RESERVE BANK
OF NEW ZEALAND
TE PŪTEA MATUA

Macro-prudential policy and the New Zealand housing market

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There has been much discussion around the increasing pace of house price inflation in New Zealand. We at the Reserve Bank have been highlighting the risks for financial stability and potentially also for broader price stability if house prices continue to accelerate.

The strong housing market is starting to underpin household demand but, with some slack still in the economy, this cannot yet be described as a threat to overall inflation. Our most recent projections show CPI inflation trending gradually back towards the mid-point of our target band. We are also well aware that any Official Cash Rate (OCR) increases at this time would likely put unwanted pressure on the exchange rate. For these reasons, higher interest rates are not the right policy response at this time.

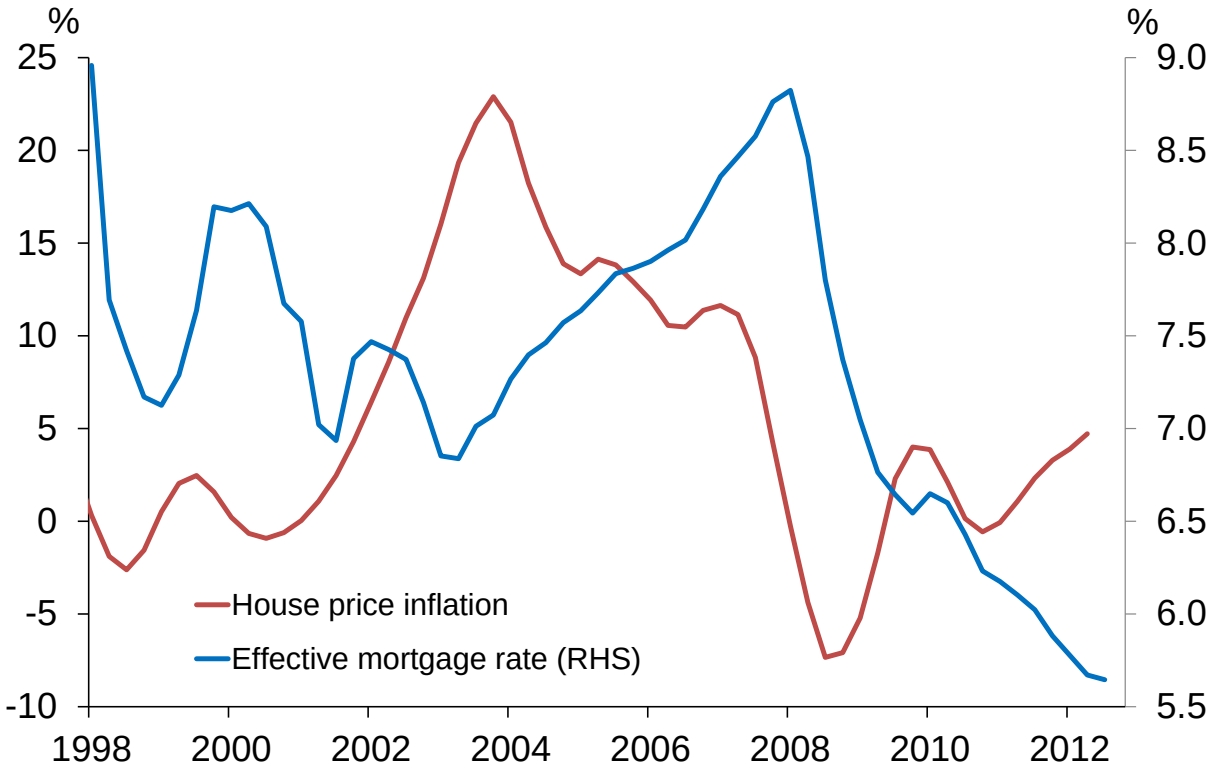
This brings me to my topic today: macro-prudential policy. You will be aware that the Reserve Bank has recently been developing a number of macro-prudential policy tools. Today I would like to review the structure and intent of these instruments and focus particularly on the loan to value ratio (LVR). This tool is more complex than the others we are considering, yet it also offers the greatest potential for moderating the current excesses in the housing market.

