

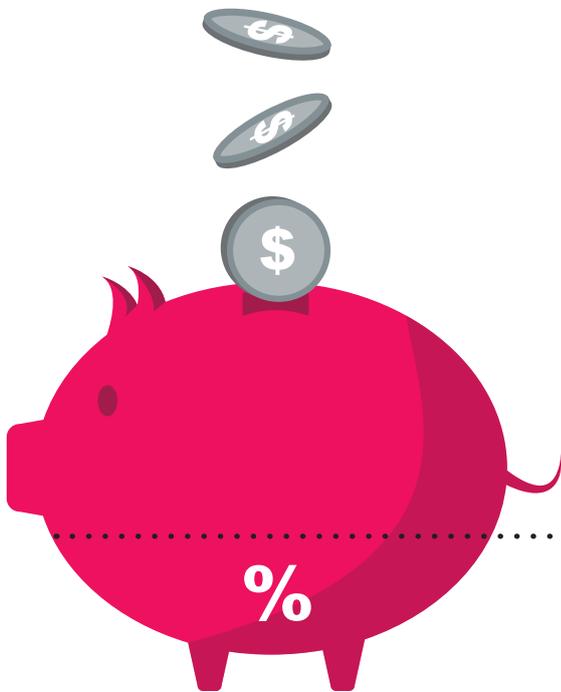


**RESERVE
BANK**

O F N E W Z E A L A N D
T E P Ū T E A M A T U A

CAPITAL REVIEW

Go-to-Guide 2019



Banks around the world are required to have a minimum percentage of their money come from their owners (shareholders)

This is for two reasons:

1 This ensures that the owners of a bank have a **meaningful stake** in the business, because the more the owners have to lose, the more carefully the bank will be managed

2 **In case the bank loses money...** When the amount of a bank's capital gets too low, and it can't get any more capital, the bank is likely to fail. So the more capital a bank has, the safer it is, and the more money it can stand to lose before going out of business. High levels of capital make depositors' funds safer.



Banks make money by raising funding from some people and lending it out to others, making their profits on the difference



Currently, the average New Zealand bank funds **\$100** of lending by borrowing **\$92** from **depositors** and others and using **\$8** of its own capital

If a bank has made poor decisions about who to lend to, and/or there is some large outside shock to the economy, some of the loans the bank has made can become worthless to the bank *(the bank will never get its money back)*

If these losses amount to **over \$8** for every **\$100** of lending, the bank becomes **insolvent** *(it can't pay back the money it has borrowed from depositors and other creditors)*

More capital makes the banking system safer and protects depositors' funds



Introduction: The Capital Review

The Capital Review began in May 2017, when the Reserve Bank published the first of four consultation papers on proposals to ensure a safer banking system for New Zealanders.

There has been significant and wide-ranging public interest in the proposals. We believe this shows how important this issue is for everyone.

Extensive consultation over 2.5 years has involved a submissions process that attracted more than 200 responses, many meetings with the public and industry groups, and an independent international review by three industry experts.

All these inputs have helped us to make robust and well-calibrated policies and decisions that best represent society's interests.

The implementation of the new rules will start from July 2020. There will be a transition period of seven years before banks are required to fully comply with the new rules.

The Reserve Bank is increasing the minimum capital requirements for New Zealand's banks. The aim is to improve the lives of all New Zealanders by making banks safer.

Safe and efficient banks are important for New Zealand families, our communities and our businesses.

We want to ensure New Zealand has a banking system that provides support and confidence to all New Zealanders.

Our analysis show that the costs of doing so are outweighed by the benefits.

We are doing this to protect New Zealand from the significant harm that accompanies a banking crisis.

Stronger banks and a stronger banking system mean New Zealand will be better able to survive large shocks.

We want to provide greater protection for depositors – and we want the public to be confident that when they put their money into banks, they can get it out again.

We also want to maintain investor confidence in New Zealand's banking system.

The Reserve Bank's job is to promote a sound and efficient financial system.

