

## **Consultation Paper:**

### **Macro-prudential policy instruments and framework for New Zealand**

The Reserve Bank invites submissions on this Consultation Paper by 10 April 2013. Please ensure that responses are sent in before the closing date. Submissions received after this cannot be considered.

Submissions and enquiries about the consultation should be addressed to:

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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.

**March 2013**

## 1.0 Background

1. Following the Global Financial Crisis (GFC), there has been considerable international focus on reducing risks to the financial system. These risks may be created by a build-up of leverage and rapid credit and asset price growth. They may also arise from the financial system's collective reliance on unstable sources of funding. If the risks to the financial system are not properly managed they have the potential to undermine the ability of the system to perform its financial intermediation role and cause significant damage to the broader economy (Ha and Hodgetts, 2011).
2. There has been a growing consensus that regulatory frameworks focusing on the stability of individual financial institutions might not be sufficient in managing risks to the financial system as a whole. This is leading to the development of a policy approach known as 'macro-prudential policy', which uses various prudential instruments to dynamically manage financial system risks.
3. In developing and implementing its own prudential policy framework, the Reserve Bank has always placed considerable weight on the requirement under its Act that it promote the maintenance of a sound and efficient financial system. However, the Reserve Bank has in recent years been considering a range of macro-prudential instruments that could further assist in promoting financial system stability. The instruments do not replace conventional prudential regulation but may be used from time to time to help manage the risks associated with the credit cycle.
4. The countercyclical capital buffer (CCB) is a macro-prudential instrument within the Basel III framework that is being widely adopted internationally (BCBS, 2010a). As part of the recent Basel III changes to the capital adequacy framework, the Reserve Bank has already consulted on a framework for the CCB (RBNZ, 2012a; RBNZ, 2012b). The Reserve Bank will be formally implementing the CCB framework as from 1 January 2014.
5. The Reserve Bank has also identified several other macro-prudential instruments that may have a role to play in the New Zealand context. These include adjustments to the minimum core funding ratio, sectoral capital requirements, and restrictions on high loan-to-value ratio (LVR) residential mortgage lending.
6. The purpose of this consultation document is to describe and seek preliminary feedback on the full package of macro-prudential instruments. The instrument discussion is for the most part high-level and principles-based, and will feed into a more detailed instrument design process that reflects the outcomes of this consultation. As the technical details of the new instruments are refined, further consultation may be undertaken where necessary.
7. In addition to outlining the proposed instruments, the paper outlines the objectives of macro-prudential policy and the proposed decision-making, governance and accountability framework for the conduct of macro-prudential policy.
8. The macro-prudential framework proposed in this paper relates to the banking system, which currently accounts for most financial intermediation in New Zealand. Capital-based instruments and adjustments to the minimum core funding ratio would directly apply to locally incorporated banks (around 90 percent of the total assets of the New Zealand banking system), while loan-to-value restrictions would apply to all registered banks. When the CCB is imposed, Basel III reciprocity arrangements

would also see foreign bank branches required to hold extra capital against their New Zealand exposures.

9. It is recognised that in some circumstances it may be desirable to extend the perimeter of macro-prudential regulations to capture other financial institutions. Should an extension of macro-prudential regulations be contemplated in the future, the Reserve Bank would expect to undertake additional public consultation setting out its proposals. Consultation would also be undertaken should any additional macro-prudential instruments be identified.

## 2.0 Objectives

10. The objectives of macro-prudential policy are to promote greater financial system stability through:
  - building additional resilience in the financial system during periods of rapid credit growth and rising leverage or abundant liquidity; and
  - dampening excessive growth in credit and asset prices.
11. Measures to dampen credit and asset price growth can promote financial stability by strengthening private sector balance sheets, reducing the impact of asset price falls on banks' balance sheets and helping to reduce incentives for speculative behaviour. This behaviour has the potential to become self-propelling, contributing to destabilising boom-bust cycles in credit and asset prices.
12. In turn, boom-bust financial cycles risk setting off a destabilising feedback loop between the real economy and the financial system that can have significant and lasting economic costs (BCBS, 2010b). The GFC is a recent notable example: a crisis that originated in the banking system sent many countries into deep recession, with large-scale job losses and significant falls in household income and wealth. As such, macro-prudential interventions that reduce the frequency and severity of financial crises will have broader economic and welfare benefits.
13. It is expected that, in most circumstances, measures undertaken to meet macro-prudential objectives will provide support for monetary policy in its role of maintaining price stability. For example, macro-prudential instruments that help to dampen excessive credit and asset price growth are likely to be of assistance in containing inflation pressures. Monetary policy, for its part, is required to monitor asset prices and to have regard to the soundness and efficiency of the financial system in its pursuit of price stability.
14. Sections 1A(b) and 68 of the Reserve Bank Act (the 'Act') establish the purpose for the implementation of macro-prudential regulations on registered banks in New Zealand, which is to promote the maintenance of a sound and efficient financial system. The powers to implement or adjust countercyclical capital buffers, the minimum core funding ratio, sectoral capital requirements and restrictions on loan-to-value ratios for residential lending are referred to under section 78 of the Act.
15. The implementation of any of the instruments listed above would be undertaken under section 74 of the Act, under which the Reserve Bank is able to impose conditions of registration on registered banks.