First I will recap on why we see the housing market as a real threat to financial stability.

Housing market a threat to financial stability

The current housing market pressures in Auckland and Christchurch are due to a combination of factors. The pressures in Christchurch are a direct consequence of the significant damage to the housing stock from the earthquakes and the demands of the re-build. In Auckland, housing imbalances are the result of limited supply over a number of years and strong demand, supported by historically very low mortgage interest rates and easy credit terms, including a willingness by banks to accept relatively low deposits (figure 1). More recently it looks as though net inward migration is picking up and this could add further pressure to housing demand.

Figure 1: House price inflation and effective mortgage rate

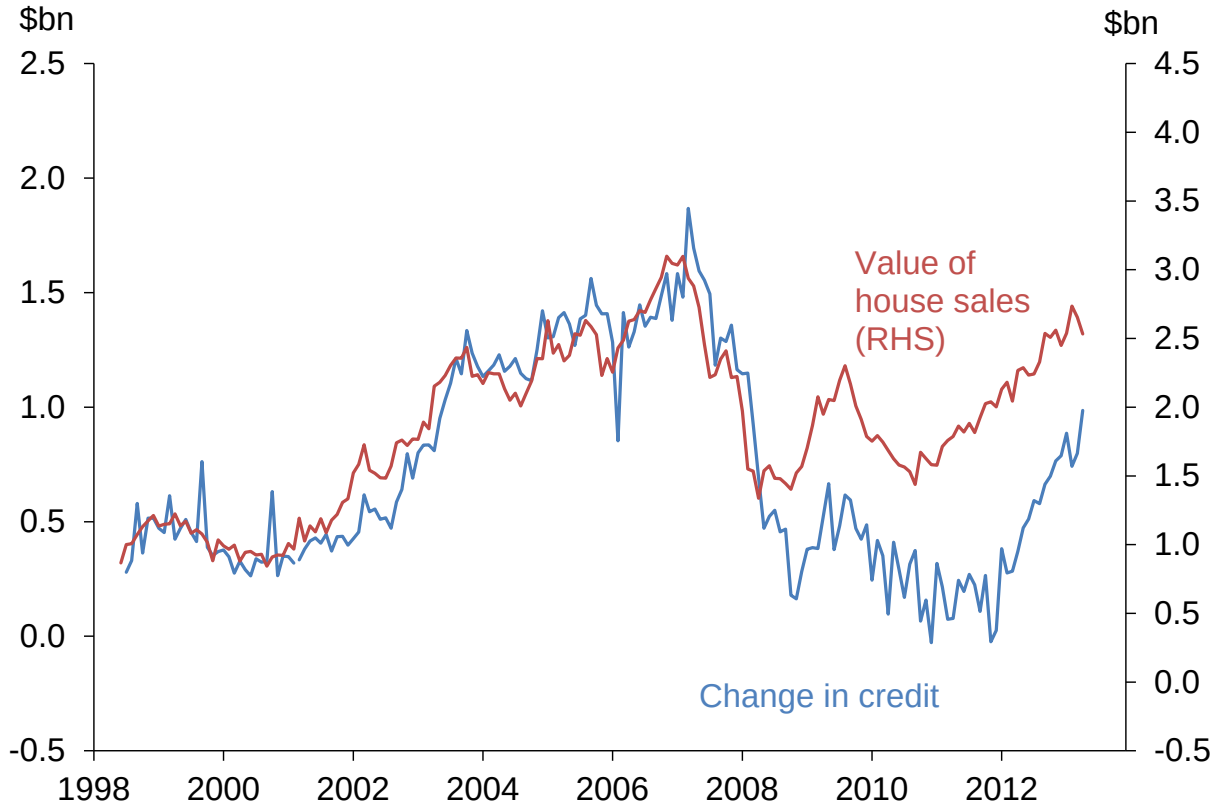


Source: Property IQ, RBNZ.

