit, at the same time as the number of distressed sales is likely to be rising. The resulting illiquidity in the housing market could reinforce the economic downturn by amplifying the fall in house prices and increasing debt overhang among distressed borrowers. The reduced availability of credit to other sectors would also reinforce the economic downturn. Dampening this amplification of the financial cycle is a key objective of macro-prudential policy.
11. The current loan-to-value ratio policy has been in place since 2013. This policy is working to improve financial system resilience by increasing the equity buffers of households. Under the conservative assumption that the share of high-LVR loans would have otherwise remained constant, around \$20 billion in lending at an LVR of above 80 has not taken place as a result of the policy. In addition, around \$3 billion of investor lending at an LVR of above 70 has not taken place due to changes made in late 2015. The policy appears to have reduced the risk of a correction, by curbing

the rise in house prices and credit growth by approximately five percent.¹ Nevertheless, the Reserve Bank believes that the risk of a severe downturn in the housing market is continuing to increase.

12. Recent housing market data suggests that house price inflation is now increasing rapidly across the country (figure 3). Risks remain most acute in Auckland, following a sustained period of rapid house price inflation since 2012. The ratio of Auckland house prices to average regional income has reached around 9 to 10 depending on the particular methodology applied. This is very elevated on a cross-country basis, and similar to major global cities such as London, San Francisco, and Sydney. Elevated house prices imply that debt-to-income ratios for a typical borrower in the Auckland region have become very stretched, making borrowers more vulnerable to a period of rising unemployment or rising interest rates.

Figure 3
House price inflation
(annual percent change, 3 month average)



Source: REINZ.

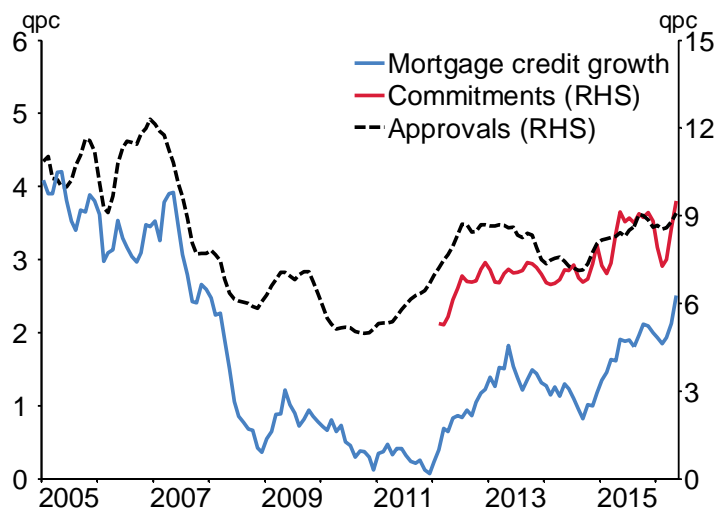
13. House prices in the rest of New Zealand increased by around 16 percent over the past year, with significantly higher rates in regions nearby Auckland. Following several years of house prices tracking broadly in line with household incomes, the house price-to-income ratio outside of Auckland has increased to around the pre-GFC peak of 5.3. There is a risk that rapid increases in house prices will continue, given recent falls in mortgage rates, market forecasts that interest rates will remain low for some time, increases in regional migration, and very low secondary market inventories. A sustained period of house price inflation could push house price and household debt ratios towards the very elevated levels seen in Auckland.
14. The risk of a price correction in the rest of New Zealand could indeed become significant well before price-to-income ratios reach similar levels to Auckland, as there is currently less evidence of a fundamental shortage of housing. Areas with rising populations, such as the Bay of Plenty, are already seeing a proportionately larger supply response. Rising supply should help take pressure off prices, but could also increase the risk that an oversupply of housing emerges. Regional evidence from the United States during the GFC suggests that a region need not necessarily

¹ This is based on the counter-factual estimates in Price (2014) of 4 percent, and an assessment of the counter-factual impact of the 2015 changes using a similar framework.

reach a high price-to-income to experience a housing bust, especially if building activity rises sharply during the boom (Haughwout et al (2013)).

15. Evidence from past crises suggests that rapid growth in housing debt is a key early warning indicator of future periods of financial stress (Anundsen et al (2014)). Mortgage debt grew by 8.5 percent over the past year (figure 5). Given current projections of income growth and house price inflation, the aggregate debt-to-income ratio is expected to continue rising. A high rate of debt repayment among existing borrowers is reducing net credit growth, with gross mortgage commitments amounting to around 35 percent of outstanding debt over the past year. Debt-to-income ratios on new lending are already stretched, and are likely to come under further upward pressure in coming years.

Figure 5
Mortgage credit growth and commitments

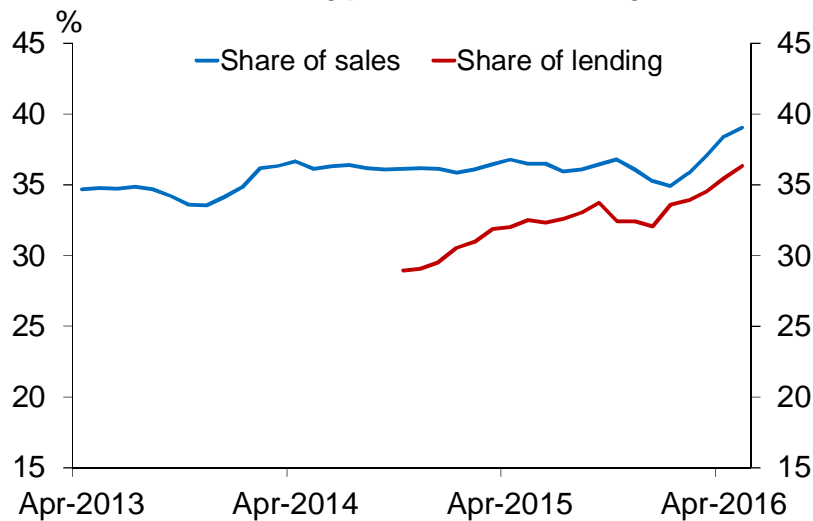


Source: RBNZ *Housing Approval Survey*, RBNZ *Standard Statistical Return*, RBNZ *New Residential Mortgage Commitments*.

