An A to Z of loan-to-value ratio (LVR) restrictions

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The Reserve Bank recently announced restrictions on high loan-to-value ratio (LVR) lending. The restrictions take the form of a 'speed limit' that requires banks to restrict new residential mortgage lending at LVRs of over 80 percent to no more than 10 percent of the dollar value of their new residential mortgage lending. The speed limit on high-LVR lending is designed to slow the growth in house prices and housing credit, and mitigate associated risks to the financial system and the broader economy. This article sets out the framework for LVR restrictions, and explores the Reserve Bank's early experience in operating them.

LVR restrictions have been altered since this article was published. Current restrictions are explained on the Loan-to-valuation ratio restrictions page

1 Introduction

In August 2013, the Reserve Bank announced that it would be restricting new high loan-to-value ratio (LVR) housing lending by registered banks.[2] LVR restrictions are one of the four tools that make up the Reserve Bank's new macro-prudential toolkit, and this was the Reserve Bank's first intervention under its macro-prudential policy framework. Borrowers with LVRs of more than 80 percent (less than 20 percent deposit) are often stretching their financial resources, and are more vulnerable to an economic or financial shock such as a recession or an increase in interest rates.[3]

The imposition of LVR restrictions was a significant development in the way the Reserve Bank applied its longstanding regulatory powers, and was driven by escalating concerns about the New Zealand housing market. Housing lending makes up more than half of all lending by New Zealand banks, and surging house price growth (particularly in Auckland) was judged to be contributing to an increasingly overvalued housing stock. This leaves borrowers and banks exposed should house prices suddenly fall. Given that well over half of New Zealand household wealth is held in the form of housing,[4] and that household indebtedness was already running near record highs, the ability of an indebted household sector to withstand a major decline in house prices was a serious concern. Although the financial system is currently well positioned, a much-extended house price boom that ended in a severe housing downturn could cause substantial damage to the financial sector and the economy.

As the prudential regulator charged with maintaining the soundness of the New Zealand financial system, the Reserve Bank was faced with a difficult choice. Should the Reserve Bank intervene to take the heat out of the housing market, and if so, what would be the right form of intervention? With escalating house prices threatening financial stability but inflation running below the middle of the Reserve Bank's 1–3 percent inflation target, LVR restrictions were considered to offer the most appropriate response. This article provides a comprehensive introduction to LVR restrictions, the Reserve Bank's expectations around their deployment, and a discussion of those aspects that are still evolving.

2 Loan-to-value ratio restrictions

2.1 Background

The global financial crisis (GFC) prompted central banks and prudential regulators to reflect on the best way to safeguard financial stability. 'Macro-prudential policy' has since developed as a significant new policy function

[1] The author is grateful to colleagues at the Reserve Bank for helpful comments and advice.

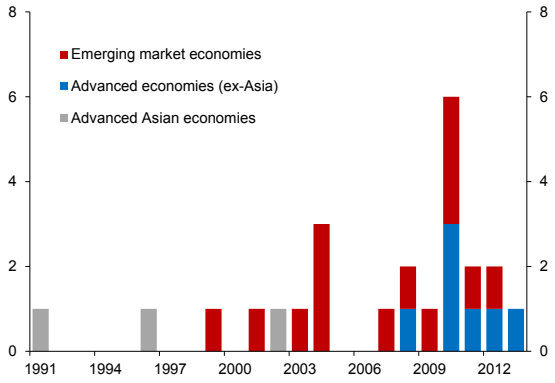
[2] The LVR of a loan is a measure of how much a bank lends against a residential property, compared to the value of that property.

[3] Lamont and Stein (1999) analyse the housing markets of US cities, and find that cities with a higher share of high-LVR borrowers are more sensitive to city-specific changes in incomes. Almeida *et al* (2006) show that house prices and new household borrowing are more sensitive to income shocks in countries with higher LVRs.

[4] Housing accounts for close to 75 percent of household assets as defined by the Reserve Bank's household asset and liabilities data. However these data overstate housing wealth as some household financial assets are excluded (such as equity in unincorporated business and shares in in unlisted companies).

in many countries, with LVR restrictions being used in a growing number. Prior to the GFC, LVR restrictions were mainly used in emerging market countries and some Asian advanced economies. Since the GFC, LVR restrictions have spread beyond this group and are now being used in Canada, Sweden, Finland, Norway, Israel and, recently, New Zealand (figure 1).

Figure 1
Countries adopting LVR restrictions to address real estate booms[5]
(number of countries)



Source: IMF, RBNZ.

New Zealand's framework for macro-prudential policy was agreed in May 2013, with the Governor of the Reserve Bank and the Minister of Finance signing a Memorandum of Understanding (MoU) on the use of macro-prudential instruments (RBNZ, 2013a).[6] Four macro-prudential instruments are currently available to help address systemic risks:

i. adjustments to the core funding ratio (CFR);
ii. the counter-cyclical capital buffer (CCB);
iii. adjustments to sectoral capital requirements (SCR); and
iv. quantitative restrictions on the share of high-LVR loans to the residential property sector.