While demand has been strengthening, supply remains limited. Low rates of housing construction since the global financial crisis (GFC) have left a shortage in Auckland, assessed by the Auckland Council at 20,000 to 30,000 homes. The recent accord between the Government and Council targets the construction of 39,000 new houses over the next three years and we fully support their efforts to improve the responsiveness of housing supply to the growing demand. But with a myriad of planning and resourcing issues to deal with, it could take many years to clear the shortage. In Christchurch, the supply response has a similar range of obstacles to overcome, with the added complexity of insurance issues. It could take several years to complete the more than 10,000 homes needed.

In our view the strength of housing and credit demand is not fully reflected in the aggregate credit data. Total outstanding mortgage credit growth is increasing but still at lower rates – of around 5 to 6 percent per annum – than in the previous boom. However these growth rates are net of debt repayments which have been significantly higher in the years since the GFC. New mortgage approvals and loans have been growing at a faster rate and are now comparable with the pre-GFC peak levels. The value of house sales is now also near the 2006-07 peak levels (figure 2).

Figure 2: House sales and changes in mortgage credit
(monthly)

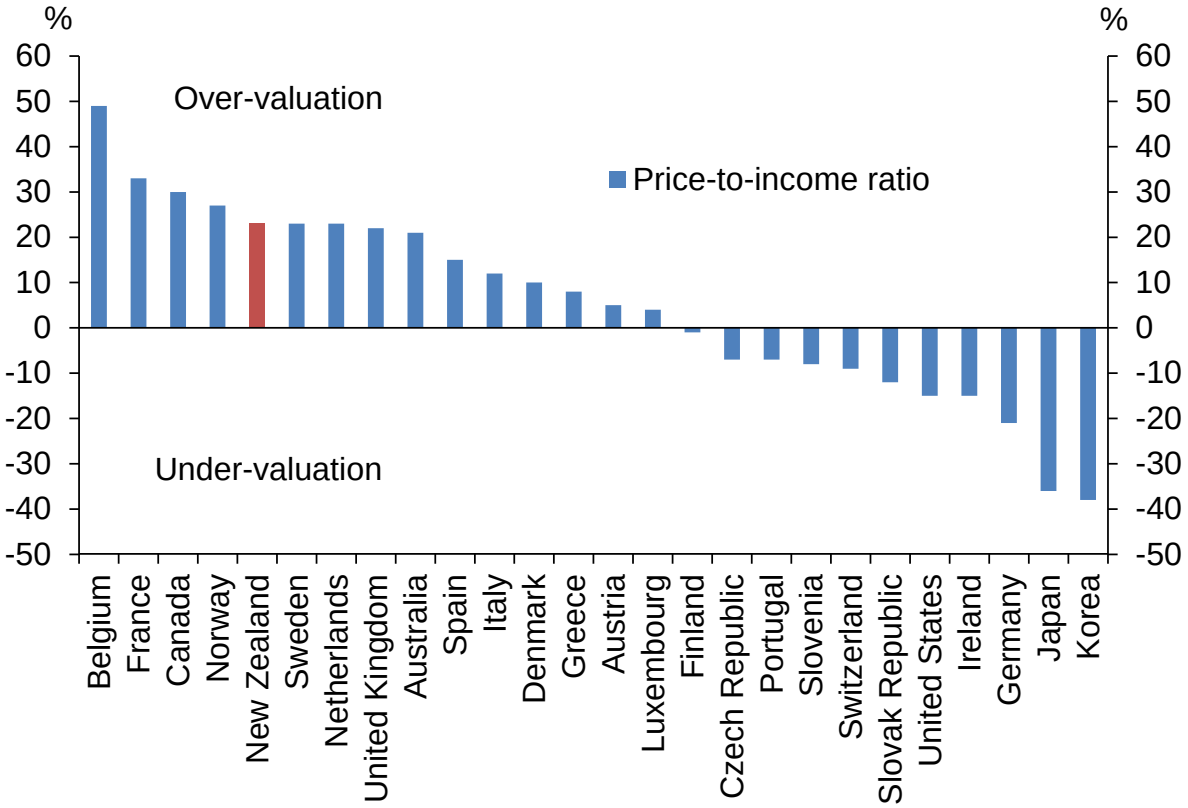


Source: REINZ, RBNZ.