### 3.0 Instruments

16. Table 1 classifies the proposed macro-prudential instrument set according to the nature of the risk that each instrument is designed to address, and whether or not the instrument targets generalised risks to the financial system or specific 'at-risk' sectors.

**Table 1: Macro-prudential instruments**

Nature of risk	Generalised	Specific
Banking sector leverage	Countercyclical capital buffers Adjustments to core funding ratio	Sectoral capital requirements
Household sector leverage		Restrictions on high-LVR lending
Maturity transformation	Adjustments to core funding ratio	

17. Tools that target excessive leverage in the financial system include the countercyclical capital buffer and sectoral capital requirements. Both of these directly affect the gearing of lenders' balance sheets, whereas restrictions on high-LVR lending improve the quality of lenders' assets by requiring borrowers to provide a greater proportion of equity. At the same time they would constrain the build-up of leverage on household balance sheets. Adjustments to the minimum core funding ratio reduce maturity transformation risk by requiring lenders to fund their balance sheets using a greater share of stable funding.
18. The remainder of this section discusses each of the instruments in detail, setting out the ways in which they can contribute to the Reserve Bank's financial stability objectives, and some evidence around their effectiveness.<sup>1</sup>

#### 3.1 Countercyclical capital buffer<sup>2</sup>

19. The CCB framework aims, during the credit cycle upswing, to provide the banking system with an additional cushion against subsequent losses or sharp increases in risk-weighted assets that may be associated with periods of credit downturn. Release of the CCB during the downturn will help banks to meet regulatory capital requirements without having to cut back on lending to creditworthy borrowers.
20. When risks to the New Zealand financial system are judged to be low, the CCB rate will be set to zero. However, in times of excessive private sector credit growth, banks may be required to hold the CCB, which will provide the banking system with an extra

<sup>1</sup> See also background paper to the consultation "Unpacking the toolkit: the transmission channels of macro-prudential policy in New Zealand", available at: <http://www.rbnz.govt.nz/finstab/macro-prudential/>.

<sup>2</sup> The Reserve Bank sought submissions on the CCB framework in March/April 2012 and final policy decisions on the framework have been announced. Details of the CCB framework are included in this consultation paper so as to provide an overview of the complete macro-prudential policy framework.

layer of high quality capital (common equity). The CCB rate is typically expected to range up to 2.5 percent of risk-weighted assets; however, there is always the possibility that it may need to be higher.

21. There are three main ways in which banks can meet the CCB requirement:
  - i. they can *raise capital*, through equity issues or higher retained earnings;
  - ii. they can *reduce risk-weighted assets*, by reducing exposures (including lending) or rebalancing away from higher risk-weighted assets;
  - iii. they can *reduce their voluntary capital buffers*, leaving overall capital ratios unchanged.
  
22. Where banks raise extra capital to support their lending, this may also increase their cost of funding, at least in the short term. Should banks opt to pass on part of the increased cost of funding to borrowers, this will weigh on the demand for credit, helping rein in excessive credit growth. Imposition of the CCB also sends a strong signal to banks and market participants around the riskiness of lending, and could result in expectations of credit growth and asset price growth being revised downwards, again weighing on demand. On the supply side, the CCB may result in a tightening in credit conditions, as banks reduce lending and tighten lending standards.
  
23. Cross-country research conducted by the Committee on the Global Financial System (CGFS) suggests that in the short run, banks will typically respond to an increase in target capital ratios by making about half to three quarters of the required change through an increase in capital. The remainder of the adjustment takes place through a reduction of risk-weighted assets of which, in turn, only half is in the form of reduced lending (CGFS, 2012).