Restrictions on high-LVR housing lending aim to improve the resilience of the financial system, primarily by slowing the rate of housing-related credit growth and house price inflation, thereby reducing the risk of a substantial downward correction in house prices that would damage the financial sector and the broader economy. They work by constraining the supply of high-LVR housing lending by banks. Rationing of high-LVR lending by banks then means that some borrowers are unable to obtain a high-LVR housing loan.

LVR restrictions can also contribute to financial system resilience, by improving the ability of households to withstand financial shocks. The extra equity provides a cushion against falls in house prices, reducing the risk of borrowers falling into 'negative equity', where the borrower owes more than the property is worth. In itself, negative equity does not mean that borrowers will be unable to service their mortgage. Should, however, borrowers encounter financial problems – perhaps because of a change in personal circumstances, such as becoming unemployed, or because of rising interest rates – negative equity reduces their ability to manage their way out of stress. For example, a borrower might be able to draw down positive equity to buffer income losses, and the loan would be a better candidate for restructuring or refinancing. Greater equity, therefore, makes banks' balance sheets less risky, as it reduces the probability of default and potential loan losses on household lending, all other things being equal.

2.2 Base framework

In setting up the framework for restrictions on high-LVR lending, the Reserve Bank has followed the model for existing regulations. A new chapter, BS19, has been added to the *Banking Supervision Handbook* and LVR restrictions have been imposed in banks' conditions of registration. In addition to the main condition, which sets out the speed limit, four other conditions are aimed at preventing banks undermining the effectiveness of the primary condition (box A). While some countries have implemented LVR restrictions through regulatory 'guidance', the use of the conditions of registration framework reflects the seriousness with which the Reserve Bank views the restrictions, and the need to reduce avoidance risks.

[5] See Nier and Osiński (2013) for details.
[6] See Rogers (2013) for an outline of the macro-prudential policy framework.

Box A
Conditions of registration

LVR restrictions are imposed by adding five new standard conditions of registration to the existing conditions of all registered banks, including branches of overseas banks.

The primary new condition sets out the threshold(s) at which the restriction would apply, and permissible high-LVR lending shares. Three subsidiary conditions restrict a bank from providing a top-up loan secured by a second or lower-ranking mortgage to a borrower who has taken out a first-ranking mortgage. These conditions apply if the top-up would take the lending over the high-LVR threshold. The conditions also cover top-ups provided by other lenders.

The fifth condition aims to prevent a bank from circumventing the LVR restrictions by colluding with a part of its banking group that is outside the scope of conditions of registration.

The Reserve Bank was aware of existing industry practices that banks could use to deliberately avoid the impact of LVR restrictions, but which banks and their customers also use for legitimate business purposes (for example, parents providing collateral against housing loans to their children). Prohibiting all such activity would have adversely affected financial system efficiency, so rather than doing this, the Reserve Bank chose to call on banks to act in the 'spirit' of the regulation and not seek to avoid the impact of LVR restrictions. The Reserve Bank has operationalised this by setting out a non-exhaustive list of methods that banks might use to avoid the impact of LVR restrictions, its expectations that banks would not exploit or promote such arrangements to avoid LVR restrictions, and has detailed how it would respond should avoidance concerns arise. In particular, the Reserve Bank would consider the size, timing and marketing of such measures, in determining whether the bank was seeking to avoid LVR restrictions. Should a bank be judged to be avoiding the effect of LVR restrictions, the Reserve Bank would take action, which might include varying the bank's standard LVR conditions, imposing an additional condition relating to LVRs, or taking some other action as appropriate (RBNZ, 2013b).

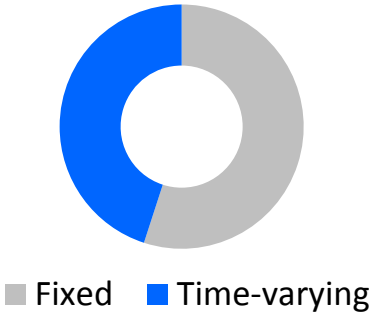
The Reserve Bank was also mindful of the risk of lending 'leaking' to non-bank entities. LVR restrictions apply only to registered banks: the Reserve Bank has no jurisdiction over non-deposit taking finance companies, offshore lenders or non-institutional lenders (e.g. family members), and more limited regulatory powers over non-bank deposit takers. This means that some borrowers might be able to avoid LVR restrictions by borrowing from these sources. Such borrowing would reduce the effectiveness of LVR restrictions in addressing excessive credit growth, but would present less risk to the resilience of the financial system, given that these lenders sit outside the 'core' system.