If house prices and debt were rising from depressed levels, then these trends would not be of real concern. However the current house price and debt trends are on top of already high base levels – both by historical and international standards. For example, figure 3 shows New Zealand having the fifth highest house price overvaluation, relative to incomes, in the OECD.

The further house prices are stretched, the more likely it is we will see a disruptive downward correction at some point in the future. While the banks' balance sheets are currently in good shape with strong capital and liquidity buffers, such a correction could be very damaging if combined with a serious economic or financial shock to New Zealand. The Reserve Bank is not alone in its belief that the housing market is posing a growing risk to financial stability in New Zealand. This view was also expressed by the International Monetary Fund (IMF) and OECD in their recent reports on New Zealand and also by the three major rating agencies.

Figure 3: House price to income across OECD countries
(deviations from historical average)



Source: OECD

While the Reserve Bank's mandate is to promote financial stability, not social equity, there are clear implications here for housing affordability. As house prices and debt levels trend increasingly upwards, so too housing becomes less affordable, particularly for first home buyers. While macro-prudential policy measures might make credit less accessible for a period, they should help to make house prices more affordable in the longer term. Such measures should also reduce the risk of a sharp housing downturn and the loss of equity that would result, particularly for highly indebted home owners.

New macro-prudential framework

The aim of macro-prudential policy is to manage risk in the financial system arising from transient but pervasive macro-financial developments, such as credit and asset price cycles or major international financial shocks.

While micro-prudential policy settings (e.g. capital ratios and risk weights) are fixed on a through-the-cycle basis, macro-prudential policy measures are introduced as an overlay when needed in order to mitigate significant but transitory risks affecting the whole financial system. Macro-prudential policies can achieve this in two ways: first, by increasing the resilience of bank balance sheets to a potential shock (which also gives them a greater capacity to keep lending in the downturn); and second by seeking to dampen a credit and asset price cycle on the upswing in order to reduce the severity of the eventual downturn. Macro-prudential policies have become more prevalent since the GFC because that

experience highlighted the massive financial and economic damage that can result from macro-financial shocks.

A macro-prudential framework for New Zealand has been developed over the past year or so. The Reserve Bank has communicated the framework through a range of speeches, consultation documents and reports (see for example Spencer (2012), RBNZ (2013a), RBNZ (2013b)). A Memorandum of Understanding has been signed between the Reserve Bank and the Minister of Finance which sets out the key objectives, instruments and responsibilities under the new framework. The Reserve Bank has decision-making responsibility for macro-prudential policy implementation but must consult with the Minister and Treasury prior to the deployment of any instrument. The Reserve Bank has also undertaken to keep the public informed on macro-prudential policy through speeches and publications, with the main accountability document being our six monthly *Financial Stability Report.*

Four potential instruments have been put forward and these are summarised in Table 1. The four instruments work in quite different ways to reduce financial system risk. The counter-cyclical buffer and sectoral capital overlay work by requiring banks to hold additional capital buffers against potential shocks in asset markets or particular economic sectors. The additional capital requirement may give rise to some increase in lending rates as a result of higher overall funding costs and may also reduce the supply of credit to housing at the margin, but is unlikely to have a major impact on the overall growth in housing credit.

Similarly, a temporary increase in the core funding ratio would make banks more resilient to liquidity shocks but would likely have only a limited effect on credit growth through somewhat higher lending rates. This is to say, the instruments based on capital and liquidity overlays mainly reduce risk in the system by increasing the resilience of bank balance sheets rather than by having a significant dampening effect on asset cycles. LVR restrictions, on the other hand, have the potential to reduce risk more directly: both by reducing the riskiness of loan portfolios; and also by dampening asset prices through a reduced supply of credit.