Because banks are part of the fabric of our daily lives, if a bank fails then all of society may suffer – not just the bank's customers.

We want banks to have enough capital, and the right quality capital, to withstand large shocks.

More capital reduces the likelihood of a bank failure.

It is the public who bear the social costs of a large banking failure.

Coming out of the Global Financial Crisis (GFC), we are learning that the costs of bank failures – both economic and well-being costs – are higher than previously understood.

There is proven harm to mental and physical health, family cohesion and community connectedness caused by the economic stress induced by a severe downturn – unemployment, falling incomes, reduced savings and/or declining asset values.

The proposals are consistent with steps taken by other banking regulators after the GFC.



What has happened since the GFC? Not enough. Banks did not sail through the GFC. The government put in a \$133b guarantee, almost overnight, to help the banks. The Reserve Bank cut interest rates by 575 basis points. We had a wholesale guarantee of \$10b and the Bank itself had to buy \$8b of debt off banks to provide them with liquidity just to survive.

Reserve Bank Governor
Adrian Orr



At the end of the day, it's about people – not the economy, debt or GDP – it's that simple.

Kantar public focus group
participant

Bank capital: What is it?



New Zealand's banking sector ... did suffer as a result of the worldwide credit crunch that quickly followed [the GFC]. This undoubtedly resulted in business failures, bankruptcies and unemployment but would have been far worse if one of our big four banks did fall over at the time.

Submission from a small business owner

Banks get their money from two places – their owners (often referred to as 'shareholders') and people they borrow from, including depositors (often referred to as 'creditors'). The money that banks get from their owners is referred to as 'capital'.

Banks in New Zealand, like banks around the world, are required to have minimum levels of capital. This means that a minimum percentage of a bank's money must come from its owners.

This minimum requirement exists to ensure that the owners of a bank have a meaningful stake in the business, because the more the owners have to lose, the more carefully they'll manage the bank.

Another reason for banks being required to have minimum levels of capital is in case the banks lose money. When a bank loses money, it is the owners' investment in the

business (the bank's capital) that is lost first, not the money the bank has borrowed.

When the amount of a bank's capital gets too low, and it can't get any more capital, the bank is likely to fail. So the more capital a bank has, the more money it can stand to lose before going out of business. High levels of capital better protect depositors.

Capital requirements are the most important component of our overall regulatory arrangements. In the absence of stronger capital requirements, other rules and monitoring of banks' activities would need to be much tougher.

Banks get their money from two places...

1 **their owners** (often referred to as 'shareholders'). The money that banks get from their owners is referred to as 'capital'.

2 **people they borrow from, everyday depositors** (like all of us...)

Owners and creditors provide the money that banks lend out

In NZ, **bank owners** provide around

\$8 of equity for every \$100



of bank funding...

...leaving **depositors and creditors** to provide

\$92 for every \$100

of bank funding...



What are the 2019 changes?

Central to the changes are increases in regulatory capital buffers for locally incorporated banks. The changes include requiring bank shareholders to increase their stake so that they absorb a greater share of losses should their bank fail, improving the quality of capital, and ensuring banks more accurately measure their risk.

Increasing the amount and quality of capital can be reasonably expected to mean that banks can survive all but the most exceptional shocks. We think the costs of doing so are outweighed by the benefits.

There are other changes too – to the quality of capital, and constraints on modelling capital requirements to ensure banks calculate how much capital they have more robustly.

