Grant Spencer: Review of bank capital requirements

Speech by Mr Grant Spencer, Deputy Governor of the Reserve Bank of New Zealand, to the New Zealand Bankers' Association, Auckland, 7 March 2017.

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Introduction

Since the traumatic experience of the Global Financial Crisis (GFC) in 2007–2009, banks and regulators have been revising their assessment of appropriate levels of capital. Bank capital is an important cushion for the financial system. It is the form of funding that stands first in line to absorb any losses that banks may incur. Having sufficient capital promotes financial stability by reducing the likelihood of bank insolvency and moderating the effect of credit cycles.

The main international regulatory response to the GFC went under the broad banner of 'Basel III'. This has involved a higher minimum quantity of capital and also a better quality of capital, for example, in terms of loss absorbency. While the new Basel III requirements are still being phased in, many national regulators, including the Australian Prudential Regulation Authority (APRA) in Australia and ourselves in New Zealand, have moved ahead of the Basel timetable. Several countries have also chosen to adopt more conservative capital rules than Basel III.

The Final Report of the Financial System Inquiry (FSI) in Australia, recommended bolstering Australian banks' capital ratios so that they are "unquestionably strong", with the top quartile of internationally active banks given as a guide.[1] APRA is implementing the FSI recommendations and this has resulted in a number of capital raisings by the Australian banks over the past year. APRA have indicated that their final position on "unquestionably strong" is not far away.

In New Zealand, our broad approach has been to adopt the Basel standards, where appropriate, and implement them with a conservative bias. For example, the Reserve Bank has imposed restrictions on components of banks' internal risk models. New Zealand has chosen not to adopt some aspects of Basel III, such as the internal modelling approach for market risk, where we have felt that a policy is overly complex or inappropriate for New Zealand conditions.[2]

This conservative approach to bank capital has been warranted by New Zealand's relatively high risk profile and the Reserve Bank's non-interventionist approach to banking supervision. Both of these factors are likely to be present going forward.

In the changing international regulatory environment, it is becoming less clear whether New Zealand's historical position on bank capital is being maintained relative to Australia and other peers. We believe it is time to review New Zealand's position and review more broadly our capital framework in light of international and domestic developments and our experience with the current regime.

Today I want to set the scene for the review of bank capital that the Reserve Bank will undertake over the coming year. I will explain the high level objective of the review, elaborate on the international and domestic context and set out principles that will guide the review.

Objective of the review

The aim of the Capital Review is to identify the most appropriate regulatory framework for setting capital requirements for New Zealand banks. Consistent with the Reserve Bank's legislative purposes, minimum capital requirements should promote the maintenance of a sound and efficient financial system. In broad terms, higher levels of capital will improve the soundness of the financial system as the likelihood of bank failures is reduced and the potential impact of credit cycles is moderated.

However, the capital regime may reduce the efficiency of financial intermediation if ratios are pushed too high or standards are made overly complex. Capital is a more expensive form of funding for the banks and so higher capital ratios can potentially increase the overall cost of funding the system as well as improving its soundness.

Our aim is to agree a capital regime that ensures a very high level of confidence in the solvency of the banking system, while avoiding unnecessary economic inefficiency.

In pursuing this objective, the Capital Review will look at the three key components of the regulatory capital regime:

- The definition of eligible capital instruments
- The measurement of risk, in particular the risk weights attached to credit exposures
- The minimum capital ratios and buffers

These three factors are interdependent and the links between them must be carefully considered. The calibration of the capital ratios needs to be set in the context of the risk weights applying to exposures as well as the capacity of eligible capital instruments to absorb losses. Also, the role of capital buffers versus hard minimum requirements needs to be considered.

The Capital Review will examine how well the Reserve Bank's current framework operates and consider potential improvements. The Reserve Bank will consult the banks and the public on its findings and on any proposed changes to the capital framework.

Outcomes of the Review will be heavily influenced by the international regulatory context, the risk characteristics of the New Zealand system and the Reserve Bank's regulatory approach. I will start with the international context.

How do our banks compare to international peers?

This is not a straightforward question to answer, but we need to understand how the idiosyncrasies and relative conservatism of New Zealand's approach to the Basel framework affects the headline capital ratios of New Zealand banks compared to peer country banks.