### 3.2 Adjustments to the core funding ratio

24. Since 1 January 2013, the minimum core funding ratio (CFR) has required banks to source at least 75 percent of their funding from retail deposits, long-term wholesale funding or capital. A greater use of 'stable' funding sources will make the banking system more resilient by increasing the 'stickiness' of funding during times of market pressure and reducing rollover risk on the stock of wholesale funding. A requirement to use a greater share of stable funding sources (i.e., a temporary increase in the minimum CFR) could also help lean against the credit cycle, given that banks can only sustain faster credit growth by raising core funding, which is typically more expensive than short-term wholesale funding.
  
25. However, when there is a significant deterioration in external funding market conditions, downward adjustments to the CFR might also be appropriate. An example could be the global easing in funding conditions leading up to the financial crisis, which fuelled an aggressive expansion in domestic credit. Had an existing CFR been in place, an increase in the minimum CFR could have been considered. Alternatively, when New Zealand banks were unable to access wholesale funding due to systemic stresses in global funding markets, an easing in the CFR requirement would have helped banks manage their way through the stress period without having to shrink their balance sheets.
  
26. An upward adjustment to the CFR can be met by banks in three main ways:
  - i. they can *increase their share of core funding*, by using a greater proportion of retail deposits, term funding or capital;

- ii. they can *reduce their total funding requirement*, by reducing exposures (including lending);
- iii. they can *reduce their voluntary funding buffers*, leaving overall core funding ratios unchanged.

27. The effects of these responses will follow a similar path to the CCB. Any increases in the cost of funding that are passed on to borrowers will weigh on the demand for credit, while credit conditions will tighten should banks choose to reduce lending. Expectations of higher funding costs and consequently slower credit growth could also weigh on expectations of asset price growth. In addition we would expect to see banks tighten liquidity risk management practices in response to the signal of increased funding risk.

28. A downward adjustment to the CFR would work a little differently. In this case, the primary objective will be to provide a safety valve for the system, so that in times of prolonged funding market stress, the CFR requirement does not unduly constrain the flow of credit in the economy or force excessive adjustment to market conditions via bank deleveraging. Banks would be able to temporarily increase their use of short-term wholesale funding, allowing them to maintain the flow of lending.

### **3.3 Sectoral capital requirements**

29. Adjustments to sectoral capital requirements (SCR) are conceptually similar to the CCB but target particular sectors of the financial system in which risk is accumulating and posing a threat to the stability of the overall financial system. As with the CCB, sectoral capital requirements work by providing a temporary additional cushion against potential loan losses in a particular sector.

30. Sectoral capital requirements would typically be applied through overlays to sectoral risk weights, say for housing lending or agricultural lending, but could also be applied through a capital add-on that is calibrated as a proportion of banks' risk-weighted exposures to the sector. When sectoral risks are judged to be acceptable, there will be no macro-prudential SCR in effect. Sectoral capital requirements applied via risk-weights would be part of the minimum regulatory capital requirement, whereas a capital add-on would be treated in the same way as the CCB.

31. As well as providing additional loss absorbency capacity, the imposition of additional sectoral capital requirements would be likely to alter the relative attractiveness of lending to the targeted sector. Banks might decide to reduce their exposures to the sector if faced with a higher cost of funding. Alternatively, should banks pass on any increased funding cost, a rise in borrowing costs would help reduce demand for credit in the sector.

32. Requiring banks to hold extra capital against exposures to a particular sector also sends a strong message to banks and market participants about the riskiness of lending to that sector. It is expected that banks would review their credit practices and pricing policies in that sector, which could see some tightening in credit conditions. Again, expectations of slower credit growth may flow through to asset price expectations, helping mitigate speculative demand.