Note: Mortgage approvals are an approximation of actual mortgage origination trends.

16. Investor lending is growing strongly, rising from around 28 to 36 percent of overall mortgage lending over the past eighteen months (figure 6). This suggests that the share of investor loans on bank balance sheets has increased significantly (especially given that more than half of investor loans have been on interest only terms in recent months). Despite tighter LVR restrictions, the investor share of sales has increased in both Auckland and the rest of New Zealand. This suggests that many Auckland investors have been able to increase borrowing capacity by revaluing their existing properties.
17. The role of investors is somewhat stronger in Auckland than in the rest of New Zealand, partly reflecting the increasing unaffordability of Auckland property for owner-occupiers. Auckland property investors are also accounting for a significant share of housing purchases in the nearby regions of Hamilton and Tauranga, which have recently experienced strong house price inflation. This is likely to reflect (i) that rising Auckland prices have increased equity for these investors and (ii) tighter LVR constraints for Auckland investor purchases have increased incentives to purchase outside of Auckland. While these properties are likely to be purchased with less debt and at a higher rental yield than in Auckland, rising Auckland investor purchases appear to be a significant factor behind very rapid growth in house prices in Hamilton and Tauranga.

Figure 6
Investor share of housing purchases and lending



Source: Corelogic NZ, RBNZ *New Residential Mortgage Commitments*.

Note: The definition of investor is somewhat different for purchases and lending. Investor purchases captures all purchases by multiple property owners, while investor lending captures all lending for the purpose of building or purchasing investment property.

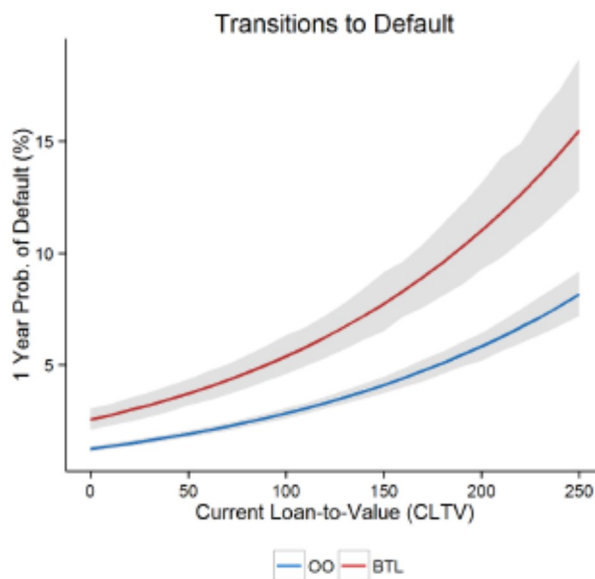
18. Rising investor defaults pose significant risks to the financial system, with a growing body of international evidence suggesting that loss rates on investor lending are significantly higher than owner-occupiers during severe housing downturns. There are caveats to applying evidence from other economies to New Zealand, including that mortgage origination standards can vary significantly across countries and time. These problems are mitigated by focussing on the differential between default rates for investors and owner-occupiers identified in international studies. Moreover, the tendency for higher investor default rates is consistent with a range of structural characteristics of investor loans in New Zealand. Direct evidence for New Zealand or Australia is limited as there has not been a severe housing downturn for many decades.²
19. Detailed studies of the post-GFC experiences of Ireland (Kelly (2014)) and the UK (McCann (2014)) have found significantly higher default rates on loans to investors than owner-occupiers. This differential remains significant even after controlling for other relevant characteristics, such as LVR, loan vintage, and regional unemployment.³ The Central Bank of Ireland (2014) and the UK Treasury (HMT (2015)) have drawn the same conclusion from these studies. The Basel committee has also recently proposed significantly higher risk weights for loans where repayment is materially dependent on the cash flow generated by the secured property (BIS (2015)).

² Fitch Ratings (2012) has reported on empirical work using data from securitised mortgages in Australia, which suggests that investor loans performed similarly to owner occupier loans in normal times but significantly worse in business cycle downturns. Rating agency models of residential mortgage default also tend to treat investor loans as riskier at any given LVR.

³ The findings of the literature on commercial property defaults is also relevant for investors with a large portfolio of residential property. An et al (2013) and Moodys (2013) find that defaults for commercial property borrowers rise sharply once the loan is in a position of negative equity.

