Economic Bulletin.

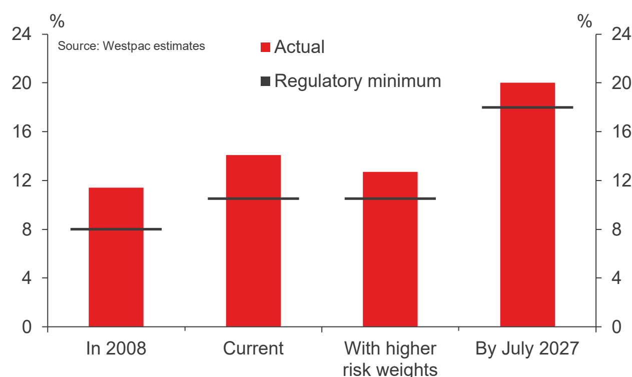
6 December 2019

Economic impact of increased bank capital requirements.

- The Reserve Bank has remained steadfast that it will require banks to hold much more capital, only slightly moderating the proposals released a year ago.
- The RBNZ's announcement was broadly in line with our expectation. Therefore there is no change to our economic forecasts or OCR outlook.
- The RBNZ estimates that the capital requirements will increase lending rates by 20 basis points, and will cost 0.4% of GDP in normal years.
- Our own analysis, outlined in section 2 of this bulletin, suggest that the effects will be around twice what the RBNZ has estimated.
- Either way, the full impact on lending rates and GDP won't be felt for several years. Therefore we don't expect this to influence monetary policy in the near term.

Michael Gordon, Senior Economist
+64 9 336 5670

Total capital ratios for major banks



Section 1: Changes to RBNZ bank capital requirements.

The Reserve Bank has announced the final outcomes of its review of bank capital requirements, almost a year after the changes were first proposed. The final requirements were broadly in line with what we expected, and constitute a modest softening relative to the original proposal – banks will still be required to increase their capital levels substantially over the coming years.

The main decisions were:

- The **minimum total capital ratio** will increase from 10.5% currently to 18% for the four largest banks, and 16% for the smaller local banks.
- For the largest banks, **at least 16% must consist of tier 1 capital**, and within this at least 13.5% must be common equity. For the small banks, the requirements are 14% and 11.5% respectively.
- **The risk weights calculated by the major banks** will be scaled up, so that overall they are at least 90% of the standardised risk weights used by the small banks.

- **Debt instruments that can be converted to equity** will no longer count towards regulatory capital. However, banks will able to make greater use of redeemable preference shares.
- These changes will be **phased in over a seven-year period** starting from July 2020. This will give the banks time to accumulate capital through retained earnings.

Compared to the initial proposal, the biggest change is to accepting preference shares as tier 1 capital, reversing an earlier decision to limit tier 1 to common equity only. Preference shares are a cheaper source of funding than common equity, so this will reduce the overall impact on banks' funding costs. The other notable changes were an extension of the phase-in period from five to seven years, and a wider gap between the minimum capital ratios for large and small banks.

The stated aim of the capital review was to ensure that banks could endure a 1-in-200-year shock to the system. While major bank failures are rare, they have the potential to inflict significant harm on the economy, so there's value in taking out some additional insurance against such a risk. But like any insurance policy, this comes with an ongoing cost during the normal years. Higher capital requirements will increase banks' overall cost of funding, resulting in higher interest rates on loans and a lower level of economic activity than otherwise.

No impact on our economic forecasts or OCR outlook.

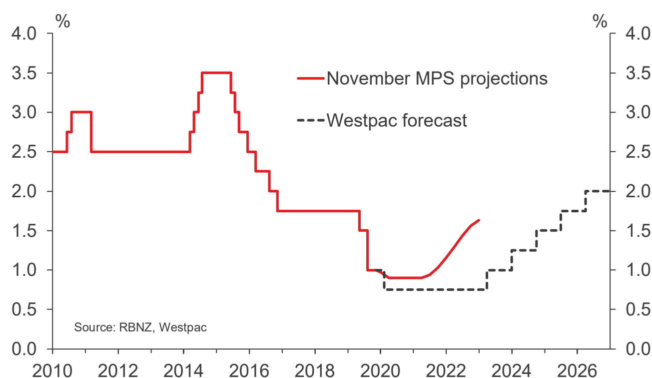
We had estimated that the initial proposal would cause a 50 basis point widening in the margin between bank lending and deposit rates by the end of the phase-in period, and a 1% reduction in the long-run level of GDP. The changes announced this week will soften the impact to some degree, putting our estimates closer to 40 basis points on bank margins and 0.8% on long-run GDP.