The Reserve Bank expects the risk of regulatory leakage to be mitigated by the temporary nature of the restrictions, and the 'speed limit' approach. Both of these raise the uncertainty around the payoffs to unregulated lenders entering the market, thus reducing the incentives for opportunistic behaviour. The current dominance of the banking sector in financial intermediation (relative to history) may further help to reduce the scope for lending by non-bank lenders. Nevertheless, the Reserve Bank is aware of the need to carefully monitor and report developments in the non-regulated finance sector, and would consider seeking to extend its regulatory perimeter to non-bank lending institutions should it prove necessary.

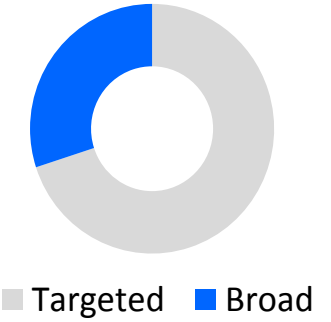
The LVR restrictions framework has been tailored to New Zealand's specific institutional context and circumstances. Whereas many countries apply LVR restrictions as a fixed part of their regulatory framework, in New Zealand they are intended to be used in a time-varying fashion (figure 2, overleaf, top LHS). LVR restrictions are to be used only occasionally, at those points in the financial cycle where there is a real danger of growing systemic risks leading to financial instability. The Reserve Bank does not intend to operate LVR restrictions in a continuous fashion to smooth the cycle, but rather aims to limit the extreme peaks in house price and housing credit cycles.

Figure 2[7]

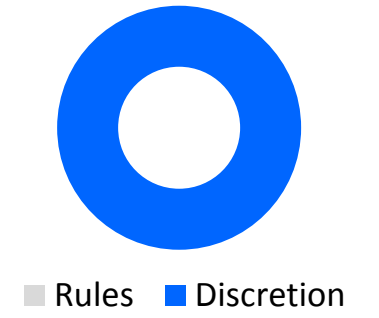
How LVR restrictions are applied in New Zealand and other countries: share of countries



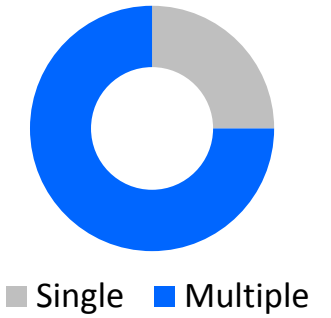
Are restrictions varied over the cycle?



Are restrictions targeted to certain borrower segments?



Are decisions rules-based or discretionary?



Are restrictions used in combination with other measures?

Source: Lim *et al* (2011), RBNZ.

The choice was also made to apply LVR restrictions in a broad-based fashion, rather than targeting them to particular borrower segments, such as investors, or regions such as Auckland (figure 2, top RHS). Targeting would risk significantly diluting the effectiveness of LVR restrictions. For example, the evidence suggested that first-home buyers were a key component of high-LVR housing lending, so exempting first-home buyers could have materially undermined the effectiveness of the policy. Moreover, targeting would raise the likelihood of circumvention, risk introducing other distortions into the housing market, and entail a number of practical difficulties, including how best to delineate and measure the targeted segment.

Instead, the Reserve Bank took a 'speed limit' approach to LVR restrictions: banks can still do some high-LVR lending but they cannot exceed the nominated quantitative threshold: i.e. no more than 10 percent of new housing lending. This is expected to mitigate the effect on particular borrower segments, since banks can choose to direct this high-LVR lending capacity to first-home buyers, for example, should they so wish. More generally, the 'speed limit' approach was seen as having lower efficiency costs than an outright ban, as many high-LVR borrowers would still be able to obtain funds from banks.

The base framework for LVR restrictions did include several exemptions, which were designed to reduce the efficiency costs of imposing LVR restrictions without unduly undermining their effectiveness (RBNZ,

[7] The doughnut charts show the proportion of countries that apply LVR restrictions in a particular way. For ease of presentation New Zealand's way of applying the instrument is coloured blue.

2013c). For example, refinancing of high-LVR loans (i.e. replacing the loan with a new loan offering better terms) is exempt, as long as the loan value does not increase, and Welcome Home Loans are exempt, on the grounds that they serve clear government housing policy objectives and present minimal risks to financial stability. The number of exemptions was deliberately kept small to limit the complexity of the framework and to reduce the risk of policy leakages.