We are significantly increasing the capital buffer we require banks to have. Banks currently have more capital than the minimum required. The actual amount

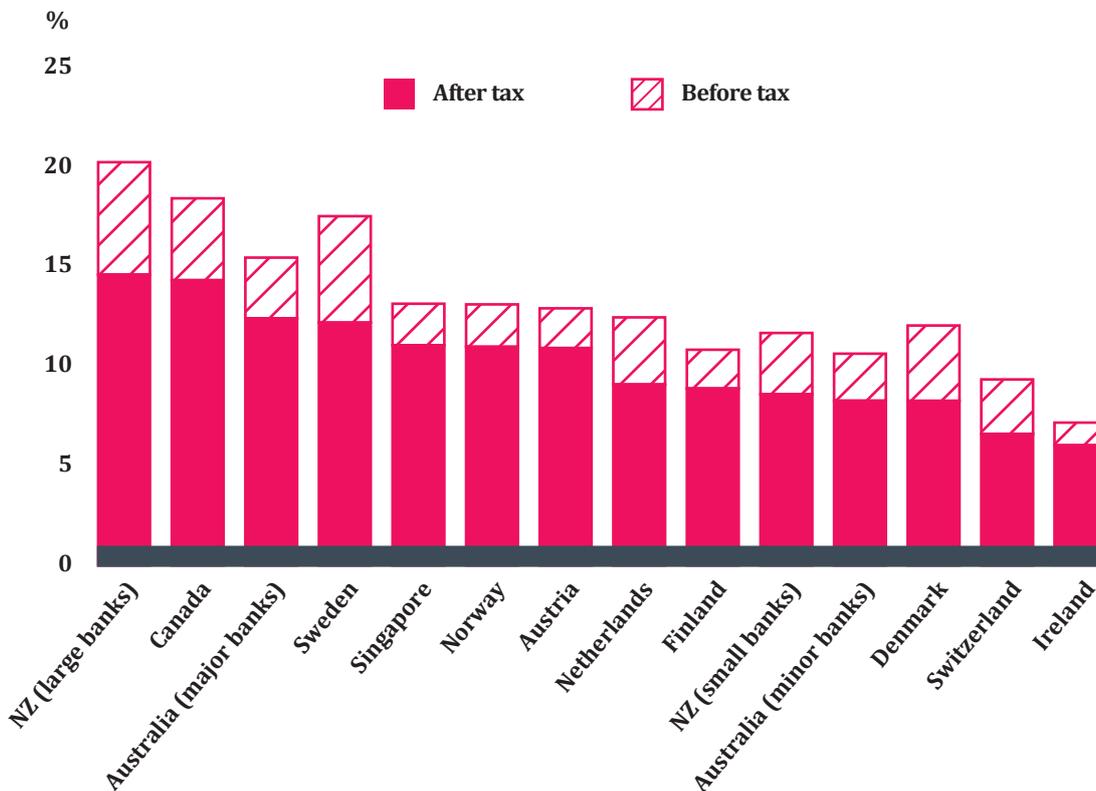
of high-quality capital in the banking system will increase by around 50 percent. In practice, actual changes to the amount they have will vary for each bank. The increase will depend on their current levels of capital, how much extra they choose to have above the required minimum, and whether they are large or small banks.

The four large New Zealand banks' average return on shareholders' equity is among the highest in the world (as below, 2018 figures). They have plenty of time to adapt – there will be a transition period of seven years before banks are required to fully comply with the new rules.

The Reserve Bank is proposing to increase the amount owners contribute

FROM \$8 *for every \$100 of lending* **TO \$12**

RETURN ON SHAREHOLDERS' EQUITY (2018 FINANCIAL YEAR)



Capital ratios



We support the strengthening of the New Zealand banking sector. This should make banks safer for investors and borrowers and ensure the country is better positioned to weather a banking crisis.

There appears to be much debate as to what level of capital is appropriate for New Zealand banks to hold to achieve the goal of withstanding a one in 200-year crisis. We appreciate there is a need to increase the amount of capital banks hold.

Submission from a large farming group

The level of bank capital is commonly measured in terms of a ratio (a percentage), known as the 'capital ratio'. This ratio is calculated by dividing the amount of a bank's capital (the numerator) by the amount of the bank's assets (the denominator).

There are three 'tiers' of bank capital – all with different features – and these tiers vary in quality. Of importance is what can be included in each tier, and how much each tier can contribute to the minimum capital required of banks.