20. Higher investor default rates partly reflect a greater incentive to default strategically than owner occupiers. Strategic defaults are defaults where the borrower has the ability to service the loan, but chooses not to because they are in negative equity. When house prices fall substantially, the size of the negative equity facing investors that own a lot of property (eg 5 houses) is much larger relative to their future labour income than it is for an owner occupier. Even if they face bankruptcy and losing their own home, default allows the investors to avoid servicing underwater mortgages with that future labour income indefinitely. In contrast, empirical evidence suggests owner-occupiers will tend to continue servicing loans if they can, in order to avoid losing their own home (see, for example, Gerardi et al (2015)).
21. The income servicing an investment loan is also likely to be more correlated with the value of the underlying security. A sharp fall in house prices will often occur alongside a rise in vacancy rates in an area (for example, due to a rise in unemployment or outward migration). This will make loan servicing more difficult, particularly for investors that have very little free cash flow. Around 20 percent of investor lending is at very elevated debt-to-income ratios of above 7. Although investors tend to have more free cash flow than owner-occupiers at a given DTI, this figure suggests that many investors could struggle to service loans in the event of a sustained fall in rental income.
22. Figure 7 highlights these points by showing the empirical relationship between LVR and probability of default (PD) for investors and owner-occupiers during the GFC in Ireland (Kelly (2014)). The relationship implies that an investor starting the crisis with an LVR of 60 would see their PD rise by around 55 percent if house prices fall by 50 percent. PD rises substantially more if LVR at origination is instead 75 percent, which is similar to typical levels amongst more leveraged New Zealand investors. The same scenario for house prices would now result in an increase in PD of around 75 percent – close to double the rate of owner-occupiers at the same LVR.

Figure 7
Impact of current loan-to-value ratio on probability of default in Ireland

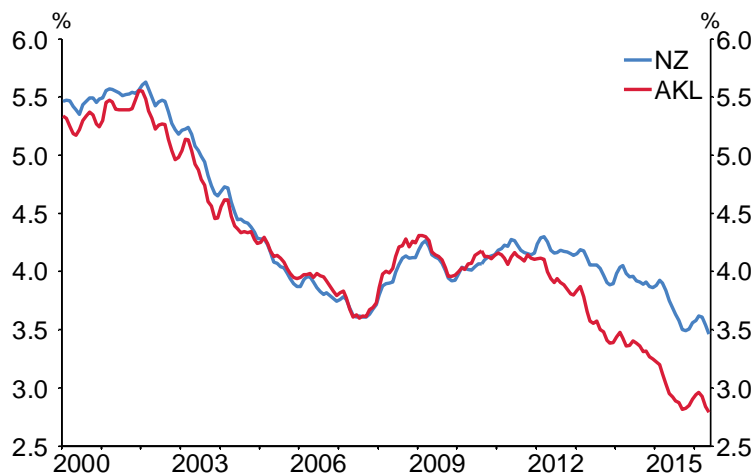


Source: Kelly (2014).

Note: Blue: Owner Occupiers. Red: Buy to let (Investors). Unemployment and loan vintage held constant (14 percent and 2006 respectively).

23. In addition to placing banks directly under pressure through mortgage losses, rising investor default rates are likely to amplify a downturn in the housing market. As most investors own multiple properties, an investor going into default results on average in a much larger increase in distressed sales than for owner-occupiers. Strategic default incentives are also likely to be stronger for investors with large property portfolios. As discussed above, rising distressed sales could reinforce the downturn in housing market, increasing the risk of a prolonged period of debt overhang that extends the duration of the downturn in economic activity.
24. There is added risk associated with investor lending in the current market environment. With the potential size of a house price correction likely to be increasing (see above), lower LVRs may be required to maintain bank balance sheet resilience. Rising property values are also enabling many investors to take on more debt, at the same time as rental yields have declined sharply. Rental yields have declined to historic lows, particularly in Auckland, suggesting that many investors are primarily purchasing for capital gain (figure 8). Falling rental yields imply that investors looking to purchase additional property will have less free cash flow (for a given LVR).

Figure 8
Imputed rental yields



Source: REINZ, Corelogic NZ, MBIE.

Note: Average rents divided by average house prices. This is likely to understate actual rental yields as investment properties have a lower than average value.

25. Investor lending can also be a strong driver of speculative rises in property markets, as the US and Irish experience indicates. Coates et al (2015) document a strong rise in investor activity in Ireland during the period of rapid house price appreciation up to 2007. Gao et al (2016) investigate the role of investors in the boom and bust in US house prices surrounding the GFC. Disaggregated regions with a greater share of purchases by investors during the boom experienced more pronounced price contractions in the wake of the GFC.

Q1: Do you have any comments on the problem definition for this policy?

Macro-prudential policy options

26. The Reserve Bank has a mandate to maintain financial stability in the face of increasing risks associated with the housing market. In addition to ensuring that underlying prudential settings are appropriate, there are a range of macro-prudential tools that could be used to build additional buffers in the financial system, and help dampen the current extremes in the housing credit cycle. There are three broad areas of macro-prudential policy options that are being considered by the Reserve Bank: adjustments to the LVR policy, restrictions on total debt-to-income (DTI) ratios, or macro-prudential capital buffers.
27. The Reserve Bank has had loan-to-value restrictions on bank lending in place since late 2013. This has improved the resilience of bank balance sheets to a housing downturn, and helped to lean against the rise in credit and housing demand for a period. Possible changes that could reinforce the financial stability impact of the LVR policy are discussed in more detail below. Substantial investments have already been made by the banking system to measure high-LVR lending for key classes of residential mortgages. This is expected to limit the timeframes required to implement proposed changes to the policy.
28. The Reserve Bank believes that new restrictions on the availability of high DTI lending could complement the current LVR policy by further mitigating housing credit risk. By improving the ability of households to cope with income or interest rate volatility, lower DTIs would further reduce the likely rise in mortgage defaults during a severe housing downturn. Tighter DTI requirements would also have some impact in lowering credit demand and house price inflation. A potential advantage of a DTI policy is that the borrowing capacity of restricted borrowers will grow in line with incomes. This suggests that a DTI restriction would help mitigate the relaxation of borrowing constraints under an LVR policy during periods of rapid house price inflation (for existing property owners).
29. The Reserve Bank will continue to investigate the case for a DTI limit in the near future. In coming months, the Reserve Bank plans to begin collecting DTI data from all registered banks, align the definition of investor loans in the collection with the proposed LVR policy, and investigate further measures to standardise the measurement of debt and income across banks. This improved dataset will enable the Reserve Bank to reach a judgement on whether DTI restrictions are desirable and, if so, how they should be designed. The use of DTI restrictions would need to be agreed with the Minister of Finance under the Memorandum of Understanding on macro-prudential policy.
30. A macro-prudential overlay on bank capital would build additional loss-bearing capacity in line with rising risks around the housing market, which could then be drawn on in a future period of financial stress. The release of macro-prudential capital buffers would lean against the tendency of banks to sharply reduce new lending during downturns. Higher capital could also result in some upward pressure on lending rates at the point that capital requirements increase, although any impact in dampening the housing credit cycle would be much smaller than for DTI or LVR restrictions (which directly constrain borrowing capacity). The Reserve Bank is undertaking a fundamental review of prudential capital requirements for registered banks over the next year, and the possibility of introducing macro-prudential capital buffers will be considered as part of this process.