In developing its macro-prudential framework, the Reserve Bank considered the case for rules-based decision-making (e.g. ex ante criteria and trigger points for intervention) but, as with other countries, opted for a discretionary approach (figure 2, bottom LHS). Given the broad range of factors shaping financial system risk, the Reserve Bank does not believe it is possible to publish simple thresholds or trigger points for decisions. The Reserve Bank is also aware that the capacity to pre-specify these matters is constrained by the dynamic and innovative nature of the financial system, and the limited state of knowledge on macro-prudential policy (both with respect to risk assessment and tool effectiveness). The chosen approach therefore is one of 'guided discretion', with the Reserve Bank publishing guidance on the indicators and judgements that underlie its macro-prudential policy decisions in its regular *Financial Stability Reports* (FSRs) and other publications.[8]

Country experiences show that multiple instruments are often used to address the same risk (figure 2, bottom RHS). Although the Reserve Bank does not have a fixed preference in this area, the decision framework (see below) does explicitly consider whether the risk is best addressed with macro-prudential tools, and what the optimum mix of tools should be. This is a decision that is heavily context-dependent: in the recent case of LVR restrictions, the rising risk in housing markets was addressed using multiple instruments. In addition to LVR restrictions, a prudential review of capital adequacy requirements led to higher capital requirements for high-LVR housing lending, a follow-up paper on definition changes and internal model processes tightened valuation policies, among other things (RBNZ 2013d, 2013e; Wheeler, 2013).

The Reserve Bank is also aware that LVRs do not capture all forms of risk affecting housing loans. In particular, debt servicing ability has an important bearing on the default risk of mortgage lending and some countries have chosen to apply restrictions on debt servicing ratios in tandem with restrictions on high-LVR lending. While the Reserve Bank is not contemplating such measures at this time, our regular assessments of financial conditions monitor trends in the household sector's debt servicing burden as well as bank standards applying in this area.

In developing LVR restrictions, the Reserve Bank decided to restrict the 'flow' of high-LVR lending, rather than apply portfolio caps to the 'stock' of high-LVR lending. The application of speed limits to new high-LVR lending reflects the key objective of LVR restrictions, which is to mitigate extremes in credit and house price cycles.

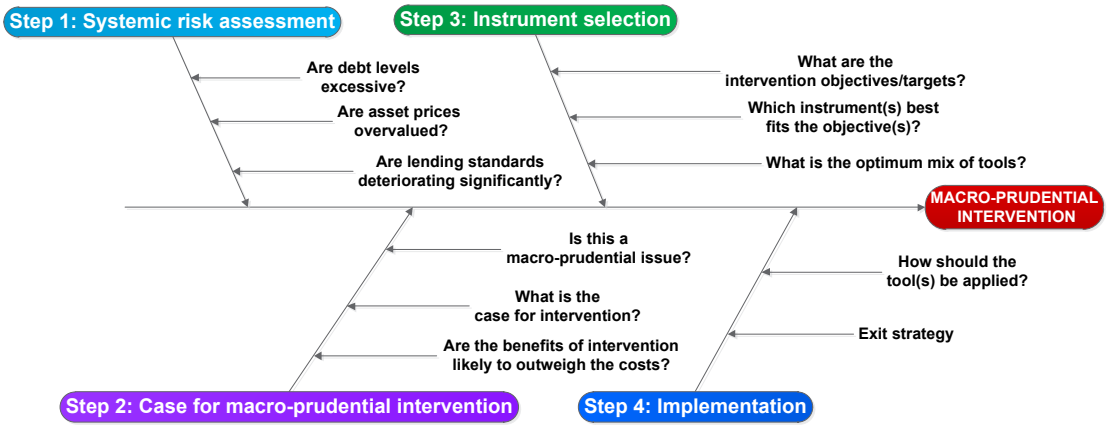
2.3 Implementation

The macro-prudential policy consultation set out the high-level framework for decision-making, starting with the systemic risk assessment process (figure 3, overleaf) (RBNZ, 2013f).

Leading up to the announcement of LVR restrictions, a series of papers were presented to the Reserve Bank's fortnightly Macro-Financial Committee meetings, which painted a picture of growing systemic risks in the housing sector. Household debt levels remained very high, notwithstanding the drop in the household debt-to-income ratio following the GFC, and house prices appeared increasingly overvalued. In the months leading up to LVR restrictions, the IMF, OECD, and the three major international rating agencies had all pointed to the economic and financial stability risks associated with New Zealand's inflated housing market. The IMF and the OECD suggested that New Zealand house prices were overvalued by around 25 percent (figure 4) (IMF, 2013b; OECD, 2013). Expectations that house prices would continue to rise also seemed to be becoming increasingly

[8] See, for example, a Reserve Bank *Bulletin* article on the role of macro-prudential indicators in measuring systemic risk (Wolken, 2013).