Note that the RBNZ's estimates of the impact are substantially smaller: a 20 basis point increase in bank margins and a cost of 0.4% of GDP. Section 2 of this article details why we believe the RBNZ's estimates are too low.

This week's announcement has no real impact on our economic forecasts. We have long been making an allowance for an increase in bank capital, going back to our February 2019 *Economic Overview*. Given the possibility that the final decisions could be softened, we factored in about 80% of the full estimated impact – that is, a 40 basis point increase in bank margins. That's more or less what we got.

While the RBNZ has not yet incorporated the higher capital requirements into its own forecasts, we don't think that it will have a bearing on monetary policy in the near term. The estimated impact on bank margins – whatever size it may be – relates to the end of the phase-in period in 2027. The RBNZ's most recent projections imply a rising OCR long before then. In that light, the more likely response would be to delay OCR hikes for longer, rather than reduce it further in the near term.

OCR forecasts



Section 2: Comparing the estimated costs of the bank capital requirements.

The RBNZ's announcement this week included an analysis of the costs and benefits of higher bank capital. While this was more detailed than the RBNZ's earlier material, the approach to estimating the costs was broadly the same. Here we detail where we differ from the RBNZ's assumptions.

Target capital ratio.

The RBNZ assumes that banks will hold a voluntary 'management buffer' of 1% above the minimum required capital ratio, giving a target ratio of 19%. It also assumes that banks will hold exactly the maximum allowance of AT1 (preference shares) and Tier 2 (subordinated debt) at all times, to minimise their reliance on the most expensive form of capital (common equity).

We think that this buffer is too small, given the variation in capital levels even during normal times. We have a assumed a total buffer of 2%, with a greater weight on common equity to compensate for the risk of a shortfall in AT1 or tier 2 capital. A 2% buffer is lower than current levels, but more in line with history.

Impact on bank lending rates.

When calculating the overall cost of bank funding, the RBNZ estimates the required rate of return on equity based on its market value. This market value is unobservable for New Zealand's banks, as none of them are listed on the sharemarket. Instead, the RBNZ applies a scalar of 2x the book value of equity, which is consistent with the long-run average of the Australian banks.

While this is indeed the long-run average, the scalar has fallen to around 1.5x in recent years – largely because of higher capital requirements in the years since the Global Financial Crisis. We believe that this leads the RBNZ to overestimate the market value of equity for New Zealand's banks, and hence to underestimate the required rate of return.

Altogether, the RBNZ estimates that bank funding costs will rise by 18bp. With a higher target capital ratio, and a higher assumed cost of equity, we put the impact at around 30bp.

The RBNZ then assumes that the rise in the cost of funding can be recouped by repricing all interest-earning assets. Loans make up the majority of this, but it also includes bonds held for liquidity or trading purposes, which can't be repriced – their returns are determined by the market. That puts more of the burden of adjustment onto the loan book.

Impact on economic activity.

To translate the impact of an increase in bank lending rates on the steady-state level of GDP, the RBNZ uses an approach developed at the Bank of England[1] and subsequently used in a number of international studies. These studies typically estimate a one-for-one impact, that is, a 1% rise in bank lending rates reduces the long-run level of GDP by 1%.

We find that these overseas estimates are not appropriate for New Zealand. The two most important parameters are banks' share of total funding for businesses, and the share of national income going to capital. In the first case, overseas studies typically assume that bank lending makes up about a third of funding, with other sources of debt (including non-bank lenders and capital markets) providing up another third and equity providing the last third. Non-bank lending plays a much smaller role in New Zealand; we estimate that banks' share of funding is closer to a half.

In the second case, overseas studies typically assume that the capital share of income is a third, in line with the US share. However, the capital share in New Zealand is around 45%. This means that economic activity is relatively more sensitive to the cost of borrowing.

These two adjustments give a multiplier closer to 2:1. This implies that a 40 basis point increase in bank lending rates will reduce the long-run level of GDP by 0.8%.

Transfer of income overseas.

Interestingly, there is one aspect where the RBNZ's cost-benefit analysis overstates the costs. Wider bank margins will mean higher bank profits in dollar terms, most of which will flow to the Australian owners of the four main banks. The RBNZ treats the increased outflow of income as a cost equivalent to 0.2% of GDP.