### **3.4 Restrictions on high-LVR housing lending**

33. Restrictions on high-LVR housing lending provide a supplementary tool for addressing imbalances in the housing sector. They could take the form of an outright

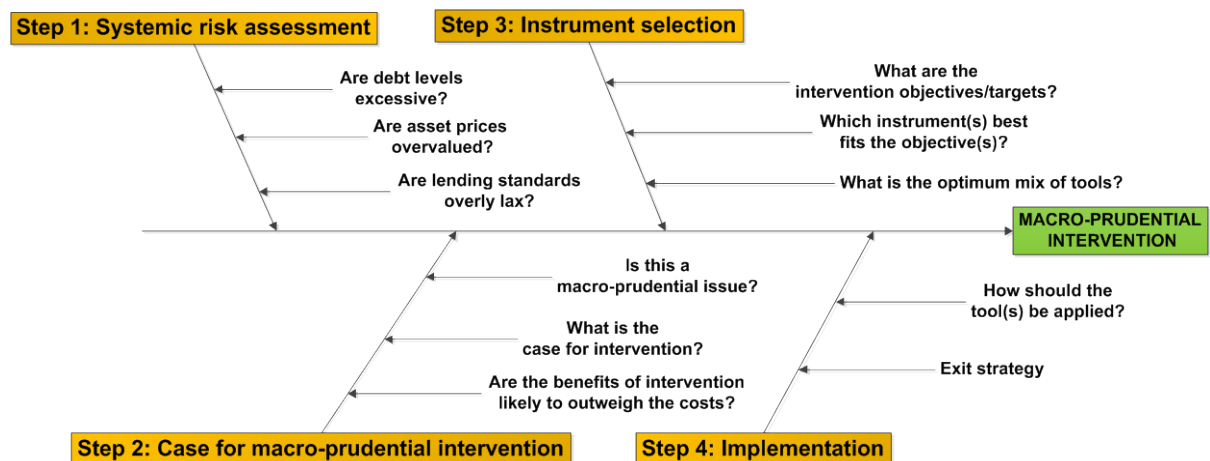
prohibition on mortgages that exceed a specified proportion of the property value (the loan-to-value ratio), or quantitative restrictions on the share of high-LVR lending, either as a proportion of the lender's housing loan book or of new housing lending.

34. Binding LVR restrictions would reduce the aggregate borrowing capacity of potential borrowers, helping to reduce pressure on real estate prices. LVR restrictions would increase the resilience of the banking system, by increasing the average amount of collateral held against housing loans (i.e. reducing borrower leverage). Lower borrower leverage means that a larger drop in house prices would be required to put a borrower in negative equity. This would translate into fewer loan losses on mortgages as more distressed borrowers would be able to sell or refinance their way out of trouble. The introduction of restrictions on high-LVR lending would require banks to substantially modify their lending practices, resulting in a significant tightening of credit conditions.
35. Loan-to-value ratios do not capture all forms of risk affecting housing loans. In particular, debt-servicing ability also has an important bearing on the default risk of mortgage lending and some countries have applied restrictions on debt servicing ratios as part of their macro-prudential frameworks. While the Reserve Bank is not contemplating such measures at this time, our regular assessments of financial conditions take into account trends in the household sector's debt servicing burden as well as bank standards applying in this area.
36. LVR restrictions have tended to be used in emerging market economies, although their use is becoming more widespread in OECD countries. Canada, Sweden, Norway and Israel have all implemented some form of LVR restriction in recent years. International evidence suggests that imposing LVR caps during booms slows down real credit growth and house price appreciation. LVR limits also appear to increase the resilience of banks by increasing the resilience of borrowers: several studies find that tighter LVR caps reduce the sensitivity of households to income and property price shocks (CGFS, 2012).

## 4.0 Decision-making framework

37. There would be four key steps to the macro-prudential policy process (Figure 1).

**Figure 1: The macro-prudential decision framework**



38. *Step One* involves a systemic risk assessment and focuses on whether debt levels and asset price imbalances are, or are likely to become, excessive and whether lending standards may be overly lax. A critical judgement will be whether these indicators are deteriorating or improving. In reaching judgements on these matters a range of quantitative (statistical) and qualitative information will be consulted. Table 2 lists some examples of the data that the Reserve Bank is currently monitoring, and the financial conditions that the indicators can help track.

**Table 2: Examples of macro-prudential indicators**

<b>Type of indicator</b>	<b>Macro-prudential indicator</b>	<b>Purpose</b>
<b>Macroeconomic</b>	Credit	Leverage and credit market conditions
	Household credit	Leverage and credit market conditions
	Business Credit	Leverage and credit market conditions
	Agricultural credit	Leverage and credit market conditions
	Government debt	Leverage
<b>Banking sector</b>	Capital adequacy (actual)	Balance sheet strength
	Non-performing loans	Asset quality
	Sectoral watchlist loans*	Asset quality
	High-LVR lending	Leverage and risk appetite
<b>Market-based</b>	House prices	Asset market conditions
	Commercial property prices	Asset market conditions
	Farm prices	Asset market conditions
	Market funding spreads	Funding and credit market conditions
<b>Qualitative</b>	Bank lending standards	Risk appetite

