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## Supporting Paper A8

# Prudential regulatory policy and the business cycle

### Introduction

Economic activity and financial system activity tend to move together. In periods of rapid economic growth, credit growth also tends to increase. Over the past few years we have seen this relationship in New Zealand. Households have been taking on increasing amounts of debt to sustain their spending at high levels and to bid house prices ever higher. As lending has grown rapidly, banks' margins have fallen and there have been instances of banks loosening their lending criteria.

The extent to which cycles in financial system activity, such as increases in the quantity of bank lending or reductions in the price of funds, are a cause of economic cycles or merely a response to those cycles is open to debate. If they are a material cause then prudential policy and how it influences macroeconomic cycles might be worth exploring as an aid to monetary policy.

Prudential policy broadly refers to regulation and supervision directed towards encouraging the appropriate and efficient management of financial system risks. Prudential policy influences the incentives of financial institutions to take and manage risk through tools such as regulatory capital requirements.

This paper discusses how prudential regulation already supports monetary policy and explores the merits of options that might allow prudential policy to further support monetary policy. It is arranged into three further sections:

1. a summary of the current role and purpose of prudential regulation and how it already aids monetary policy;
2. discussion of how prudential tools could be used to

further aid monetary policy and what merit there might be in doing so; and

3. a review of current developments in Reserve Bank prudential policy that may impact on macroeconomic cycles.

### Current prudential regulation

The Reserve Bank is currently the prudential regulator and supervisor of banks. The Government has also recently agreed that the Reserve Bank should be the single prudential regulator in New Zealand in the future. As single prudential regulator the Reserve Bank will regulate and supervise insurers and regulate non-bank deposit takers (supervision of non-bank deposit takers will continue to be done by trustees).

The Reserve Bank's current prudential powers for banks can be used for the purposes of:

- promoting the maintenance of a sound and efficient financial system; or
- avoiding significant damage to the financial system that could result from the failure of a registered bank.

(section 68 of the Reserve Bank Act)

The Reserve Bank has a broad range of prudential powers for banks. These powers include the ability to register and deregister a financial institution as a bank, respond to bank distress, and to issue rules on matters like bank capital adequacy, risk management, loan concentration and risk management systems. Currently these powers apply only to banks. While banks hold three-quarters of financial system

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assets, they make up only a small proportion of the total number of financial institutions.

The Reserve Bank is required to use its prudential powers primarily for the purposes outlined above (what we will refer to here as “prudential purposes”). Actions primarily for these purposes – financial system soundness and efficiency – will often aid monetary policy because there is some degree of natural alignment between the objectives of monetary stability and financial stability. A sound and efficient financial system can make monetary policy more effective, while monetary and macroeconomic stability reduces the stresses to which the financial system might otherwise be exposed.

Imprudent lending by banks tends to occur more often at the peak of the economic cycle when benign conditions lead some to underestimate the degree of risk. Asset values can also be at inflated levels, inducing banks to lend more on the basis of unrealistic expectations about the value of any security they might be taking. Some of these behaviours occurred in New Zealand in the years immediately before 1987. This type of lending can destabilise the financial system and add to the economic cycle, which is bad for both monetary and financial stability. Prudential policy actions aimed at discouraging imprudent lending will therefore also aid monetary policy in its task.

Occasionally, monetary policy and prudential policy objectives are not well aligned and prudential policy might make the task of monetary policy more difficult. For example, in Japan in the 1990s monetary authorities were nervous about tightening monetary policy because of ongoing fragility in the banking system, which meant that monetary policy was not as tight as the economic situation may have justified.

Core prudential rules in New Zealand and other countries typically aim to ensure that financial institutions are prepared to deal with difficult times. Currently in New Zealand these rules apply at all times and in a largely non-discretionary way. For example, capital adequacy rules apply at all times to encourage banks to have sufficient capital for periods of increased loan losses. Current Reserve Bank prudential rules for banks are not explicitly designed to counteract economic cycles, though in principle they could be if that was consistent with the prudential objectives and

likely to succeed.