The Basel Committee regularly publishes reports that compare banks' capital levels on an unadjusted basis. The most recent report[3] has the large internationally active banks reporting a median Common Equity Tier 1(CET1) ratio of 12.1%, with 25th and 75th percentiles of 10.9% and 13.8%. At the same date, our four largest banks reported a weighted average CET1 ratio of 10.5%, putting them, on an unadjusted basis, in the bottom quartile. For the entire New Zealand banking system, Tier 1 capital ratios have also been at the lower end of international comparisons.

However, such comparisons can be misleading as countries have implemented the Basel Framework in different ways. The Reserve Bank has made a number of amendments to better reflect New Zealand risks, for instance our farm lending adjustments raise the average risk weight on banks' exposures by around 20–30 percentage points compared to a usual implementation of the IRB framework.[4] Risk weights on residential mortgages are also higher than for a range of peer countries, as seen in Table 1. The relatively cautious approach adopted in New Zealand with regard to risk measurement means that, on a like-for like basis, New Zealand's relative capital position should be higher than the headline ratios suggest. The question is by how much.

Table 1. Housing risk weights for selected countries (large banks)

Country	Weighted average risk weight
Australia	23.5%[5]
Canada	7.2%
Denmark	13.9%
New Zealand	28.3%
Sweden	6.8%
United Kingdom	11.7%

Source: Pillar 3 reports[6]

APRA has also applied the Basel Framework on a relatively conservative basis.[7] Taking into account differences in the calculation of capital and risk-weighted exposures, APRA estimated that the Australian major banks' CET1 capital ratios, as at December 2015, would be 3.5 percentage points higher if calculated on a more internationally comparable basis.

Running a similar analysis on the New Zealand framework, we estimate that CET1 ratios are roughly equivalent to at least an additional 1 to 2 percentage points of CET1 capital under an internationally normalised regime. This adjustment would place our four largest banks in the second or third quartile of the banks included in the Basel III monitoring studies.

Alternative approaches to comparing capital adequacy also suggest that New Zealand banks may effectively be around the median of international comparators.

Looking at simple leverage ratios, as of June 2016, the median leverage ratio of large internationally active banks was 5.6%. By comparison, we estimate that our four largest banks would have reported a weighted average leverage ratio of around 6.3%, placing them in the third quartile.

Another basis for comparison is Standard & Poor's "Risk-adjusted capital" (RAC) framework. S&P's methodology uses risk weights based on their view of each country's economic and banking industry risks. Relative to the world's top 100 banks by Tier 1 capital, S&P's methodology suggests that the weighted average of the four largest New Zealand banks' RAC ratios is around the 56th percentile, although their position would fall to the 32nd percentile once adjusted for concentration risk.[8] These scores are influenced by S&P's view that New Zealand's underlying economic imbalances are "very high" compared to peers.[9]

These initial comparisons point to New Zealand banks being "in the pack" in terms of capital ratios relative to international peers. Further work will be done as part of the Review to further clarify New Zealand's current relative position.

Basel Committee developments

Over the past few years the Basel Committee has finalised aspects of the Basel III Capital Framework. The most recent reforms addressed aspects of the measurement of risk-weighted

exposures. Most of the changes to market risk measurement have been finalised but proposed changes to the credit risk and operational risk frameworks are still being discussed.

The proposed credit risk reforms include restricting the scope of the IRB approach to a smaller range of portfolios, imposing constraints on parameters used by internal models and developing a more risk-sensitive standardised approach. The Basel Committee has proposed a floor linking the revised IRB approach to the revised Standardised approach. European regulators want a relatively low floor, while US regulators have been arguing for a higher floor.

The proposal for operational risk would see internally modelled approaches removed from the framework, to be replaced with a single standardised approach.

The different state of banking systems between countries and the potentially significant impact of the reforms has seen on-going differences between members and a delay in concluding a framework. We hope that the Basel Committee will be able to finalise and publish these standards in the coming months, particularly those related to the use of internal modelling approaches. However, if this becomes a drawn out process we may need to conclude some aspects of the Review without the benefit of a fully agreed Basel framework.

Australian FSI and increased capital requirements

The Australian Financial System Inquiry (FSI) made three key recommendations on capital standards for Authorised Deposit-taking Institutions (ADIs):

- Set capital standards so that ADIs' capital ratios are 'unquestionably strong'.
- Raise internally modelled risk weights on residential mortgages to narrow the difference in risk weights between IRB and Standardised ADIs.
- Implement a framework for minimum loss-absorbing capacity in line with international practice, to facilitate orderly resolution and minimise taxpayer support.