31. Although the Reserve Bank will continue to investigate the case for using a DTI restriction and/or a capital overlay in the future, the increasing over-valuation in the housing market and rapid increases in investor debt suggests it is desirable to change the LVR policy in the interim. The Reserve Bank is proposing to:
- Apply a single speed limit for all investor lending in New Zealand, permitting no more than 5 percent of lending at an LVR greater than 60.
 - Apply a single speed limit for all owner-occupier lending, permitting no more than 10 percent of commitments with an LVR of greater than 80.
32. Compared to the current policy, there is a large tightening in credit availability for investor lending, and a smaller tightening for owner-occupiers in the rest of New Zealand. There are two key policy judgements underlying these proposed changes:
- Firstly, the case for differentiating LVR policy by region has weakened. The Reserve Bank believes that the risk of a sharp fall in house prices is now increasing across most of the country. There has also been a significant increase in investor activity outside Auckland, particularly in nearby regions, which reinforces the case for a nationwide speed limit applying to investors.
 - Secondly, it is appropriate to have a significantly lower maximum LVR for investor loans than for owner-occupiers. Banks have always been less willing to lend at very high LVRs to investors reflecting that, as discussed above, investors are substantially riskier at any given LVR. Furthermore, from a wider efficiency perspective, the costs imposed on an owner-occupier that cannot purchase for a period due to the LVR policy are likely to be greater than for an investor (see below).
33. Auckland investors are currently restricted to a maximum of LVR of 70 percent, compared to a maximum LVR of 80 percent for Auckland owner-occupiers. The Reserve Bank is proposing a lower limit of 60 percent for all investor loans. This reflects that, since 2015, risks on investor lending have increased further, reflecting the increasingly overvalued housing market, a growing exposure of the banking system to investors, and falling rental yields. The empirical evidence discussed above also suggests that probability of default remains elevated for investor loans at an LVR of above 60 percent. In addition to potentially increasing bank loan losses, increases in stressed sales among these investors are likely to have significant feedback effects on the housing market.
35. The proposed LVR limit will also have some impact on DTI ratios for property investors, resulting in improved resilience to a reduction in income or increase in interest rates. In the extreme case where an investor services their debt entirely using rental income, a cap on LVR directly constrains DTI at a given rental yield. For example, a decline in the portfolio LVR for an investor from 70 to 60 percent would see DTI fall from around 12 to 10 at a 6 percent rental yield. In reality, the transmission of the LVR limit to DTIs is more complex, as (i) many high-LVR investors will also use labour income to service the loan and (ii) any further falls in rental yields would relax the implicit limit on DTIs under the LVR policy.
36. LVR restrictions are becoming increasingly common internationally. Most advanced economies that use LVRs apply a maximum LVR for owner-occupiers that is equal to or higher than 80 percent, as under the Reserve Bank's LVR policy. Several countries impose tighter LVR limits on investor lending, with Singapore, Hong Kong and Israel having caps in the 50-60 percent range. In addition, the Bank of England is currently consulting on an interest coverage ratio limit of 125 percent for investor

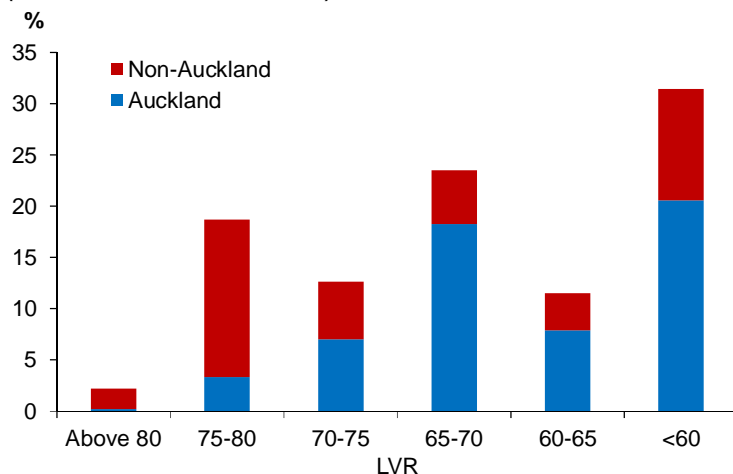
loans, and the US and Canada both have limits on the ratio of debt servicing payments to pre-tax income of around 40-50 percent applying to conventional insured mortgage lending. Based on plausible assumptions for rental yields and origination mortgage rates, these servicing policies may effectively constrain LVR to below 50 percent for many investors.