How to measure a bank's risk-weighted assets – the denominator for capital ratios – is also critical. Banks' assets consist mostly of loans and these are measured differently, according to their risk. How these loans are measured is crucial.

Types of funding that count as capital

Bank capital, in general terms, refers to the amount of money provided by the owners of a bank. Bank capital is different to bank borrowing. Most banks get the vast majority of their money by borrowing it, with the rest coming from owners.

There are three 'tiers' of bank capital – all with different features – and these tiers vary in quality. The highest quality capital is owner equity. This can be relied on to protect banks from failing. The next tier is equity provided by investors who don't have votes and in exchange have more certainty about the income they get from their shares.

These investors hold 'preference shares'. Our changes will significantly increase the amount of both of these types of capital.

The lowest tier of capital is 'Tier 2'. This doesn't protect a bank from failure but it helps make sure depositors get their money back if a bank does fail.

Glossary of terms

AT1 capital – Additional Tier 1 capital. AT1 capital, which includes perpetual preference shares, is the second highest quality of capital behind CET1.

Capital – Part of a bank's funding that allows it to absorb financial losses while remaining solvent. Includes the investment of the bank's shareholders (e.g. ordinary shares and retained earnings).

Capital ratio – A bank's capital divided by its RWA. A capital ratio is a key indicator of the financial strength of a bank, measuring the losses it can withstand relative to the risk of its business.

CET1 capital – Common Equity Tier 1 capital. CET1 is the highest quality of capital as it is permanently available to absorb a bank's financial losses. CET1 includes shareholders' investment (ordinary shares) and the bank's retained earnings.

Conservation buffer – A type of prudential capital buffer that applies to all banks. The conservation buffer promotes capital resilience by requiring banks to maintain capital levels above the minimum requirement.

Countercyclical capital buffer – A type of prudential capital buffer that the Reserve Bank may increase or decrease over the financial cycle. Increasing the

countercyclical capital buffer aims to build banks' capital resilience and guard against financial stability risks. Lowering the countercyclical capital buffer enables banks to operate at lower capital levels during periods of financial system stress, to promote their ability to continue lending to support the economy.

D-SIB buffer – Domestic-Systemically Important Bank capital buffer. A type of prudential capital buffer that applies to banks that are deemed systemically important and whose failure would have a significant impact on the economy and the rest of the financial system. A D-SIB buffer promotes higher capital strength of banks and lowers their probability of failure.

IRB approach – Internal ratings-based approach to credit risk. One of the two methodologies available to calculate RWA for banks' credit risks, IRB involves the use of inputs from credit models developed internally by the bank to a formula specified by the Reserve Bank. The Reserve Bank must accredit a bank to use the IRB approach, and approve the models it uses in its RWA calculation.

IRB scalar – A parameter in the IRB approach to credit risk set by the Reserve Bank. The IRB scalar adjusts the level of conservatism in the IRB approach's calibration.

Leverage ratio – A measure of a bank's financial strength that does not attempt to adjust for risk. A leverage ratio measures a bank's

Why are the changes necessary?

With an increase in capital, banks will be more resilient to economic shocks and downturns, which will strengthen New Zealand's banking system and economy. Bank owners may earn less from their investment in the bank; however, we believe this cost will be more than offset by the benefits of a safer banking system for all.

It is important that the Reserve Bank's banking regulations are up to date. There is also increasing evidence that the costs of bank failures – both economic and social (well-being) costs – are higher than previously understood. This is why we've reviewed the capital rules for banks.

Banks get the vast majority of their money by borrowing it, with the rest coming from owners.

The Reserve Bank is now requiring banks to use more of their own money. This is consistent with steps taken by other banking regulators after the GFC.

This will reduce the chances of banks failing in New Zealand. If banks in New Zealand fail, some of us might lose money and

some of us might lose jobs. However, there would also be indirect costs for all of society that may be harder to see that would negatively affect the well-being of all New Zealanders.