Figure 3
The macro-prudential decision framework

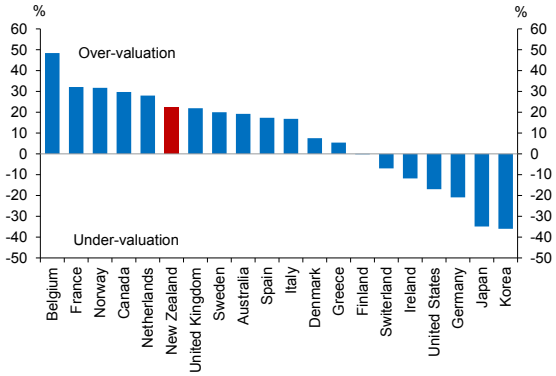


embedded, raising the risk of self-fuelling credit and house price rises.

The Reserve Bank identified a number of longer-term risks to the housing market that could cause a sharp decline in house prices, potentially destabilising the financial system. These included mortgage rates rising faster than expected, adverse labour market and migration developments, and mismatches between the construction of new housing and housing demand (RBNZ, 2013g).

The proportion of high-LVR lending was also worryingly high, at close to 30 percent for the banking system over the first half of 2013, as aggressive competition between banks saw deposit requirements relaxed. The Reserve Bank became increasingly concerned about the risk of a hard landing in the property market, and the resilience of borrowers and ultimately the banking system, if these trends continued.

Figure 4
House price to income across OECD countries
(deviations from historical average)



Source: OECD.

Although housing supply/demand imbalances were seen as key contributors to rising house prices, the Reserve Bank was aware that it could take some considerable time for supply-side measures to reduce the upward pressure on house prices. This led the Reserve Bank to focus on potential demand-side responses. The conventional mechanism to help restrain housing demand would be to raise the Official Cash Rate (OCR), which would feed through directly into higher mortgage rates. However, CPI inflation was sitting below the middle of the Reserve Bank's 1–3 percent inflation target, and was forecast to remain low. A premature OCR increase would have risked causing the New Zealand dollar to appreciate sharply, putting further pressure on New Zealand's export and import-competing industries. Importantly, risks were concentrated in the housing and construction sectors, but an interest rate increase would have affected all sectors of the economy. In the circumstances, where escalating house prices were threatening financial stability but not yet general inflation, macro-prudential policy offered the most appropriate response.

As noted earlier, the Reserve Bank considered adjustments to the base prudential framework, as well

as using macro-prudential tools. With regard to the base framework, the Reserve Bank analysed the housing capital risk weighting rules and determined that risk weights for high-LVR mortgages were undesirably low – this led to those risk weights being raised (RBNZ, 2013h). This improved the base level of bank resiliency, but the Reserve Bank considered that broader cyclical concerns about the housing cycle remained. Consideration was given to the options of the core funding ratio (CFR), a sectoral capital overlay, and LVR restrictions, with a key decision driver being the likely impact of the tool on housing credit and house prices. An adjustment to the CFR was eliminated relatively early, reflecting the blunt nature of such a tool, which would affect all bank lending, not just housing lending, and the likely lack of traction on the financial cycle. A very large increase would have been necessary to achieve the desired effect. A temporary increase in capital requirements for housing lending would have been better targeted, but was assessed to be lacking in 'bite' compared to the Reserve Bank's modelling of the likely impact of LVR restrictions on house price growth and credit growth (Bloor and MacDonald, 2013).

After testing a range of policy calibrations, the Reserve Bank settled on a speed limit approach, which limited banks' new residential mortgage lending at LVRs over 80 percent (a deposit of less than 20 percent) to no more than 10 percent of the dollar value of their total new residential mortgage lending. It was estimated that the proposed calibration could result in 1-3 percentage points lower household credit growth for the first year that the restriction was in place, all else equal. This reduction was likely to come about through a combination of slower housing market turnover, reduced house prices and higher average deposits for house purchases (figure 5). The Reserve Bank's modelling also suggested that house price inflation could be 1–4 percentage points lower over the first year, reflecting reduced competition for houses, a direct lowering of the price that some purchasers could