Q2: Do you have any comments on the analysis of possible macro-prudential options or the rationale for the proposed LVR restrictions?

Effectiveness in mitigating housing risks

37. Based on the current LVR distribution, the proposed nationwide investor speed limit would potentially affect around 70 percent of investor lending (figure 9). The potentially restricted lending would be split roughly evenly between Auckland investors (primarily at an LVR of 60-70 percent) and non-Auckland investors (primarily at an LVR of 70-80 percent).

Figure 9
Distribution of investor lending by LVR
(November 2015-current)



Source: RBNZ *Residential New Mortgage Commitments Survey*.

38. Following the introduction of the current Auckland investor limit, there has been a material decline in average LVRs without any significant reduction in Auckland investor purchases. This suggests that many affected investors have been able to continue transacting at a lower LVR by:

- leveraging owner-occupied or non-Auckland investment properties using the combined collateral exemption
- leveraging property that was previously held outside of the collateral pool
- shifting to purchasing lower value property, eg an apartment rather than a standalone house
- more actively revaluing existing properties, especially in an environment of rapid house price increases

Alternatively, different investors with more equity may have replaced those constrained by the LVR rules. The Reserve Bank estimates that, of the total amount of 70-80 percent LVR lending that might have otherwise occurred in the absence of

the policy, around 50-66 percent has continued to transact either by making use of the combined collateral exemption or shifting to an LVR of just below 70. While this development is likely to have reduced the longevity of the impact on Auckland house prices, the policy continues to have a sustained impact on the resilience of the financial system by lowering LVRs for investor loans.

39. The proposed changes to the LVR policy involve a substantial increase in required deposit for restricted borrowers, especially outside of Auckland. In addition to bringing about a larger reduction in LVR on new investor lending, the proposed policy is likely to result in a greater proportion of affected investors choosing not to (or being unable to) transact. Borrowers now have reduced debt capacity (particularly for non-Auckland rental properties), and may have used more of their capacity (as described above) to make purchases in the last 12 months. Whereas around 20 percent of Auckland investor lending currently has an LVR exceeding 70, the proportion of investor lending with an LVR of above 60 would be expected to fall to around 10-15 percent. The lending at above 60 would mainly reflect investors using the combined collateral exemption to get higher leverage on owner occupied properties that are in a collateral pool alongside investor properties.
40. The proposed LVR limit is expected to result in a significant reduction in average LVR and improved servicing ability for investors seeking new lending (table 1). Based partly on the experience with the current Auckland investor limit, the average LVR for an investor in the top half of the LVR distribution would be expected to fall from around 73 percent to just below 60 percent. This shift in LVR would also generate a significant improvement in servicing ability. For example, the interest coverage ratio based on rental income would increase from around 73 percent to just above 97 percent under plausible assumptions for interest and principal and rental yields.

Table 1
Distribution of investor lending under proposed policy

	May 2015	Current	Proposed LVR changes
% of loans with LVR > 70	50	33	
% of loans with LVR > 60	73	68	10-15*
Mean above median (MAM) LVR	77	73	58*
Rental interest coverage ratio at MAM LVR	73	77	97*

Note: MAM refers to the average value in the top half of the distribution. * indicates a projection under proposed new limits. Rental interest coverage ratio is the ratio of rental income to total mortgage payment, and assumes a rental yield of 6 percent, expenses equal to 25 percent of rental income, and interest and principal repayments of 8 percent of the outstanding balance.

41. The proposed policy is expected to materially lower downturn loss rates over time, and reduce the scope for rising defaults to exacerbate falling house prices. Based on the Irish evidence, the improvement in investor LVRs shown in table 1 might reduce the loss rate on new investor lending by up to 35 percent, during a scenario where house prices fall by 50 percent and unemployment rises sharply. This resilience impact would strengthen over time as lending flows originated under the

new policy become a progressively larger share of the stock of investor loans. Turnover rates of investor lending suggest that this effect would have mostly worked through the system within 3 years.

42. Bloor and McDonald (2013) set out a framework for analysing the impact of LVR restrictions on the housing credit cycle. The approach first estimates the reduction in number of purchases by restricted borrowers, and then uses an empirical model to relate this to housing prices, sales and credit. Applying the same general framework to the proposed LVR amendments yields an estimated 5-15 percent reduction in house sales, and a 2-5 percent reduction in both house prices and mortgage credit. These effects would be somewhat larger outside of Auckland, reflecting that there are currently tighter restrictions on Auckland investor lending in place.
43. Although the horizon for these effects is approximately one year, this could vary depending on the underlying rate of house price inflation. Faster house price growth tends to reduce the longevity of the impact of LVRs on borrowing capacity and house prices, particularly when limits are applied to investors. This reflects that investor restrictions are likely to apply mainly to existing owners of property, many of whom may be actively seeking to use any extra borrowing capacity to purchase more property.
44. All else equal, the reduction in financial distress amongst investors in the downturn scenario, along with the small reduction in peak house prices described above, is expected to reduce the size of the peak to trough decline in house prices. This makes it more likely that the housing market will remain orderly, encouraging lenders to remain active, and giving more homeowners confidence about their financial position. The risk of a “spiral” where a growing excess supply of properties on the market push prices down further and thus push more borrowers into financial distress (causing more properties to go on the market) is reduced.
45. The proposed changes are also expected to potentially restrict an additional 5 percent of non-Auckland owner-occupier lending (2 percent of overall lending). This reflects that these borrowers have been shifted to a bucket which (i) has a lower speed limit of 10 and (ii) does not contain non-Auckland investors (who undertake very little lending at an LVR of above 80). This change is expected to have a relatively minor impact on the housing market. However, the reduced proportion of high-LVR mortgage loans outside of Auckland will increase the resilience of bank balance sheets to the growing risk of a sharp correction in house prices.