We believe this treatment is incorrect. Overseas shareholders are entitled to get something out because they put something in: namely, the additional equity needed to meet the capital requirements. It is inconsistent to count the future outflow of income as a cost, but not count the inflow of equity as a benefit. The value of these flows nets out to zero in current dollar terms.

Comparison of estimates

	RBNZ	Westpac
Impact on bank lending rates		
Target capital ratio	19%	20%
Market value of equity vs book value	2x	1.5x
Increase in bank funding costs	18bp	30bp
Increase in bank lending rates	20bp	40bp
Impact on GDP		
Multiplier for lending rate impact on GDP	1x	2x
Impact of higher bank lending rates	0.2%	0.8%
Impact of income transfer	0.2%	0%
Total impact on long-run level of GDP	0.4%	0.8%

1 Miles, D, Yang, J and Marcheggiano, G (2011), 'Optimal bank capital', Bank of England Discussion Paper No. 31.

Contact the Westpac economics team.

Dominick Stephens, Chief Economist
+64 9 336 5671

Michael Gordon, Senior Economist
+64 9 336 5670

Satish Ranchhod, Senior Economist
+64 9 336 5668

Paul Clark, Industry Economist
+64 9 336 5656

Any questions email:
economics@westpac.co.nz

Past performance is not a reliable indicator of future performance. The forecasts given in this document are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

Disclaimer.

Things you should know

Westpac Institutional Bank is a division of Westpac Banking Corporation ABN 33 007 457 141 ('Westpac').

Disclaimer

This material contains general commentary, and market colour. The material does not constitute investment advice. Certain types of transactions, including those involving futures, options and high yield securities give rise to substantial risk and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This information has been prepared without taking account of your objectives, financial situation or needs. This material may contain material provided by third parties. While such material is published with the necessary permission none of Westpac or its related entities accepts any responsibility for the accuracy or completeness of any such material. Although we have made every effort to ensure the information is free from error, none of Westpac or its related entities warrants the accuracy, adequacy or completeness of the information, or otherwise endorses it in any way. Except where contrary to law, Westpac and its related entities intend by this notice to exclude liability for the information. The information is subject to change without notice and none of Westpac or its related entities is under any obligation to update the information or correct any inaccuracy which may become apparent at a later date. The information contained in this material does not constitute an offer, a solicitation of an offer, or an inducement to subscribe for, purchase or sell any financial instrument or to enter a legally binding contract. Past performance is not a reliable indicator of future performance. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

Country disclosures

Australia: Westpac holds an Australian Financial Services Licence (No. 233714). This material is provided to you solely for your own use and in your capacity as a wholesale client of Westpac.

New Zealand: In New Zealand, Westpac Institutional Bank refers to the brand under which products and services are provided by either Westpac or Westpac New Zealand Limited ("WNZL"). Any product or service made available by WNZL does not represent an offer from Westpac or any of its subsidiaries (other than WNZL). Neither Westpac nor its other subsidiaries guarantee or otherwise support the performance of WNZL in respect of any such product. The current disclosure statements for the New Zealand branch of Westpac and WNZL can be obtained at the internet address www.westpac.co.nz. For further information please refer to the Product Disclosure Statement (available from your Relationship Manager) for any product for which a Product Disclosure Statement is required, or applicable customer agreement. Download the Westpac NZ QFE Group Financial Advisers Act 2008 Disclosure Statement at www.westpac.co.nz.

China, Hong Kong, Singapore and India: This material has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (as defined in the applicable Singapore laws and regulations) only. Recipients in Singapore of this material should contact Westpac Singapore Branch in respect of any matters arising from, or in connection with, this material. Westpac Singapore Branch holds a wholesale banking licence and is subject to supervision by the Monetary Authority of Singapore. Westpac Hong Kong Branch holds a banking license and is subject to supervision by the Hong Kong Monetary Authority. Westpac Hong Kong branch also holds a license issued by the Hong Kong Securities and Futures Commission (SFC) for Type 1 and Type 4 regulated activities. This material is intended only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance. Westpac Shanghai and Beijing Branches hold banking licenses and are subject to supervision by the China Banking and Insurance Regulatory Commission (CBIRC). Westpac Mumbai Branch holds a banking license from Reserve Bank of India (RBI) and subject to regulation and supervision by the RBI.