In accepting the recommendations, APRA has taken as a guide for 'unquestionably strong' capital, the top quartile of capital levels of internationally-active banks. To help fulfil the recommendations, APRA has over the past year increased residential mortgage risk weights for IRB banks to an average level of 25%.[10] In response, the major banks raised around $23 billion in common equity over late 2015 and early 2016, as well as significant quantities of Additional Tier 1 and Tier 2 capital.[11]

These capital raisings have bolstered the resilience of the Australian parents of New Zealand's four largest banks. While this contributes to the ultimate soundness of the New Zealand subsidiaries, it does not directly strengthen their balance sheets. The increase in risk weights on Australian exposures means that most of the new capital is being absorbed by the need to maintain existing capital ratios in the Australian businesses.

APRA has indicated that their final position on 'unquestionably strong' is not far off, although detailed capital standards may not be finalised until later in the year. APRA had been waiting for finalisation of the Basel Committee revisions but does not wish to be held up by the current Basel impasse. Recent comments by the APRA chair [12] indicate that the banks should be able to meet any new requirements in an orderly manner.

New Zealand domestic context

The Capital Review will assess how our future capital framework might be shaped by domestic considerations. These relate to New Zealand's risk profile, the shape of our financial system and also our regulatory approach.

New Zealand's exports are concentrated in a small number of commodity-based sectors which can be subject to considerable price volatility. Bank exposures to commodity export industries are a key risk in the domestic system. Residential mortgage exposures are also a major source of risk given the system's heavy exposure to housing and the capacity for house prices to become very stretched – as at present.

New Zealand is a net debtor country, having run current account deficits continuously over the past 40 years. About half of the country's gross external debt is issued by the New Zealand banking system which then on-lends to businesses and households. This reliance on external funding is an important vulnerability of the New Zealand system, as starkly demonstrated during the GFC. While liquidity buffers must be the first line of defence against funding market disruptions, a strongly capitalised system also helps to mitigate the risk of reduced market access.

New Zealand's financial system is less diversified relative to peer countries. Financial intermediation is concentrated in a few large institutions and capital markets play a relatively minor role.

Rating agency risk assessments of the large New Zealand banks is heavily influenced by expectations of support from the Australian parent banks. Under the S&P regime, this factor lifts the ratings of the large New Zealand banks by an average of 4 notches from BBB+ on a standalone basis, to AA- , the rating applied to the Australian parents. While the implicit support of the parent banks is valuable for the New Zealand system, it is also a vulnerability. For example, in recent times the Australian parent banks have been on negative outlook and, separately, APRA has placed restrictions on the ability of the parent banks to give credit support to their international subsidiaries. Should implicit parental support be eroded, it is important that our banks be seen as strong on a standalone basis in order to maintain their international standing.

The Capital Review will draw on the emerging international literature on optimal capital and include an assessment of optimal capital that takes account of New Zealand-specific characteristics. The final calibration of capital requirements will also take account of the results and insights from bank stress-testing and other analytical work we are undertaking in support of the Capital Review.

Capital review principles

Consistent with the objective of the Review, the Reserve Bank will adopt principles that reflect the international and domestic context as well as the Reserve Bank's approach to prudential supervision.[13] The Bank will have regard to six high-level principles:

1. Capital must readily absorb bank losses ahead of creditors and depositors

'Capital' is the portion of a bank's funding that can absorb losses ahead of creditors, allowing the bank to continue operating as a going concern or reduce losses to creditors and depositors in the event of failure. A key word in this principle is *readily*. To be useful in supporting a distressed bank, capital instruments must be able to absorb losses as and when they arise.

Capital instruments can be ranked based on their subordination, permanence and loss absorbency, with Common Equity Tier 1 (CET1) capital being the highest quality capital instrument. The Reserve Bank will consider the roles of the different tiers of capital and whether more emphasis should be placed on simpler and higher quality forms of capital.

We are particularly interested in reviewing the role of convertible capital instruments and will give this some priority in the Review.

The principle of loss absorbency is also relevant for our assessment of buffers that are required in addition to minimum capital ratios. The current regime includes a conservation buffer of 2.5% and the potential for a counter-cyclical capital buffer under our macro-prudential framework. Such buffers enhance the ability of banks to readily absorb losses while remaining compliant with minimum ratios. An appropriate structure for capital buffers will be an important issue for the Review.

2. Capital requirements should be set in relation to the risk of bank exposures

Regulatory capital requirements must reflect the underlying risk of exposures in order to avoid distorting banks' risk-return decisions.