Table 1: Macro-prudential Instruments

Counter-cyclical capital buffer (CCB)	The CCB is part of the Basel III framework. It requires an additional capital overlay to be applied, normally of up to 2.5 per cent of risk weighted assets. Higher capital holdings would increase the resilience of bank balance sheets to credit shocks. The CCB might also moderate the credit cycle via upward pressure on bank funding costs. Banks would be given up to 12 months to raise the extra capital.
Adjustments to the minimum core funding ratio (CFR)	Adjustments to the CFR would vary the proportion of stable funding (retail deposits and long term market funding) required relative to a bank's total lending. A CFR tightening would increase the resilience of banks to liquidity shocks. It could also lean against the credit cycle by increasing bank funding costs. Banks would be given up to six months' notice in which to meet an increase in the CFR.
Sectoral capital requirements (SCR)	Sectoral capital requirements are akin to the CCB and would require banks to hold extra capital against lending to a particular sector. An SCR would provide an additional cushion against credit shocks in the relevant sector and could reduce the relative attractiveness of lending to that sector. Banks would be given up to three months' notice in which to raise the extra capital.
Restrictions on high loan-to-value ratio (LVR) residential mortgage lending.	Restrictions would take the form of caps or 'speed limits', the latter restricting the share of new bank lending that has a high LVR. Such restrictions, if binding, would reduce the incremental risk in bank mortgage portfolios and would also have a direct effect on the supply of new bank credit, thus potentially moderating housing market pressures. Banks would be given at least two weeks' notice of any LVR restriction.

International precedents for use of the first three instruments are limited. The CCB is part of the new Basel III regime which is live from January 2014 for New Zealand and somewhat later for many other countries. The deployment of a SCR has been recently announced by the Swiss and will come into effect in September. They are applying a capital overlay of 1 percent against all residential mortgages. The CFR is an existing micro-prudential tool, similar to the Net Stable Funding Ratio (NSFR) under the Basel III regime. As a macro-prudential tool, the CFR is unique to New Zealand, although the possibility of using the NSFR as a macro-prudential tool has been under consideration in the United Kingdom. There are considerably more precedents for the use of LVR restrictions and I will elaborate on these shortly

The point I want to make here is that, of the four macro-prudential instruments, the LVR instrument is the one with the best scope to dampen the current strong demand for housing, as well as reducing the riskiness of bank balance sheets. For this reason the Reserve Bank is looking closely at the use of LVR restrictions to address the growing housing market threat to financial stability. While all four of the macro-prudential instruments remain valid options, I will use the rest of my time to focus on LVR restrictions and how they would work.

Loan-to-value restrictions

As I mentioned, LVR restrictions have the most potential to reduce risk both by making bank balance sheets less risky and by dampening housing market pressures through reduced credit supply. Borrowers with high LVR loans are often stretching their financial resources, paying a deposit of less than 20 percent and often also having high debt service ratios (DSRs). Such borrowers are more vulnerable to an economic or financial shock such as a recession or an increase in interest rates. A high LVR loan is more likely to be underwater in the event of a default and is therefore a riskier proposition for the lender. A restriction on the volume of high LVR loans should reduce the inherent risk in banks' mortgage portfolios as well as reducing the overall supply of credit to the housing market.

The international evidence suggests that a prevalence of high LVR lending can accentuate loan losses and worsen economic disruption when inflated house prices correct abruptly. Two examples are the United States and Ireland. While lending practices in these countries were far more extreme than we have seen in New Zealand, their experiences are instructive. In both countries, house price appreciation was fuelled by competition between lenders, and falling lending standards. By 2006, 20 percent of new mortgage lending in the United States was sub-prime, often with minimal credit checks and very high LVRs. Similarly in Ireland, lending was often occurring at LVRs over 100 percent. Annualised house price growth peaked at 16 per cent and 15 per cent in the US and Ireland in the lead up to the GFC before falling sharply. The subsequent sharp downturns gave rise to considerable financial distress in both countries, with high LVR borrowers particularly hard hit. At the bottom of the US housing market in 2010/11, around 25 percent of the 50 million or so mortgage holders had loans larger than the value of their houses.