Q3: Do you have any comments on the expected impact of the policy in increasing financial system resilience or dampening house price and credit growth?

Possible unintended consequences

46. There is a risk that restrictions on high-LVR lending result in an increase in high-LVR lending by institutions that are not subject to the policy. The Reserve Bank believes this would result in a decrease in financial system stability and efficiency, as non-bank lenders would likely have more costly and less comprehensive processes for mortgage origination. In addition, growing lending outside of the banking sector would undermine the benefits of the policy in limiting the rise in house prices and household indebtedness.

47. To date, there has been very little evidence of growing high-LVR lending outside the banking system. The incentives for non-banks to enter the market are limited by the temporary nature of the LVR policy, and the fact that banks have a speed limit of high-LVR loans available. In addition, non-bank lenders are a very small component of the financial system, with the non-bank deposit taking sector in particular having declined substantially since the Global Financial Crisis. However, the risk of a material increase in non-bank high-LVR lending is likely to increase under the proposed restrictions, which could potentially constrain a large part of the market for bank investor loans. The Reserve Bank will continue to monitor for any sign that an increased share of properties are being financed outside of the banking system.
48. LVR restrictions can also have wider efficiency costs if they result in some prospective buyers needing to delay house purchases. As the proposed LVR policy involves a much larger tightening in borrowing capacity for investor loans, any effect on house purchases is likely to be concentrated among investors. The relatively small tightening in borrowing capacity for owner-occupiers outside of Auckland could also have efficiency costs. First-home buyers that meet the relevant criteria can undertake high-LVR lending via the Government's Welcome Home Loan scheme, which is exempt from the LVR policy.
49. For an individual investor that is constrained in purchasing by the LVR policy, delayed purchase results in a lower exposure to the housing market than they would otherwise have chosen. This may represent an efficiency cost (although some of the demand to hold investor property is possibly related to it being taxed relatively lightly compared to other assets like bank deposits, so reduced investor demand from LVR policy may not be inherently inefficient). However, any efficiency cost is likely to be much smaller than if an owner-occupier needs to delay purchasing, which could entail delays in entering the housing market or being able to shift cities for a new job.
50. There is some risk that the proposed changes to the policy could put upward pressure on rents. The Reserve Bank believes that the effect on rental inflation will be limited. Over time it is possible there will be some reduction in the supply of rental property, in line with a relative shift from investor to owner occupier purchases. This transition will also result in a reduction in demand to occupy rental properties. There could be some upward pressure on rents if this transition results in fewer people occupying each dwelling, but any effect is not expected to be large.
51. The LVR policy already includes an exemption for mortgage lending to fund the construction of new dwellings, which is designed to mitigate any negative effect of the policy on housing supply. This exemption will continue to apply under the proposed policy settings, and is available for both investors and owner occupiers.
52. There are likely to be some costs incurred by the banking system to enact the necessary system changes in order to meet the new speed limits. These are not expected to be significant relative to the previous LVR changes, and mainly reflect work required to slightly modify the definition of an Auckland non-property investor (see below).
53. Table 2 summarises the discussion in the previous two sections through the lens of a cost-benefit analysis. The proposed policy is expected to have significant benefits by mitigating the increase in stressed investor sales and bank losses during a severe housing downturn, and reducing the probability of a sharp house price correction by dampening current rapid increases in house price inflation and mortgage lending. There are costs associated with the policy, including systems changes for banks (expected to be smaller than for previous changes), and any

costs arising from delayed housing purchases for some buyers (expected to mainly affect investors). The Reserve Bank will continue to monitor for signs of any significant unintended consequences from the policy, including a growing share of high-LVR lending financed by institutions that are not subject to the policy.

Table 2

Summary of the principal costs and benefits of the proposed LVR policy

Benefits	Comment	Costs	Comment
Reduce bank downturn loss rates over time.	There is evidence that investors have higher default rates than owner-occupiers.	Increased risk that non-regulated institutions engage in a material amount of high-LVR lending.	Little sign of any growth in non-bank lending in response to current LVR policy.
Dampen house price inflation by approx 2-5 percent in first year of implementation.	Longevity of this impact could decline if underlying house price inflation remains elevated.	Some buyers may need to delay housing purchases. Any effect concentrated among investors.	Efficiency costs for investors delaying purchases lower than for owner-occupiers.
Reduce amplification of a housing downturn from distressed investor sales.	Share of investor loans on bank balance sheets is increasing.	Changes required to bank systems and processes.	Expected to be smaller than for previous LVR changes.
Simplify existing LVR policy, removing regional boundary effects.	Higher risks around Auckland housing market, but rest of NZ is expanding fast.	Unintended impacts on rents or supply of housing.	Effect on rents expected to be small, and construction lending is exempt.

Q4: Do you have any comments on possible unintended consequences from the policy?

Q5: Is the construction exemption still suitable with the proposed policy changes?

Q6: For regulated entities, please quantify costs in relation to implementing this proposed policy change.

Specific policy details

54. The proposed policy change would be enacted through changes to the Banking Supervision Handbook document "Framework for Restrictions on High-LVR Mortgage Lending" (BS19) and changes to bank conditions of registration. This consultation document has been released alongside a proposed redraft of BS19. The proposed conditions of registration are in the appendix to the proposed BS19.