Critics of the Basel framework maintain that ever-increasing risk granularity has led to a spurious sense of sophistication and that the pendulum should swing back to simpler, more objective measures of risk.[14] In particular, the use of internal models to determine capital requirements has been shown in practice to lead to excessively wide estimates of risk for what is the same underlying exposure.[15] The Basel Committee has agreed that a simplification of the framework and a reduction in model-based variation in capital requirements is desirable. However, as noted, we are yet to see the final shape of these reforms.

We believe that model-based variations in risk measurement are less pronounced in New Zealand, due in part to our restrictions on internal model parameters and our relatively simple approach to market risk measurement. However, we agree that excessive complexity is undesirable and that risk differentiation should only occur when it is based on objective and credible measurement. In the Review, we will examine whether some simplification of the framework might produce more transparent and relevant outcomes.

3. Where there are multiple methods for determining capital requirements, outcomes should not vary substantially between methods

Related to the previous principle, the Reserve Bank considers that if internal models are used to determine capital requirements alongside Standardised approaches, the calibration of the two should not result in unduly different outcomes.

Standardised approaches can be seen as a default treatment for risk measurement. If Internal Model banks are able to use relevant data and risk management systems to better understand and measure the risks in their business, capital requirements might vary from the Standardised approach. However, the degree of difference should depend on the value added by Internal models over and above that achieved under the Standardised approach. For example, it may be difficult to justify large differences between Modelled and Standardised approaches where banks' private information adds little to what is publicly available, say in the case of exposures to sovereign and local governments, or to publicly listed companies.

4. Reflecting the risks inherent in the New Zealand financial system and the Reserve Bank's regulatory approach, New Zealand bank capital requirements should be conservative relative to international peers

As discussed, New Zealand's economy and financial system have risk characteristics that set us apart, including: our exposure to export markets; our dependence on international capital markets; our high degree of banking industry concentration; and the low diversification in banks' lending portfolios. Further, New Zealand's regulatory approach puts less weight on active supervision and relatively more on high level safety buffers such as regulatory capital.

When calibrating capital requirements we need to be mindful that the Basel standards are based on the experiences and needs of large and diversified G10 and G20 financial systems. This may not be an appropriate starting point for New Zealand.[16] Certainly in our current framework we

have modified the Basel standards to take account of New Zealand-specific risks, including in relation to residential mortgage and farm lending that were not adequately captured in the Basel standards.[17]

Based on New Zealand's risk profile and our approach to banking supervision, we would expect the Review to deliver an outcome where capital standards are seen as conservative relative to the Basel standards and to the standards of peer countries.

5. The capital framework should be practical to administer, minimise unnecessary complexity and compliance costs, and take into consideration relationships with home country regulators

By international standards our banks are small with relatively straightforward business models. Similarly, the Reserve Bank is a relatively small prudential regulator. The full Basel framework is complex and voluminous as it aims to identify and measure the risks faced by the world's largest and most complicated banks. We have chosen not to adopt some of the more complex features of the Basel framework, particularly in the area of market risk. In other areas where we have allowed the use of internal models, such as for operational risk, we have imposed overlays to provide a degree of comfort that capital will not fall below prescribed levels.

Prudential regulators always face trade-offs between the level of simplicity and complexity in their requirements, the resourcing and monitoring of the framework, and the demands of the regulated entities. For example, adopting a full-service approach to implementing the Basel framework would impose higher resource and compliance costs on the regulator and the banks than a simpler framework. There would need to be clear and proven net benefits from the full-service model over the simpler but conservative approach that we currently prefer. However, we are mindful that our largest banks operate as subsidiaries of foreign banks and that some degree of alignment with international standards can help to reduce banks' compliance costs.

As we undertake the Capital Review, we will be consulting on the Reserve Bank's preference to move towards a simpler capital regime, not a more complex one.

6. The capital framework should be transparent to enable effective market discipline

Market discipline has been at the heart of the Reserve Bank's approach to prudential supervision for over two decades.[18] Effective market discipline requires banks to disclose prudential information that can be readily understood by creditors and is comparable across banks. This principle reinforces principles 3 and 5: avoiding large differences in outcomes between capital methodologies; and avoiding unnecessary complexity.