\* Household, business and agriculture sectors

39. The Basel Committee on Banking Supervision particularly favours use of the de-trended ratio of credit to GDP (also known as the 'credit gap') as a key guide to macro-prudential interventions (BCBS, 2010b). Historical analysis of New Zealand data suggests that the credit-to-GDP gap should be a useful indicator of excessive credit growth. However, since the crisis, 'credit gap' indicators appear to have become distorted and there is a risk that they might be late in signalling the need for intervention. The Reserve Bank will monitor a broad range of indicators, which is likely to vary over time, and will be supplemented by both market and supervisory intelligence, and stress tests of banking sector resilience. Judgement will be an important part of the decision-making process.
40. *Step Two* considers whether a macro-prudential intervention is warranted or whether other economic policy responses might be appropriate. The existence of imbalances might not be best addressed through a macro-prudential response if the imbalances reflect a mis-calibration of other policies. In addition, it is important to ensure that there has been adequate communication of the risks to banks and the public, as in some cases this may help to change behaviour without recourse to additional prudential measures. There would also need to be a broad assessment of the potential costs of macro-prudential intervention relative to the expected benefits, which would, *inter alia*, consider some of the issues raised in section 5.0.
41. *Step Three* involves selecting an appropriate macro-prudential instrument. In selecting the appropriate tool, it is important to consider the effectiveness of the various tools in meeting the policy objectives: building financial system buffers and reducing extremes in the credit cycle. The likely benefits of the instrument will need to be weighed against the costs of intervention, including any distortions to the financial system or potential leakages. For example, as noted in Section 5.0, LVR



restrictions are likely to adversely affect efficiency, and there is a risk of leakage should there be an increase in new lending by the non-bank sector.

42. In some cases, the optimum response might involve using more than one instrument. For example, during a credit boom it might be appropriate to not only constrain the build-up of leverage in the banking system with the countercyclical capital buffer but also to target high risk borrowing more directly (e.g. through the use of LVR restrictions). Timing will be an important consideration, with notice periods varying according to the macro-prudential instrument (Table 3).

**Table 3: Notice periods for macro-prudential instruments**

<b>Instrument</b>	<b>Notice period</b>
Countercyclical capital buffers	Up to twelve months
Sectoral capital requirements	Up to three months
Adjustments to core funding ratio	Up to six months
Restrictions on high-LVR housing lending	At least two weeks

43. *Step Four* is concerned with how individual tools should be applied. The Reserve Bank favours a discretionary and relatively simple approach to implementation. Macro-prudential instruments will not be applied in a formulaic manner; they will be applied in a forward looking manner; and they will not affect existing loan agreements.
44. In times of financial crisis, a priority will be to ensure that the flow of credit is not unduly constrained, subject to the banking system remaining adequately capitalised. For example, a countercyclical buffer would be 'released' when there were clear signs that the credit cycle had peaked (this would allow institutions to draw on the extra capital during the subsequent downturn). Timing such reversals may be technically difficult and may conflict with the natural tendency of lenders and financial markets to become more risk averse during a downturn. This could make macro-prudential tools asymmetric in their effect – it may be easier to lean against credit booms than it is to encourage lending during a downturn.
45. During the decision process and before any implementation decisions are taken, there will be consultation with the Minister of Finance and the Treasury. A *Memorandum of Understanding* (MoU) between the Minister and the Reserve Bank will provide a framework for this engagement, by setting out the agreed objectives, instruments and operating guidelines for macro-prudential policy.
46. In line with the Reserve Bank Act, the Bank's semi-annual Financial Stability Report (FSR) will be a key *accountability* document. The FSR reports on matters relating to the soundness and efficiency of the financial system including any build-up of systemic risk. The Reserve Bank will foreshadow the emergence of financial system imbalances in the FSR, along with the case (or not) for macro-prudential intervention. As part of this process, it is expected that the key macro-prudential indicators will be published and discussed.
47. The appropriateness and effectiveness of macro-prudential policy decisions will be reviewed regularly and reported in the FSR. This will include an assessment of the key judgements that led to macro-prudential decisions as well as a policy impact assessment. As the macro-prudential policy framework evolves, the Reserve Bank is planning to publish more detailed policy pieces outlining various aspects of the framework, either in the FSR or in other Reserve Bank publications.