In the end, we would all bear the cost of bank failures, in one way or another. This is why we are making the chances of this happening very small – so small that the chances of a large bank in New Zealand failing should be no more than once every 200 years.

The levels of bank capital we are moving to are conservative compared to other countries, but not extreme. We think this is needed to reflect the risk profile of New Zealand.



I lead a community organisation that works with whānau experiencing relational and financial stress.

It is this part of the community that will eventually pay a high price if the Government needs to bail out a major bank, increasing public debt and forcing a reduction in government spending. The impacts of this scenario span generations and could significantly reduce our economy's human capital.

Submission from a social services provider and community-based organisation CEO

capital levels relative to a non-risk based measure of its financial position, such as the accounting value of its assets. While both a leverage ratio and the risk-based capital ratio use the same definition of capital, they contrast in what they measure this capital against (e.g. assets (accounting definition) versus RWA respectively).

Minimum capital requirements – A minimum capital ratio requirement. If a bank has a capital ratio below the minimum requirement, it is likely to be in financial distress from a prudential perspective, and the Reserve Bank would likely seek to place it in a resolution.

Non-performing loans – Generally speaking, non-performing loans are loans that are at risk of not being fully repaid,

or where interest on the loan may not be fully paid by the borrower.

Output floor – A limit on the IRB approach. An output floor means that, when determining its capital ratio, the RWA a bank calculates using the IRB approach cannot go below a certain proportion of the RWA that it would calculate under the Standardised approach.

Prudential capital buffer – An amount of capital above the minimum capital requirement. A bank that operates with a capital ratio within the prudential capital buffer applying to it would not be in breach of its Conditions of Registration, but it may have restrictions placed on it and be required to rebuild its capital levels over time.

Risk appetite framework – A risk appetite framework enables decisions about the right balance of risk and return. In the context of this Consultation Paper, the Reserve Bank has developed a risk appetite framework to determine settings for its capital framework that strike a balance in its outcomes on financial stability, economic activity and societal welfare.

Risk-weighted assets (RWA) – Risk-weighted assets (RWA) is an adjusted picture of a bank's financial position (e.g. its loan portfolios and other investments, and its operational and market trading activities) that takes into account the risk profile of that financial position.

Standardised approach – Standardised approach to credit risk. One of the two methodologies available to calculate RWA for banks' credit risks, the Standardised approach requires banks to use Reserve Bank-specified tables to determine the risk weights to apply to different types of loans and other assets.

Tier 1 capital – Tier 1 capital consists of CET1 capital and Additional Tier 1 (AT1) capital.

Tier 2 capital – Tier 2 capital, which includes some subordinated debt, is capital that can generally only absorb losses once a bank has already entered into financial difficulty. It is therefore considered of lower quality than Tier 1.

2019 changes: Main features



Capital ratios

NZ's four large banks must have:

- 13.5% owner equity
- 16% Tier 1 capital
- 18% Total capital

All other NZ banks must have:

- 11.5% owner equity
- 14% Tier 1 capital
- 16% Total capital



Types of funding that count as capital

- Owner equity is money contributed by owners and earnings retained in the bank.
- Tier 1 capital includes owner equity and money provided by investors in preference shares that the bank can buy back after five years (if the Reserve Bank agrees).
- Total capital is made up of owner equity, preference shares and long-term subordinated debt.



Methods used to risk-adjust assets

The formulas used by the four large banks to calculate risk-weighted assets (needed to calculate capital ratios) are changing. The changes will make these calculations more robust and be more aligned with the formulas the Reserve Bank makes other banks apply.



Dual reporting

The four large banks will have to report to the Reserve Bank, and the public, what their capital requirements would be if they used the Reserve Bank's formulas instead of their own.



Timeframe

Banks have up to seven years to implement the changes. They have a number of options to raise the capital they need. They could retain more profits over several years (rather than paying out dividends to their owners) or they could raise more capital from shareholders.



Cost-benefit analysis

When making changes of this importance and magnitude, the Reserve Bank is required to produce a 'cost-benefit analysis' to justify its changes.