In addition to these types of rules, in more exceptional circumstances prudential regulators can take discretionary steps in response to any heightened financial system risk. If there appeared to be a high probability that there was an asset price bubble in progress, and that if the bubble burst it could do significant damage to the financial system, prudential regulators might choose to take steps to mitigate the impact. They might, for example, require banks to raise additional capital to absorb any losses. A recent example of such steps was US regulatory agencies issuing additional guidance for financial institutions and consumers on a range of riskier residential mortgage products. The agencies had become concerned about lending to sub-prime borrowers; concerns reflected in the recent US sub-prime mortgage market problems.<sup>1</sup>

There can also, in principle at least, be requirements that increase as financial system risk increases, or that can take effect only when certain “trigger” indicators of heightened risk are reached, which would effectively make any response to heightened risk more mechanical and automatic.

## Could prudential policy do more?

In 2006, Reserve Bank and Treasury staff prepared an initial report on instruments that might be able to aid monetary policy (the Supplementary Stabilisation Instruments report discussed in supporting paper A6). Some of the options reviewed involved prudential policy tools. The prudential tools discussed were focused on the housing market, but most can be generalised to focus on macroeconomic cycles driven by events in any range of asset markets.

We can categorise those tools into three groups:

1. further linking bank capital adequacy requirements to risk;
2. rules and guidance related to banks’ risk management; and
3. quantitative restrictions on particular types of lending, such as limits on loan-to-valuation ratios (LVR) for mortgage lending or limits on lending to certain sectors.

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<sup>1</sup> We do not believe issues of this sort have been a problem in the current New Zealand economic cycle.

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## Further linking capital requirements to risk

New Zealand, like most developed countries, has had regulatory capital requirements for some time. Two changes to capital adequacy requirements that could aid monetary policy are the further linking of capital requirements to risk and discretionary changes to capital requirements in exceptional circumstances.

When asset markets become stretched, the risk in those markets can increase. Capital requirements that are more sensitive to this risk will increase when the risk increases. For example, if capital requirements were sensitive to the underlying LVRs, then greater bank lending at high LVRs in a property boom would lead to higher capital requirements.<sup>2</sup> The other option would be to increase capital requirements on a discretionary basis when risk increases, which often coincides with stretched macroeconomic circumstances.

The effects of changes to capital adequacy rules on the macroeconomic cycle are likely to be moderate at best. Banks in New Zealand each hold capital well in excess of the regulatory minimum, typically to attain a desired credit rating. Changes in regulatory capital requirements would need to be large for the regulatory requirements to become a binding constraint on banks, though if regulatory capital requirements are a factor in rating agencies' perceptions of risk then small changes might also have an effect.

There is no clean link between regulatory capital requirements and the interest rates that banks charge, though it appears likely that any effect of changes in capital requirements would be modest. Among other things, banks' pricing of loans depends on the market structure and situation, the underlying risk in particular types of lending, and the banks' risk appetite. All else equal, greater perceptions of risk and a lower appetite for risk will lead a bank to charge a higher interest rate. If regulatory capital requirements affect perceptions of risk, then changes to capital rules might affect the interest rates that banks charge.

Unlike quantitative restrictions (discussed below), changes to regulatory capital requirements do not prevent particular sectors from getting credit, meaning its drawbacks for the efficient allocation of resources are likely to be less severe than quantitative restrictions. Capital requirements are usually more continuous in nature making them closer to a pricing mechanism, so there are likely to be fewer distortions than if hard limits were used. Notwithstanding the benefits of such continuous measures, if capital requirements were excessively disproportionate to the underlying risk there is likely to be disintermediation to institutions not bound by the requirements and via securitisation.

The use of capital adequacy requirements for banks is restricted to being primarily for prudential purposes and greater risk sensitivity in capital requirements is already being pursued for prudential purposes (see below). If the requirements were imposed and varied on a discretionary basis, achieving timely and effective interventions is likely to be difficult because of the difficulty identifying the times of heightened risk and putting the rules in place quickly.