Calculation of speed limit

55. The proposed policy changes simplify the existing three speed limits on high-LVR mortgage lending into two categories, namely:

- Non-exempt property investment loans at LVRs of greater than 60 percent divided by all non-exempt property investment loans.
 - Non-exempt non-property investment loans at LVRs of greater than 80 percent divided by all non-exempt non-property investment loans.
56. The two types of residential mortgage (property investment and non-property investment) in the proposed BS19 are defined in the same way as for capital purposes (in BS2A and BS2B). We also retain the definitions of Auckland and non-Auckland lending for each of these two categories, but these are not used in the proposed policy (we would like banks to continue to measure them and provide statistical reporting splitting flows by these two regions).
57. The definitions described above are largely the same as in the existing BS19, but there is one category of borrowers that need to be treated differently. The existing definitions within BS19 classify an Auckland owner occupier with a loan also secured on rental properties outside Auckland as an Auckland owner occupier. This reflects the relatively strict treatment of Auckland lending under the current LVR policy. It would be quite problematic for the proposed policy if these customers were able to borrow 80 percent while most non-Auckland investors were only able to borrow 60 percent. So our new definitions shift this small category of borrowers into the property investor category.
58. Since 2015, banks have developed the systems required to report to the Reserve Bank on loans based on the location and nature of the property securing the loan (including reporting to the RBNZ on whether non-Auckland loans are for property investment or not, even though the LVR limits currently in force do not make a distinction). This should make it relatively easy to switch to administering the new speed limits.
59. The proposed harmonisation of the definition of property investor loans across BS2 and BS19 also means that the reporting of the flows of property investment loans (including their LVRs and DTIs) will provide information about the evolving credit risk of the stock of owner occupied and investor mortgages.
60. We recognise that this change (as well as the new speed limits), if implemented, is likely to require some system work by banks. Because we consider that this change is necessary to the functioning of the policy we suggest that planning to allow for the possibility of this system change could be worth commencing soon. We are asking banks for feedback on the complexity involved in the change.

Q7: How large are the systems changes required to reclassify property investors that have an Auckland owner-occupied property?

Calibration of speed limits

61. The introduction of LVR restrictions via speed limits recognises that in some cases it is appropriate for banks to provide loans at higher LVRs. The speed limits allowing banks to provide a small proportion of high-LVR loans, in order to fund purchases for more creditworthy borrowers and/or take into account the impact of special borrower circumstances.

62. As in the 2015 changes, the Reserve Bank sees less need to allow a flow of lending at higher LVRs to property investors. We consider that a 5 percent speed limit for investors (as with the current Auckland investor limit), in combination with the available exemptions, will allow for special cases or errors.
63. For the non-property investment limit, we are proposing to allow 10 percent of lending to be at LVRs above 80 percent. This allows a more material amount of high LVR lending to owner occupiers. We have been pleased generally with how banks have appeared to use this limit since 2013, with a high proportion of lending under the speed limit going to first home buyers and relatively low DTI customers. Relative to the current restrictions, the proposed 10 percent limit results in a tightening for non-Auckland non-property investors, particularly as they are now separated from the non-Auckland investor lending.

Q8: Is the proposed speed limit for property investment loans suitable to achieve desired objectives?

Q9: Do you have any comments on the calibration of the owner-occupier speed limits?

64. Treatment of customers with multiple collateral types is an important complexity for the LVR regime. In 2015, RBNZ considered approaches to limit the incentives of investors to split lending across multiple banks in order to increase borrowing capacity. The RBNZ initially considered approaches that involved splitting loans (with multiple different types of collateral) across multiple speed limit categories, but finally settled on an approach where Auckland investors were placed entirely in one speed limit category with an exemption available for combined collateral.
65. We propose that the combined collateral exemption will be redrafted so that it reflects the new LVR limits. We have generalised the drafting of the exemption so that it should not need to be redrafted if there are any further changes to the LVR policy in the future. In the proposed policy, it will effectively allow investor borrowers who have their own home as part of the collateral package to borrow 80 percent against their own home and 60 percent against investment property. This greatly reduces the incentive to 'split-bank' in order to borrow more, which would have been an inefficiency of the proposed policy if this exemption was not included.
66. There are a number of other exemptions available within BS19, including the ones added since 2013 covering the construction of new dwellings and major non-routine repairs of dwellings. We propose retaining these, and are interested in any feedback about their continued relevance and effectiveness.

Q10: Do you have any comments on the effectiveness and appropriateness of the combined collateral exemption, or any of the other exemptions within BS19?

Measurement periods and transition arrangements

67. The Reserve Bank proposes that the policy changes take effect from 1 September 2016. This should allow banks to alter systems and processes to cope with the alterations to the limits discussed above.
68. There is some risk that there could be a "rush to buy" prior to these changes being formally enacted. As with the 2015 changes, our expectation is that banks will

observe the spirit of the proposed restrictions, and will act to curtail lending at LVRs of above 60 percent to property investors in advance of 1 September.