The primary benefit of these Capital Review changes is an increase in financial stability and a reduction in the risk of banking crises that is greater than the cost anticipated from the expected increase in interest rates.

	Current requirements	New requirements (ANZ, ASB, BNZ, Westpac)	New requirements (other banks)
Common Equity Tier 1	7%	13.5%	11.5%
Tier 1	8.5%	16%	14%
Total Capital (Tier 1 + Tier 2)	10.5%	18%	16%

Risk weights used to aggregate assets

The four large banks in New Zealand (ANZ, ASB, BNZ and Westpac) use their own 'models' (mathematical formulas) to determine capital requirements. Other banks used the Reserve Bank's models.

The models used by the four large banks to calculate risk-weighted assets (needed to calculate capital requirements) are changing. The models will be more robust and be more aligned with the models that the Reserve Bank asks other banks to apply.

The four large banks will not be allowed to have capital levels lower than 85% of what their requirements would be if they used the Reserve Bank's models.

Given banks' historical performance, we expect banks to be able to meet the requirements within the transition period.



Dual reporting

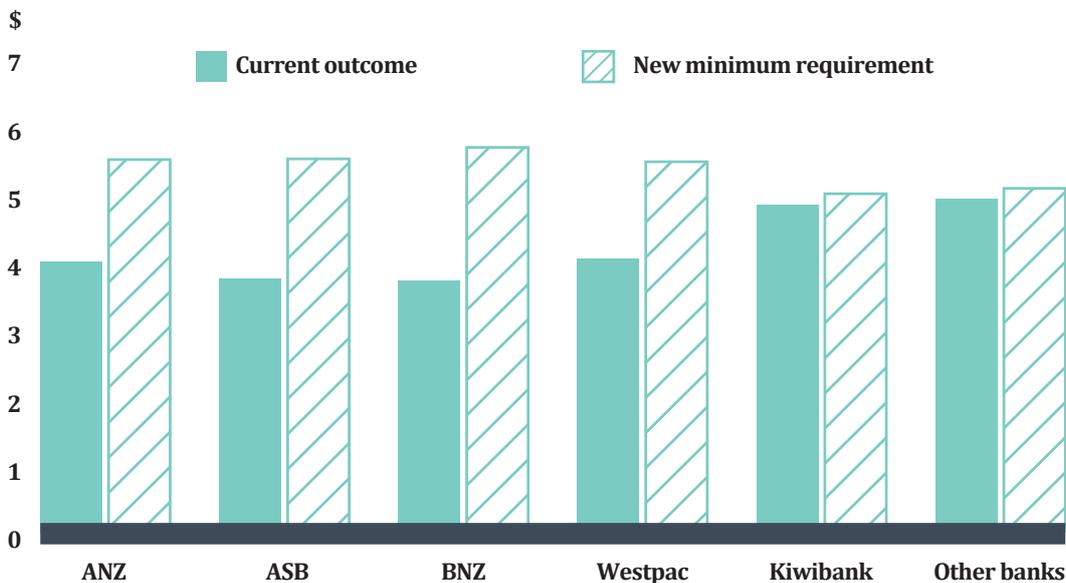
Requiring the four large banks to report on the same basis as the other banks will promote transparency in their models and capital ratios.

These changes were proposed to help level the competitive playing field between large banks (which use their own models) and small banks (which use the Reserve Bank's models).

LEVEL PLAYING FIELD

Large banks have been holding less capital than small banks for the same risks. The 2019 reforms will reduce this advantage and require the biggest banks to hold a higher level of capital because their failure would have greater costs for New Zealand.

Tier 1 capital per \$100 of mortgage lending, current outcome and new minimum requirement.



Cost-benefit analysis



I believe that the additional costs to borrowers/depositors (if material) will be small relative to the implicit cost to the taxpayer and wider economy from a banking crisis. If New Zealand wants to drive the value in being savers, we need to know that the platforms we save into are not going to crash. I 100% support the new capital adequacy increases proposed by the Reserve Bank.