The SSI report concluded that there was merit in further exploring better alignment of regulatory capital requirements with risk. While such a move might provide some modest support to monetary policy, there is a strong case for it on prudential grounds.

## Risk management rules and guidelines

Some supervisors issue rules on how banks should manage their risks, while others issue guidance on good risk management practice. The Reserve Bank has the power to impose conditions of registration in relation to banks' risk management arrangements, and it can also issue guidelines on a range of matters.

If risk management rules or guidelines made banks less willing to loosen credit standards as the economy expanded (and vice versa when the economy contracted) then they might, to a small extent, make the job of monetary policy easier. However, to be effective the enforcement of risk management rules and guidelines would create an unpalatable trade-off. To be enforceable the rules and guidelines would need to be detailed and prescriptive because enforcing outcomes-based rules on something as

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<sup>2</sup> In these situations sometimes actual LVRs can be declining because of inflated property values. However, underlying LVRs (based on long-run property values) might actually be increasing. If the LVR was calculated using the property value when the loan is initially made these effects are less material.

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judgemental as risk management would be difficult. But detailed and prescriptive rules would restrain the dynamism of the financial system, making it harder for banks to evolve and develop more effective ways of managing risk. The effectiveness of the rules would also be undermined by disintermediation to other institutions.

Issuing detailed guidelines and risk management rules would also represent a departure from the focus on market incentives-based banking supervision in New Zealand. In a general sense, current banking supervision arrangements are based on the idea that bank management and directors are best placed to manage bank risks. The regime seeks to bolster the incentives for them to do so, keeping regulatory rules to a minimum. Detailed risk management rules and guidance might give supervisors more influence over day-to-day risk management in banks, to the detriment of bank staff taking responsibility for risk management.

While in some circumstances issuing risk management rules and guidance might be appropriate for prudential purposes, they are likely to have only a modest impact on macroeconomic cycles. This limited impact and the poor fit with the Reserve Bank's general approach to supervision meant it was not taken further in the SSI report.

In a similar vein, the regulator can also identify instances where banks and other financial institutions might be loosening credit standards and are taking on increased risk. The Reserve Bank has the benefit of seeing across the entire financial system and can more readily identify when a number of financial institutions are taking on more risk and increasing overall financial system risk, whereas individual institutions might not have the wider set of information to make such assessments. The Reserve Bank uses regular discussions with banks and its Financial Stability Report to alert financial institutions and the public to these situations. Against a background of strong housing lending growth and aggressive competition, earlier this year, for example, we undertook a range of discussions with banks. These focused on lending standards and the question of whether banks were assuring themselves sufficiently that their housing lending was being undertaken with appropriate regard to the possible risks on those loans in future. These constructive discussions provided some effective signals to banks about areas of concern, and achieved some positive outcomes.

## Quantitative restrictions

Quantitative restrictions could be placed on particular types of lending. These restrictions could operate at all times or only in times of heightened risk. For example, residential mortgage lending with high LVRs or lending to particular sectors could be targeted and limited.

In the SSI report applying quantitative restrictions to all lenders in the economy was explored. If quantitative restrictions could be enforced across all lenders then they could affect economic activity by preventing lenders from making certain types of loans.

As a prudential tool, quantitative restrictions could be applied only to regulated institutions – currently only banks. Application of quantitative restrictions only to banks would mean that disintermediation would quickly occur and the effectiveness of the restrictions would quickly wane. Applying the restrictions only to banks would also reduce competitive equity.

While outside the scope of the paper, it is useful to note some of the other problems with quantitative restrictions on all lenders noted in the SSI report:

- Re-regulation of the financial system may affect efficiency and encourage costly avoidance behaviour.
- Blunt quantitative restrictions can often be poorly targeted. For example, restrictions on high LVR residential mortgage lending can impact on small business borrowers.
- Quantitative limits can also impact on relatively safe lending because of the bluntness of the limits; not all high LVR loans are high risk.
- If applied on a discretionary basis it can be hard to time interventions because of difficulties in identifying the state of the economic cycle.