Figure 5
Projected impact of restrictions on high-LVR lending

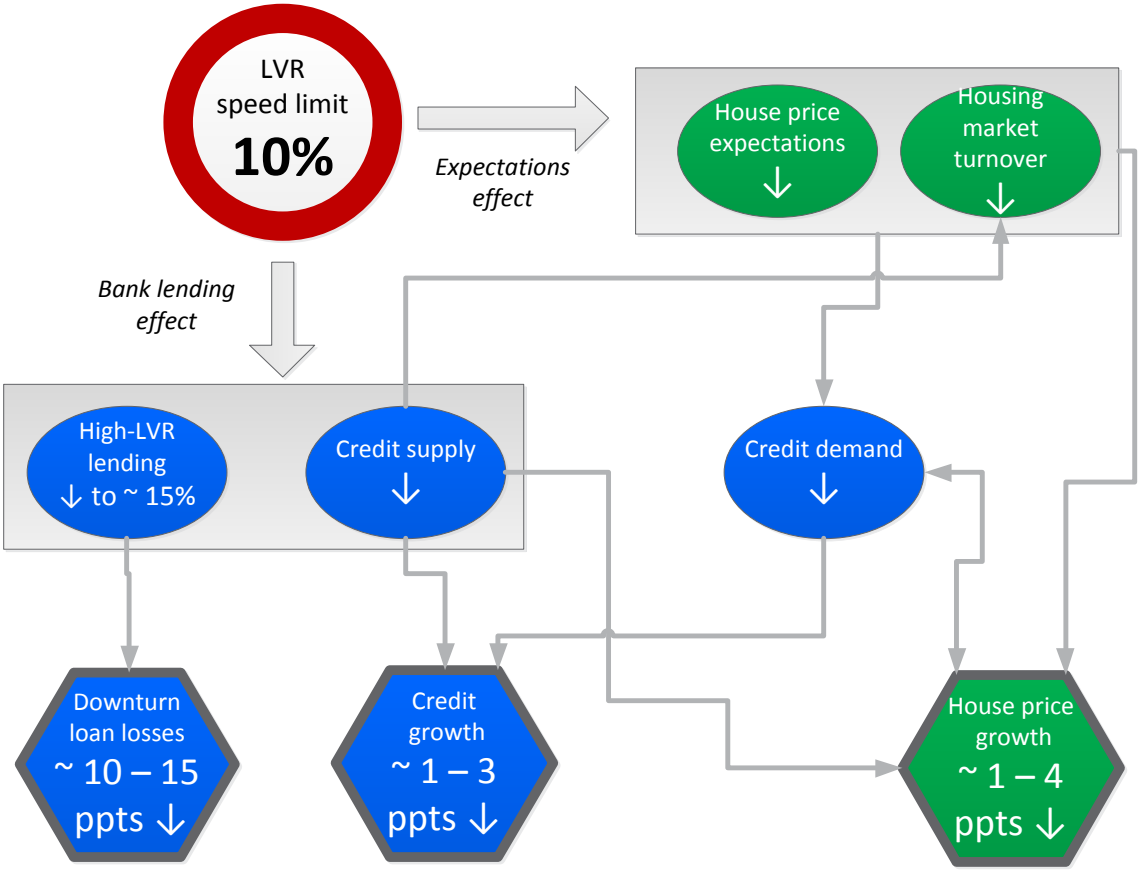


Table 1
Macro-prudential policy development: timeline

Date	Macro-prudential policy development
March 2013	Consultation on macro-prudential policy instruments and framework
May 2013	Finalisation of high-level macro-prudential policy framework
May 2013	Memorandum of Understanding signed
June to July 2013	Technical consultation on framework for restrictions on high-LVR residential mortgage lending
August 2013	Finalisation of framework for restrictions on high-LVR residential mortgage lending
August 2013	Announcement of intention to implement restrictions on high-LVR residential mortgage lending, and publication of *Regulatory Impact Assessment*
October 2013	LVR restrictions come into effect
December 2013	Consultation on proposed modifications to framework for restrictions on high-LVR residential mortgage lending, including exemption of construction lending

pay, and reduced house price expectations as a result of the restriction. The decision was made to focus on the use of LVR restrictions as a likely policy response, and to accelerate the technical analysis and design to accommodate this.

Technical enhancements to the regulations were led by the Reserve Bank's Prudential Supervision Department, in close collaboration with the Macro-Financial Department. As is standard, there was a public consultation on the draft changes to the *Banking Supervision Handbook* and conditions of registration, prior to the LVR framework being finalised. This resulted in some important modifications, particularly with regard to handling the existing pipelines of pre-approved housing loans, which were very large at some banks. To address the pre-approval pipeline, the framework was modified to allow for a one-off transition period, during which banks could smooth their high-LVR lending over a longer, rolling, six-month measurement period (rather than the normal three-month period).

In addition, the Reserve Bank had already been exploring ways to improve its systemic risk assessment capacity, by standardising the data collected from banks on high-LVR residential property lending. This work was accelerated, with an added focus on the information needed to monitor compliance and the effectiveness of LVR restrictions. The first data reporting began in July 2013, and aggregate data are now published by the Reserve Bank at monthly intervals (RBNZ, 2013i).

2.4 Operation

'Speed limits' on high-LVR lending were announced in August 2013 and formally introduced on 1 October 2013 (table 1; RBNZ, 2013j).[9] The announcement was accompanied by a *Regulatory Impact Assessment* (RIA), which provided an extensive review of the various policy options considered by the Reserve Bank, and the costs and benefits likely to be associated with LVR restrictions (RBNZ, 2013k).[10]

Following the implementation of LVR restrictions, the Reserve Bank's focus has shifted to monitoring bank compliance and the effectiveness of the restrictions. From a compliance point of view, banks in aggregate are meeting the speed limit requirement. Four months into the initial measurement period, the average share of banks' high-LVR lending has fallen to 6.7 percent (after exemptions), providing a buffer of a little over 3 percent

[9] To account for the natural ebbs and flows of lending activity, the speed limit is measured at the end of each month on a rolling average basis; that is, measuring lending totals over a specified number of months up to each month-end. This measurement period is initially six months for all banks; from end-April 2013, it will be three months for the larger banks – ANZ, ASB, BNZ, Kiwibank and Westpac. The smaller banks will continue to comply over a six-month moving average, to help account for the greater volatility in their flows, and smaller total lending.