In New Zealand, losses from housing loans in the wake of the GFC were well contained compared to many countries, although there was an increase in defaults. The Reserve Bank recently analysed data on banks' loss rates, by LVR category, over the period from 2008 to 2012. The increase in loss rates followed a fall in nominal house prices of around 10 percent from their peak in 2007. While there was some variation across banks, the data shows that loss rates on high-LVR loans generally increased more (and in several cases substantially more) than loss rates on lower LVR loans. This evidence of high and correlated loss rates supports the proposition that higher LVR loans have more systemic risk than lower LVR loans.

It is on this basis that the Reserve Bank recently took the (micro-prudential) measure of increasing high LVR risk weights on the housing exposures of the major banks (RBNZ, 2013c).

A number of countries have applied LVR restrictions over the past few years, including Canada, Sweden, Norway, Israel, Korea and Hong Kong SAR. In the case of Sweden and Norway, the LVR restrictions are in the form of guidelines rather than hard regulatory limits. The LVR restrictions often work in concert with regulatory debt servicing limits (e.g. Korea), while insured mortgages in a number of economies are exempted from the restrictions (e.g. Canada and Hong Kong SAR). The available evidence suggests that LVR caps can slow credit and asset price cycles. In addition, the IMF has studied house price corrections in OECD

economies since 1980 and concluded that the fall in prices was significantly more severe for economies with higher maximum LVR ratios (IMF, 2011a).

With regard to slowing down credit growth and house price appreciation, the IMF (2011b) has found, using a cross-country analysis since 2000, that credit growth and house price inflation slowed following the implementation of LVR caps in more than half of cases where the tool was used. A more sophisticated estimation approach found that the introduction of LVR caps reduced the pro-cyclicality of credit growth. Studies estimating the effects of LVR caps in Hong Kong (Craig and Hua (2011), Wong et al (2011)), Korea (Igan and Kang (2011)), and most recently in Canada (IMF (2012)), have found that reductions in maximum LVRs had a significant impact on housing transactions, house prices, house price expectations and/or housing credit growth.

We are currently consulting with the banks on how LVR restrictions could be implemented in New Zealand (Refer Consultation on framework for restrictions on high-LVR residential mortgage lending). The consultation is concerned with a range of mainly technical implementation issues such as: how is a loan defined, what is a valid valuation, how will LVRs be measured and reported to the Reserve Bank, and what loans will be exempted. I will not go into all the details, but I will mention some key features of our preferred approach.

First, an LVR restriction **would apply to new lending by banks**, not the banks' existing loan portfolios. The banks can control the LVR of loans at origination, but they cannot control the effect of house price movements on LVRs of existing loans.

Second, we favour **speed limits over outright restrictions.** We do not want to ban high LVR lending; we would prefer to restrict it as a share of banks' total new lending. With a speed limit approach, we expect banks would need to build in their own internal buffers to give themselves a margin of error. Such buffers could reduce as banks become better at controlling their proportion of high LVR lending. Within the speed limit, each bank would make their own assessment of which customers received high LVR loans, based on their own criteria including other risk measures, such as debt servicing capacity, and the potential long-term value of those customers to the bank.

Exemptions

A number of submissions to the recent consultation have proposed targeting particular borrower segments. Our preference is to keep the policy simple and effective by not having major exemptions and by minimising the possibilities for avoidance. If for example there was a carve-out for small businesses, the potential for avoidance would increase markedly as individual borrowers set up companies for borrowing purposes.

Categories where there is a clear case to exempt include Housing New Zealand mortgage-insured loans, bridging loans, refinancing loans and high-LVR loans to borrowers who are moving home (but not increasing their LVR or loan amount).

Unintended consequences

While we believe that LVR restrictions could have significant benefits in terms of reducing systemic risk in the housing market, they are not a panacea. We recognise there would be costs and unintended consequences. Most obviously there would be implementation costs. Banks will need to change systems and policies, and train staff to implement LVR restrictions. More substantially, there will be system-wide efficiency costs arising from borrowers and lenders seeking to avoid LVR restrictions.