In some circumstances the Reserve Bank might be able to impose quantitative limits, though this has not yet been tested. It is likely that if used for prudential purposes then on many occasions when they might be desirable from a monetary policy perspective they would not be exercised because the prudential concern is not present.

Quantitative restrictions would likely have limited effectiveness if applied only to banks using prudential tools, and if applied to all lenders would have the problems of the re-regulation required to prevent disintermediation and the

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difficulty in targeting the restrictions.

## Current work

The conclusion from the SSI report was that measures related to capital adequacy appeared the most promising of the prudential options considered. There is a strong prudential case for imposing them, and they might modestly aid monetary policy.

The Reserve Bank is currently revising its capital adequacy rules to reflect the development of a new international framework, referred to as Basel II. The core elements of Basel II will take effect in New Zealand at the start of 2008, with other elements being implemented later in 2008.

Among other things, Basel II is intended to make bank capital requirements more sensitive to the risk that a bank is taking. Basel II allows banks to use one of two methods to determine their capital requirements:

1. A standardised approach where banks classify their loans according to type and some simple measures of risk and assign Reserve Bank measures of risk to those categories to determine capital requirements. This is the default approach.
2. An internal models approach where banks can use their own risk measures to determine their capital requirements. Supervisor approval is required to use this approach.

As part of the standardised approach the Reserve Bank has proposed linking capital for residential mortgage loans to their LVR and whether the loans are insured, an approach that has been common in some other countries. Current rules require the same capital for all loans fully secured by a residential mortgage, which means banks have to hold the same amount of capital for higher LVR loans as for low LVR loans. Similar arrangements are proposed for corporate loans, using credit ratings to differentiate between higher and lower risk loans.

Under the internal models approach banks are expected to develop models that are even more sensitive to risk than the supervisory measures used in the standardised rules. The Reserve Bank has indicated that if the models developed by banks wanting to use them for regulatory purposes are not

sufficiently sensitive to risk or produce unreasonably low risk estimates, it will either not accredit those models or put in place supervisory overlays until those models are sufficiently well developed.

There is also the risk that under Basel II the additional risk sensitivity from banks' internal models will actually make capital more sensitive to the cycle: in economic upswings perceptions of risk decline, and if that flowed through to banks' capital requirements it could encourage further lending. Conversely, in downswings perceptions of risk can increase, and if that flowed through to capital requirements it could discourage lending.

Clearly such pro-cyclicality in capital requirements is highly undesirable and inconsistent with capital being held for the long-run risk of lending. The Reserve Bank is determined to ensure that such pro-cyclicality does not occur and will ensure that banks further develop models that are responsive to longer-run drivers of risk and not short-term cyclical risk measures. The Reserve Bank will expect banks to hold additional capital to account for any potential cyclicality revealed in their own internal models.

Supervisors can always increase capital requirements in exceptional circumstances because of heightened risk to the financial system, regardless of whether Basel I or II is in place. The Reserve Bank plans to use the introduction of the more structured Basel II framework to explore when and how best to introduce these requirements if they prove necessary in particular situations, such as by modelling the potential impact of asset price bubbles on risk and capital requirements.

## Conclusion

Good prudential policy can assist monetary policy. However, using prudential policy to directly help monetary policy attenuate the economic cycle is hindered by a range of difficulties: limits on what prudential policies can legally be used for; disintermediation or limited effectiveness; distortion of economic activity; and potentially poor targeting of measures.

Of the measures explored in this paper, the most

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promising are moves that are already under way to improve financial system soundness by making bank capital adequacy rules more sensitive to risk. Although being undertaken for financial stability reasons, these changes should also give some moderate assistance to monetary policy.

More generally, the ongoing active role of a prudential

supervisor in engaging with banks is likely to provide some useful, if modest, additional support for the stabilisation task of monetary policy. This is likely to be particularly so during periods of very rapid credit growth and rapid rises in asset prices.