[10] The RIA was prepared in accordance with section 162AB of the Reserve Bank of New Zealand Act 1989 (the Act), which requires the assessment of expected regulatory impacts of policies adopted under Part 5 of the Act.

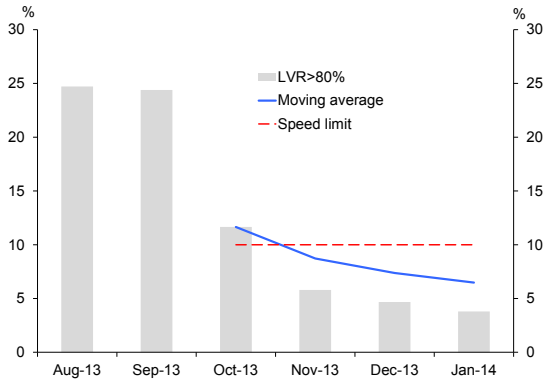
to the 10 percent speed limit (figure 6). The share of high-LVR lending before exemptions is lower than expected, running at around 7.8 percent, compared to a projected 15 percent. This partly reflects lower than projected use of exemptions, which are averaging around 1 percent of total lending, compared to projections of 5 percent. It is possible that the share of high-LVR lending could modestly increase in coming months as banks adjust to the new framework.

It will be some months before the impact of LVR restrictions can be reliably gauged. However, from an effectiveness point of view, the early evidence suggests that LVR restrictions are having the desired impact on house prices and credit growth. The housing market has weakened, with seasonally adjusted house sales down by around 13 percent over the five months to February, and nationwide house price growth easing to 8.2 percent over the year to February compared to 9.8 percent over the year to September (figure 7). Survey data also suggest that expectations of continuing house price increases are softening. After trending up since June 2011 (when the survey began), households' expectations of higher house prices appear to have stabilised (figure 8).

The weaker housing market is reflected in housing lending data. This is particularly evident in the first stage of the lending process, with the value of new housing loans approvals falling by a seasonally adjusted 7 percent over the three months to February. Changes in housing credit are slower to come through, reflecting that net credit is also affected by drawdowns on existing loans, and changes in repayment behaviour. Housing credit growth does appear to be turning however, having slowed from its October 2013 peak of 6.4 percent annual growth to 6 percent in January 2013.

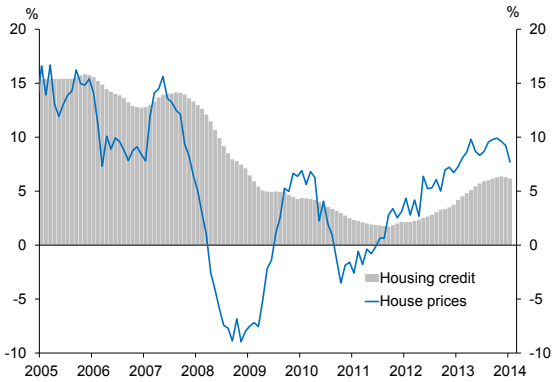
There have also been some marked changes in the pricing of housing lending, with banks now pricing for the higher risk and capital requirements associated with high-LVR lending. Banks have broadly increased the use and level of low equity premiums, and are offering

Figure 6
New Zealand bank new high-LVR lending
(percent of lending)



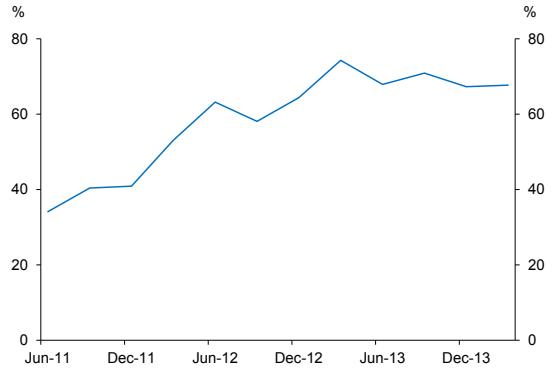
Source: RBNZ *LVR New Committments Survey*.

Figure 7
New Zealand house prices and housing credit
(annual percentage change)



Source: REINZ, RBNZ *Standard Statistical Return*.