The most obvious channel for avoidance is family loans, which could become more prevalent as a means of reducing the amount of bank finance utilised by first-home buyers. That is a family's prerogative and there is nothing the Reserve Bank could or should do about it. Alternative channels could include unsecured top-up loans or high LVR mortgages from non-bank housing lenders. Such disintermediation will tend to be greater, the longer that any restrictions remain in place. If it becomes widespread, then efficiency costs could become significant at the same time as the effectiveness of the policy is reduced.

If avoidance activity is so prevalent as to undermine the effect of the LVR policy then either the LVR restriction could be removed or the LVR policy could be applied more broadly and/or more rigorously. For example, following the introduction of LVR restrictions in 2002, the Korean authorities expanded the regulatory perimeter in 2006 beyond banks to include non-bank financial institutions. One factor that will constrain these alternative channels is the cost of funding. Unsecured lending is considerably more expensive than mortgage lending, and non-bank funding is more expensive than bank funding. In Sweden, for example, it is quite common for households to borrow a portion of house purchase costs via an unsecured top-up loan, and that activity increased when LVR restrictions were applied in 2010. But the borrowers who do that need to consider the higher interest rate on unsecured funds as well as the more rapid repayment of their top-up funds relative to their main mortgage. In this way there can be significant deterrent effects built into avoidance channels.

The cooperation of the banks in implementing any LVR restrictions would be crucial for their success. We would expect bank management and directors to follow the spirit, not just the letter of the restrictions. In particular, they would need to ensure that the policy was not abused or undermined through innovative lending practices. Certainly we would be maintaining a close dialogue with the banks.

Removal of Restrictions

When would an LVR restriction be removed? This would need to be assessed in light of the assessed impact of the restrictions on housing lending, house price pressures and the riskiness of bank balance sheets. Once the housing market returned to a better balance of supply and demand, the restrictions would be removed. Alternatively, we would look to remove the restrictions if they were judged not to be achieving their purpose of reducing systemic risk and/or if they were causing material distortions.

If we saw a sharp correction in house prices, there would be a clear case for promptly removing any LVR restrictions. In that situation there would be little risk that removal of the restrictions would result in a resurgence of risk appetite. For example, the correction in house prices after 2007 resulted in a sharp decline in both the demand and supply of high LVR lending, suggesting that an LVR restriction would not have been necessary during this period.

A preferred outcome would be a 'soft landing' in the housing market, where house price growth moderates without resulting in a sharp correction. In that situation, the Reserve Bank would need to carefully weigh the efficiency benefits of removing any LVR restrictions against the risk that this might stimulate a renewed build-up of systemic risk. A persistent moderation in household credit growth would argue in favour of removal.

Conclusion

We at the Reserve Bank see the current overheated housing market as a real threat to future financial stability. While limited housing supply is at the heart of the problem, strong demand supported by easy credit is underpinning the rapid escalation of house prices. The demand for mortgages is now close to pre-GFC peak levels. If this momentum persists, the housing market pressures could also become a threat to general price stability.

The new macro-prudential policy framework has been developed to address just this kind of macro-financial imbalance. The Reserve Bank is therefore seriously considering the use of macro-prudential policy.

While the LVR restriction is more complex and difficult to implement relative to the other macro-prudential instruments, we believe this is the best tool, apart from interest rates, that could moderate the current strength in housing demand. In the current low inflation environment, interest rate increases are not seen as an appropriate response.

Although they would have benefits for financial stability, LVR restrictions would bring with them efficiency costs. In order to keep these to a minimum, we believe any restrictions should be set as speed limits, and have relatively few exemptions. It is also important to keep the bigger picture in mind when assessing potential efficiency costs. These need to be compared against the significant economic and financial damage that could result from a housing boom that ends in a severe housing downturn.

In the pre-GFC housing boom, with hindsight and with this macro-prudential framework, we would most likely have applied macro-prudential instruments with the aim of reducing systemic risk. In the current situation, with house prices and household debt ratios starting from much higher levels, and with interest rates at historically low levels, the risks to financial stability may well be greater.

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