Timetable for the Capital Review

We will release a high level Issues Paper in April, outlining the areas of the capital framework that the Reserve Bank intends to examine, followed by more detailed consultation papers. As I noted at the outset, we will be seeking stakeholders' views in three broad areas: what sorts of capital instruments should qualify (the numerator); how risk exposures should be measured (the denominator); and the minimum capital ratios and buffers.

The Issues Paper will request stakeholders' initial views on the areas we intend to cover and issues that might warrant particular attention. Further consultation documents with options for changes to the framework and recommended policy positions will be targeted for the third quarter. We plan to conclude the Review by the first quarter of 2018.

Conclusion

Today I have discussed the context for the upcoming Capital Review and outlined a number of

key issues that the Reserve Bank will be considering over the coming year. Capital policy has multiple dimensions and trade-offs and we will welcome your views as we consult on the various aspects.

We will assess the current framework and recommend policy changes in the context of international developments, New Zealand's risk profile and the Reserve Bank's regulatory approach. In doing so, we will be guided by principles that broadly promote conservatism and simplicity. We will ensure that the quantity and quality of banks' capital remain consistent with promoting a sound and efficient financial system.

Thank you for the opportunity to share these ideas with you today.

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1 '*Financial System Inquiry – Final Report*' (2014).

2 For further discussion of the Reserve Bank's adoption of the Basel III standards, and the rationale for minimum capital requirements more generally, see the *Bulletin* article '*The Reserve Bank's application of the Basel III capital requirements for banks*' (2015).

3 Basel III Monitoring Report (February 2017)'.

4 These figures are for the 100 "Group 1" banks under the Basel Quantitative Impact Study definition, i.e. banks with Tier 1 capital in excess of €3bn, who are well diversified and are internationally active. "Group 2" banks, which are the 110 other banks that participate in the QIS, reported a median CET1 ratio of 13.9%, with a 25th and 75th percentile of 11.4% and 18.3%.

5 See, for instance, the *Bulletin* article '*Bank farm capital: does it cost the earth?*' (2011).

6 The Australian housing risk weight is in the process of being increased to an average of 25%.

7 Data as at most recent Pillar 3 regulatory disclosure. Sample includes ANZ, CBA, NAB, WBC (Australia), BMO, CIBC, RBC, Scotiabank, TD (Canada), Danske, Nordea DK, Jyske, Nykredit, Sydbank (Denmark), ANZ, ASB, BNZ, WNZL (New Zealand), Handelsbanken, Nordea Group, SEB, Swedbank (Sweden), Barclays, Co-operative, HSBC, LBG, NBS, RBS, Standard Chartered (UK).

8 See APRA Information Paper: International capital comparison study (2015), and International capital comparison update (2016)..

9 See Standard & Poor's *'Top 100 Banks: Risk-Adjusted Capital Ratios Have Improved For Most Banks In 2015'*, August 2016, and the December 2016 Standard & Poor's Global Ratings reports for ANZ New Zealand, ASB Bank, Bank of New Zealand, and Westpac New Zealand. Concentration and diversification adjustments take into account Standard & Poor's views of banks' single-name, industry sector, geographic, and business line concentration or diversification.

10 See, for instance, Standard & Poor's *Banking Industry Country Risk Assessment, January 2017.*

11 See *'APRA reaffirms revised mortgage risk weight target'* (2016).

12 See the Reserve Bank of Australia *Financial Stability Review*, October 2015 and March 2016, for more details on ADIs' recent capital raisings.

13 See 10 February comments by Wayne Byres.

14 See '*New Zealand's evolving approach to prudential supervision'* (2016) for a recent discussion of the Reserve Bank's supervisory philosophy.

15 See for instance, 'The dog and the frisbee' (2012) by Andrew Haldane.

16 See the Basel Committee's 'Analysis of risk-weighted assets for credit risk in the banking book' (2013, 2016) for their reports into the causes of variation in risk-weighted assets under the Internal-Ratings Based approach. A hypothetical portfolio exercise showed that, for the sample, practice-based variation in risk estimation for sovereign, bank and large corporate exposures could lead to a ±22% difference in reported capital ratios, for the same underlying risk.

[17] To give an example of why this might be the case, the asset correlations used in the internal-ratings based supervisory formulae are based on either G10 supervisory data or were 'reverse-engineered' from the outputs of internal capital models developed by internationally active banks in the 1990s and early 2000s. These calibrations may not be appropriate in New Zealand. See '*An explanatory note on the Basel II IRB risk weight functions*' (2005).

[18] These include higher minimum loss-given-default parameters and higher asset correlations.