Figure 8
Households expecting higher house prices
(net percent)



Source: RBNZ.

discount rates on low-LVR lending. This created an initial pricing wedge of up to 100 basis points between high-LVR and low-LVR loans.

In assessing the impact of LVR restrictions, the Reserve Bank considers both actual developments in house prices and credit growth (as outlined above), and counterfactual developments; e.g. what would the likely path of housing credit and house prices be in the absence of LVR restrictions? This counterfactual modelling accounts for changes in key factors such as interest rate movements and net migration, but given the many other moving parts that also make up the financial system and economy, it is not possible to be too definitive around the results. That being said, the Reserve Bank's counterfactual exercises suggest that house price inflation would have been around 2.5 percentage points higher in the year to February in the absence of LVR restrictions.

As discussed earlier, the boundaries of the regulation mean that it is possible that there could be policy leakages, whereby the effectiveness of the LVR restrictions is undermined by avoidance on the part of banks, increases in unsecured lending, or greater lending by non-regulated entities. The Reserve Bank is monitoring for such developments. However, to date, banks appear to be complying with the spirit of the LVR restrictions, and the data do not show any material increases in unsecured lending, or lending by non-regulated entities.

2.5 Framework enhancements

In assessing the effectiveness benefits of LVR restrictions, the Reserve Bank is also mindful of costs. As outlined in the macro-prudential and LVR consultations, macro-prudential interventions may also have a number of efficiency costs, and other unintended consequences. An example is the case of construction lending. The initial available information suggested that high-LVR lending made up a very small part of construction lending, and that the 10 percent speed limit would provide the banks with the capacity to continue such lending. Neither the banks nor the building sector raised concerns about construction lending in their submissions to the consultation on high-LVR lending. Following implementation, however, feedback from the banks and building sector suggested that the proportion of high-LVR construction lending might be somewhat higher, and that the new policy could adversely affect new building. This was of concern, as improving the housing supply response is a key part of bringing a better balance to the housing market. After collecting and analysing supplementary data on construction lending and the housing construction market, the Reserve Bank decided to exempt construction lending (RBNZ, 2013l). The exemption is expected to support new building and therefore help to moderate house price pressures, thus helping to reduce systemic risk in the banking system.

Similarly, the Reserve Bank eventually decided not to include unsecured lending in the calculation of the loan-to-value ratio for capital purposes, as this would have modified the base prudential framework in a way that was not consistent with the temporary nature of LVR restrictions. From a macro-prudential perspective, excluding credit card and unsecured lending from the LVR calculation could adversely impact the effectiveness of an LVR restriction, particularly if borrowers became tempted to use their credit card facilities or personal loans to raise or increase the deposit needed to obtain a mortgage. However, from a capital point of view, including credit card and unsecured lending in the LVR calculation was unnecessary as credit card and personal loans were already treated as unsecured lending and risk-weighted accordingly. Their inclusion in the calculation of the LVR could therefore have led to a form of 'double counting', which would not reflect the way these loans are treated by banks, and could have resulted in significant unintended consequences to the housing lending market, such as a move away from 'all obligations mortgages', and from borrowers having all of their business with the same bank (RBNZ, 2013k). The potential costs were judged to outweigh the potential benefits of reduced avoidance risk and associated greater effectiveness of LVR restrictions.

While such decisions require a degree of discretion, the Reserve Bank is mindful of the need for consistency and even-handedness in its regulatory approach. To aid this, the Reserve Bank has identified a core set of principles for analysing framework issues:

- How does the modification affect the objectives of the LVR restrictions?
- Does it adhere to the existing LVR framework, or would the framework require substantive modifications?
- Is it supportive of the underlying prudential framework, or could it come into conflict with it?
- What are the likely effects on efficiency?
- Are there any distributional considerations?

3 Removal of LVR restrictions

In monitoring LVR restrictions, the Reserve Bank is also continuing to consider the conditions that would justify their removal. These would include evidence of a better balance in the housing market, with the Reserve Bank being confident that removal of LVR restrictions would not lead to a resurgence of housing credit and demand.

4 Conclusion

This article has provided an introduction to the LVR restrictions framework, and the Reserve Bank's initial experiences in deploying them. LVR restrictions are not a permanent tool, and the Reserve Bank is continuously monitoring their impact. Although some desirable adjustments to the framework have been identified, and are currently being drafted, LVR restrictions appear to be working well overall. The housing market seems to be slowing, and there is little evidence of material leakages around the edges of the restrictions. A better balance in the housing market will help reduce the risk of a severe housing downturn, and associated systemic risks to the financial sector and the economy.

The Reserve Bank recognises that the policy room provided by LVR restrictions can only be temporary. LVR restrictions provide a way of restraining housing demand while working on the supply response. But in the medium to longer term, imbalances will need to be resolved through appropriate longer run policy measures, including actions to improve the housing supply.

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