## 5.0 Costs and benefits

48. The instrument discussion illustrates the ways in which individual instruments, through creating additional capital and liquidity buffers, and mitigating extremes in the financial cycle, can contribute to the overall stability of the financial system. The main benefit of a more stable financial system is reduced risk of financial crisis and associated output losses. The GFC has demonstrated that failures in the financial system can result in significant economic disruption, placing households and business under severe stress, as well as placing considerable pressure on governments' fiscal resources.
49. These system-wide benefits will be weighed carefully against the potential costs associated with each of the instruments. Examples of costs and implementation issues might include:
- a) The possibility of financial disintermediation – macro-prudential instruments that only apply to locally incorporated banks (i.e., the CFR, CCB and sectoral capital requirements) could displace credit growth to foreign bank branches or the non-bank lending sector (including possibly to lenders based offshore). In the case of the CCB, these risks would be partly mitigated by the reciprocity provisions of Basel III.<sup>3</sup> Similarly LVR restrictions would only apply to registered banks and could induce disintermediation towards the non-bank lending sector. Should there be a substantial risk of financial sector disintermediation, the Bank might need to investigate the possibility of extending the perimeter of macro-prudential regulation;
  - b) External market conditions – instruments such as the core funding ratio or CCB may be less effective in leaning against credit growth if global funding spreads become compressed and bank funding is plentiful;
  - c) The use of some macro-prudential instruments, such as restrictions on high loan-to-value lending, will likely require the compilation and collection of additional data on lending patterns. In addition these instruments will need to be vigorously enforced and monitored in order to reduce avoidance;
  - d) Instruments such as loan-to-value restrictions will tend to directly impede some viable borrowers' access to home ownership and may have broader distributional and equity effects. LVR restrictions may particularly affect new home buyers with little equity;
  - e) The possibility that banks might choose to reduce voluntary buffers (funding or capital) to meet the macro-prudential tightening, and on the downswing, that banks might be reluctant to eat into released buffers for fear of markets seeing this as a signal of weakness. The latter risk is expected to be partly mitigated by the fact that the release would be system-wide, and driven by systemic rather than idiosyncratic (bank-specific) events.

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<sup>3</sup> The Basel III global standard envisages reciprocity arrangements to help maintain a level playing field between banks that are regulated locally (including the subsidiaries of the Australian parent banks) and foreign banks that are not regulated by the local supervisor (such as the branches of foreign banks operating in New Zealand). Under reciprocity, the CCB that would apply to each bank at a consolidated level would reflect the geographic composition of its portfolio, i.e. a weighted average of buffers across the group's regional operations.

## 6.0 Request for submissions

50. The Reserve Bank seeks your views on the proposed macro-prudential policy instruments and framework set out in this paper, including:
- a) The use of adjustments to the minimum core funding ratio, sectoral capital requirements and restrictions on high loan-to-value ratio (LVR) mortgage lending as macro-prudential policy instruments;
  - b) How banks' lending, funding, pricing and balance sheet management are likely to adjust in response to changes in the minimum core funding ratio, or to changes in aggregate or sectoral capital requirements;
  - c) Any operational considerations relating to the imposition of sectoral capital requirements via a risk weight overlay vs. a capital add-on;
  - d) The likely impact of restrictions on high loan-to-value ratio mortgage lending, including operational considerations relating to the use of outright limits vs. quantitative restrictions on the flow of high-LVR lending;
  - e) The proposed decision-making framework for macro-prudential policy;
  - f) The proposed notice periods for the core funding ratio, sectoral capital requirements and restrictions on high-LVR residential mortgage lending;
  - g) The likely costs and benefits of the proposed tools.
51. Note that the Reserve Bank is not seeking specific feedback on the operational arrangements for the countercyclical capital buffer as the CCB framework has already been finalised and announced following a consultation in March/April 2012.
52. This consultation will close on 10 April 2013.

## Glossary

BCBS – Basel Committee on Banking Supervision  
 CCB – countercyclical capital buffer  
 CFR – core funding ratio  
 CGFS – Committee on the Global Financial System.  
 FSR – Financial Stability Report  
 GDP – Gross Domestic Product  
 IMF – International Monetary Fund  
 LVR – loan-to-value ratio  
 OECD – Organisation for Economic Co-operation and Development  
 RBNZ – Reserve Bank of New Zealand

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