UK: The contents of this communication, which have been prepared by and are the sole responsibility of Westpac Banking Corporation London and Westpac Europe Limited. Westpac (a) has its principal place of business in the United Kingdom at Camomile Court, 23 Camomile Street, London EC3A 7LL, and is registered at Cardiff in the UK (as Branch No. BR00106), and (b) authorised and regulated by the Australian Prudential Regulation Authority in Australia. Westpac is authorised in the United Kingdom by the Prudential Regulation Authority. Westpac is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Westpac Europe Limited is a company registered in England (number 05660023) and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

This communication is being made only to and is directed at (a) persons who have professional experience in matters relating to investments who fall within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (b) high net worth entities, and other persons to whom it may otherwise lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any person who is not a relevant person should not act or rely on this communication or any of its contents. The investments to which this communication relates are only available to and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such investments will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely upon this communication or any of its contents. In the same way, the information contained in this communication is intended for "eligible counterparties" and "professional clients" as defined by the rules of the Financial Conduct Authority and is not intended for "retail clients". With this in mind, Westpac expressly prohibits you from passing on the information in this communication to any third party. In particular this communication and, in each case, any copies thereof may not be taken, transmitted or distributed, directly or indirectly into any restricted jurisdiction. This communication is made in compliance with the Market Abuse Regulation (Regulation(EU) 596/2014).

Investment Recommendations Disclosure

The material may contain investment recommendations, including information recommending an investment strategy. Reasonable steps have been taken to ensure that the material is presented in a clear, accurate and objective manner. Investment Recommendations for Financial Instruments covered by MAR are made in compliance with Article 20 MAR. Westpac does not apply MAR Investment Recommendation requirements to Spot Foreign Exchange which is out of scope for MAR.

Unless otherwise indicated, there are no planned updates to this Investment Recommendation at the time of publication. Westpac has no obligation to update, modify or amend this Investment Recommendation or to notify the recipients of this Investment Recommendation should any information, including opinion, forecast or estimate set out in this Investment Recommendation change or subsequently become inaccurate.

Westpac will from time to time dispose of and acquire financial instruments of companies covered in this Investment Recommendation as principal and act as a market maker or liquidity provider in such financial instruments.

Westpac does not have any proprietary positions in equity shares of issuers that are the subject of an investment recommendation.

Westpac may have provided investment banking services to the issuer in the course of the past 12 months.

Westpac does not permit any issuer to see or comment on any investment recommendation prior to its completion and distribution.

Individuals who produce investment recommendations are not permitted to undertake any transactions in any financial instruments or derivatives in relation to the issuers covered by the investment recommendations they produce.

Westpac has implemented policies and procedures, which are designed to ensure conflicts of interests are managed consistently and appropriately, and to treat clients fairly.

The following arrangements have been adopted for the avoidance and prevention of conflicts in interests associated with the provision of investment recommendations.

(i) Chinese Wall/Cell arrangements;

(ii) physical separation of various Business/Support Units;

(iii) and well defined wall/cell crossing procedures;

(iv) a "need to know" policy;

(v) documented and well defined procedures for dealing with conflicts of interest;

(vi) steps by Compliance to ensure that the Chinese Wall/Cell arrangements remain effective and that such arrangements are adequately monitored.

U.S: Westpac operates in the United States of America as a federally licensed branch, regulated by the Office of the Comptroller of the Currency. Westpac is also registered with the US Commodity Futures Trading Commission ("CFTC") as a Swap Dealer, but is neither registered as, or affiliated with, a Futures Commission Merchant registered with the US CFTC. Westpac Capital Markets, LLC ('WCM'), a wholly-owned subsidiary of Westpac, is a broker-dealer registered under the U.S. Securities Exchange Act of 1934 ('the Exchange Act') and member of the Financial Industry Regulatory Authority ('FINRA'). This communication is provided for distribution to U.S. institutional investors in reliance on the exemption from registration provided by Rule 15a-6 under the Exchange Act and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors in the United States. WCM is the U.S. distributor of this communication and accepts responsibility for the contents of this communication. All disclaimers set out with respect to Westpac apply equally to WCM. If you would like to speak to someone regarding any security mentioned herein, please contact WCM on +1 212 389 1269. All disclaimers set out with respect to Westpac apply equally to WCM.

Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The author of this communication is employed by Westpac and is not registered or qualified as a research analyst, representative, or associated person under the rules of FINRA, any other U.S. self-regulatory organisation, or the laws, rules or regulations of any State. Unless otherwise specifically stated, the views expressed herein are solely those of the author and may differ from the information, views or analysis expressed by Westpac and/or its affiliates.