Submission from a member of the New Zealand public

The Reserve Bank has completed a comprehensive analysis of the impacts of the changes on New Zealanders, to assess the economic and social costs and benefits of the changes. The benefits – that arise from an increase in financial stability – are estimated to exceed the costs, which arise from a small estimated increase in interest rates.

In addition, the Reserve Bank considers that the unquantified benefits (including from the impacts of a more stable economic environment on the well-being of New Zealanders) are likely to exceed the unquantified costs (such as less access to credit for riskier customers).

The approach to assessing costs and benefits is the same one that the Reserve Bank described in earlier publications during the Capital Review. The framework was adjusted to incorporate feedback received during the consultation period.

The inputs to the cost-benefit analysis were reviewed by three independent international experts. Based on their feedback, the

Reserve Bank revised some of its estimates of the benefits and costs. For example, we now think that the impact on lending rates is likely to be an increase of around 0.2% on average.

In addition, Dr John Yeabsley, Senior Fellow at the New Zealand Institute of Economic Research, acted as an external source to test ideas and concepts in the final stages of developing the cost-benefit material. Dr Yeabsley concluded that the analysis had been carried out in a comprehensive and transparent way, and covered the key information required to inform decisions, as well as covering the risks and sensitivities in depth.

Banks have plenty of time to prepare

With seven years to transition to the new requirements, banks are able to maintain their lending growth, reach higher capital ratios, and continue to pay dividends.

The Reserve Bank has provided banks with seven years to meet the new reforms. This gives banks enough room to not only maintain their current lending growth, but also make dividend payments to their shareholders.

The impacts across individual banks may vary, as some already hold high levels of capital and others have high returns from their profits. Where some banks may choose to limit their lending growth, it is likely that others will be able to grow their books to fill any gap in the market.

Lending growth in the system as a whole is unlikely to be affected by the changes.

With seven years to transition, as well as the ability to issue preference shares as capital, banks can meet the new requirements with room to pay dividends to shareholders.

Banks have a number of options for raising the capital they need. They could retain more profits over several years (rather than paying dividends to their owners) or they could raise more capital from shareholders.

It will be up to banks to make their own pricing and lending decisions. We encourage all customers to question their banks on issues of competition.

Facts

- The four large New Zealand banks' average return on shareholders' equity is **1st** in the world among countries including Canada, Australia, Singapore, Sweden, Norway, Austria, the Netherlands, Finland, Denmark, Switzerland and Ireland (2018 figures)
- **2** reports by international agencies (IMF, OECD)
- **3** independent expert reviewers (from the US, the UK and Australia). Each independent reviewer signalled their support for the direction proposed in the Capital Review, and all acknowledged the quality of analysis underpinning our proposals, the transparency of our process, and the care we have taken to consider the points raised by submitters during the consultation process
- **4** phases of consultation (the scope of the review, capital instruments, measurement of risk, the appropriate capital level for NZ banks)
- **\$5** – the fortnightly increase in a \$100,000 mortgage over 30 years at the current 3.45 percent two-year rate, based on a 20 basis point increase
- **30** months over which we have consulted (since May 2017)
- Around **100** background papers that we'll be proactively releasing
- More than **200** submissions (from the general public, individual businesses, and industry representatives)
- **575** basis points – What we cut the Official Cash Rate by during the GFC to support banks. In addition: retail deposit guarantee scheme (~\$133b in contingent liability at peak); wholesale guarantee scheme (~\$10.3b); Reserve Bank lending to banks via market operations (~\$8b)
- **5500** – The number of media stories referencing the Capital Review since consultation began
- **6500** downloads – The fourth and final consultation paper *How Much Capital Is Enough* has been among the most downloaded documents on the Reserve Bank's website in the past year
- **17,000** – Views of the Reserve Bank *Capital Consultation* web page in the past year

SUBMISSIONS ON DECEMBER 2018 CONSULTATION PAPER