69. Currently, compliance with the LVR policy is measured over a three-month rolling window for banks with monthly lending of consistently more than \$100m, and over a six-month rolling window for banks with monthly lending of less than \$100m. Our proposal is that these speed limit windows will remain the same (we do not propose that the larger banks get an initial 6 month window with these restrictions, as in 2013 and 2015).
70. We propose that the existing LVR restriction apply to lending committed until 31 August 2016, with compliance assessed based on the measurement period ending on this date. The new speed limits will take effect from 1 September, but compliance with these new limits will not be assessed until the end of the first measurement period – either 30 November 2016 for larger banks, or 28 February 2017 for smaller banks.
71. For the avoidance of doubt, these changes do not affect the transitional arrangements for BS2A/B, which were established in 2015 to give banks until 1 November 2016 to classify their entire stocks of residential mortgages as either property investment or non-property investment, with different risk weights applying to the property investment lending. Those transitional arrangements will have ended by the time the BS19 changes are made, so we also propose to delete the text describing the transitional arrangements from BS2A/B (see Annex 1 for the proposed changes to BS2A/BS2B).

Q11: Will the proposed implementation timeframes and transition arrangements create any significant difficulty?

Residential mortgage lending that is not in the residential mortgage asset class

72. The boundary of BS19 is lending that is classified in BS2A and BS2B as a residential mortgage loan. This definition excludes some lending that is secured by residential property but is classified in another (often corporate) asset class. This lending tends to take two forms. The first is lending that is predominantly for business purposes, but may be partially secured by residential mortgage collateral. The second is loans to large scale property investors, who banks manage on an individual basis as business customers.
73. While large scale property investors do not have particularly high LVRs, the Reserve Bank understands that some will have LVRs around 70 percent. It would be inequitable if large investors in this asset class were still able to borrow at that sort of LVR while smaller residential mortgage investors were restricted by formal LVR restrictions. However, there would be significant difficulties in redrafting the LVR restrictions in order to bring these investors into scope.
74. BS19 states that banks should not seek to avoid the LVR restrictions by (7(2)f) “providing lending primarily reliant on residential property as security, as opposed to lending that is also reliant on other sources of funds such as business cash flows, that is treated as outside the residential mortgage asset class (for example in the corporate asset class) and where the lending would be high LVR if a residential mortgage loan.”

75. In the context of the proposed new LVR restrictions, the clause quoted above means that banks should not typically lend at LVRs greater than 60 percent to customers that fit the description in 7(2)f. For example, a customer in the corporate asset class with 8 rental properties, who would have difficulty servicing their loan without the rental income from the properties, and is seeking to buy another property (which would make their overall LVR 65 percent), should not obtain finance. In contrast, a customer who has used their house (and one rental property) as collateral to fund a café operation, but is expected to be able to service their mortgage entirely using cashflow from the café and other non-rental income, should not be affected by this clause (normal bank credit criteria would still of course apply).
76. To date, we haven't required reporting on lending that meets the 7(2)f criteria, but we think the new (lower) investor LVRs make the case for more regular reporting stronger. We will be asking banks to track the lending they are doing which meets 7(2)f (both low LVR and high LVR) and report to us on the characteristics of that lending.

Q12: Will there be any significant difficulty associated with reporting lending to large scale residential property investors as defined in clause 7(2)f of BS19?

Data requirements

77. The proposed changes will necessitate some minor adjustments to the new commitment survey to monitor compliance. As noted above, we expect to liaise with banks separately on the necessary changes.

Timeline and next steps

78. The consultation period for these proposals will run until August 10. Shortly after that, the Reserve Bank expects to release a summary of submissions and final policy, with the policy taking effect from 1 September 2016.

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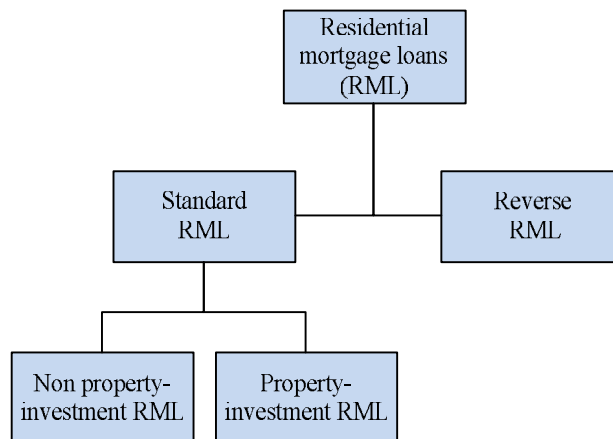
Annex 1: Proposed text to be removed from BS2

“residential mortgage loan” means a loan secured by a first ranking mortgage over a residential property used primarily for residential purposes either by the mortgagor, or a related party of the mortgagor, or a tenant of the mortgagor. A loan may not be classified as a residential mortgage loan if the mortgaged property is predominantly used for farming or commercial activities. Without limitation, a property will be considered to be predominantly used for farming or commercial activity if:

- (i) the mortgaged property would be marketed as a farm or a commercial property; or
- (ii) the principal or interest payments are predominantly serviced from the income generated by the use of the property for farming or commercial activity, except where that income is rental income and the property is used for a residential purpose.

For the purpose of this section, predominantly means more than 50 percent.

~~From 1 July 2016, a~~ A residential mortgage loan must be classified as either a standard residential mortgage loan or a reverse residential mortgage loan. ~~Prior to July 1 2016, all residential mortgage loans are classified as standard residential mortgage loans.~~ The diagram below depicts the sub-classification of residential mortgage loans.



A standard residential mortgage loan originated ~~on or after 1 November 2015, and from 1 November 2016 a standard residential mortgage loan originated before 1 November 2015,~~ must be further sub-classified into either a non property-investment residential mortgage loan or a property-investment residential mortgage loan.

~~All residential mortgage loans originated before 1 November 2015 are classified as non property investment residential mortgage loans until 31 October 2016.~~ A non property-investment residential mortgage loan is eligible for retail treatment irrespective of exposure size.