TE TAI ŌHANGA
THE TREASURY

Reference: 20200209

6 July 2020

s9(2)(a)
[redacted]

Thank you for your Official Information Act request, received on 8 June 2020. You requested the following:

1. *'Institutional Arrangements for Unconventional Monetary Policy', received on 29 January 2020*
2. *'Aide Memoire: The economic and fiscal effects of Large Scale Asset Purchases by the Reserve Bank of New Zealand', received on 16 March 2020*
3. *'Treasury Report: COVID-19: Next steps on macroeconomic advice', received on 27 March 2020*

Information being released

Please find enclosed the following documents:

Item	Date	Document Description	Decision
1.	29 January 2020	Joint Report: Institutional Arrangements for Unconventional Monetary Policy	Release in part
2.	16 March 2020	Aide Memoire: The economic and fiscal effects of Large Scale Asset Purchases by the Reserve Bank of New Zealand	Release in part

I have decided to release the documents listed above, subject to information being withheld under one or more of the following sections of the Official Information Act, as applicable:

- personal contact details of officials, under section 9(2)(a) – to protect the privacy of natural persons, including that of deceased natural persons,
- confidential information, under section 9(2)(d) – to avoid prejudice to the substantial economic interests of New Zealand, and
- direct dial phone numbers of officials, under section 9(2)(k) – to prevent the disclosure of information for improper gain or improper advantage.

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https://treasury.govt.nz

Direct dial phone numbers of officials have been redacted under section 9(2)(k) in order to reduce the possibility of staff being exposed to phishing and other scams.
This is because information released under the OIA may end up in the public domain, for example, on websites including Treasury's website.

Please note that the Treasury has revised its analysis of the impacts of Large Scale Asset Purchases on the Government's balance sheet subsequent to the completion of item 2 (page 3 of item 2 provided Treasury's earlier analysis). The Treasury's revised analysis is available on its website at the following link:

https://treasury.govt.nz/sites/default/files/2020-05/4278985_How%20the%20Reserve%20Bank%20Large%20Scale%20Asset%20Purchases%20affect%20the%20Crown%20balance%20sheet.pdf

Information publicly available

The following information is also covered by your request and will soon be made available on the Treasury website:

Item	Date	Document Description	Website Address
3.	27 March 2020	Treasury Report: COVID-19: Next steps on macroeconomic advice	https://treasury.govt.nz/publications/other-official-information/information-releases

The Treasury intends to publish this document as part of the Budget 2020 proactive release, planned for late July 2020.

In making my decision, I have considered the public interest considerations in section 9(1) of the Official Information Act.

Please note that this letter (with your personal details removed) and enclosed documents may be published on the Treasury website.

This reply addresses the information you requested. You have the right to ask the Ombudsman to investigate and review my decision.

Yours sincerely

Renee Philip
Manager, Macroeconomic and Fiscal Policy

20200209
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RESERVE BANK
OF NEW ZEALAND
TE PŪTEA MATUA

TE TAI ŌHANGA
THE TREASURY

Joint Report: Institutional Arrangements for Unconventional Monetary Policy

Date:	29 January 2020	**Report No:**	Treasury: T2020/17 RBNZ: 5374
		File Number:	Treasury: MC-1-1-1-2 (RBNZ Institutional Frameworks)

Action sought

	Action sought	Deadline
Minister of Finance (Hon Grant Robertson)	**Agree** that officials undertake further work on the institutional arrangements to support unconventional monetary policy **Provide** feedback on the scope and timing of our future work	By Thursday 13 February 2020

Contact for telephone discussion (if required)

Name	Position	Telephone		1st Contact
Matthew Galt	Analyst, Macroeconomic and Fiscal Policy team, The Treasury	s9(2)(k) [redacted]	s9(2)(g)(ii) [redacted]	✓
Michael Thornley	Advisor, Policy Analysis team, The Reserve Bank		N/A (mob)	

Minister's Office actions (if required)

Return the signed report to Treasury.

Enclosure: No

Joint Report: Institutional Arrangements for Unconventional Monetary Policy

Executive Summary

This report recommends that the Treasury and the Reserve Bank undertake work to design institutional arrangements to support the use of unconventional monetary policy (UMP) in New Zealand.

With interest rates at historic lows, there is a risk that monetary policy could become constrained if interest rates fall towards zero. In such a situation, we consider it prudent that the Reserve Bank has alternative tools available to stabilise the economy and that the governance arrangements relating to the use of alternative tools are clear, comprehensive and effective.

While fiscal policy is an alternative to monetary policy in terms of generating demand, it is unlikely to be sufficient in all circumstances. Ensuring appropriate governance arrangements are in place for the use of UMP will better enable the Reserve Bank's Monetary Policy Committee (MPC) to meet its remit and thereby promote the wellbeing of New Zealanders. Effective macroeconomic stabilisation helps people maintain adequate incomes through the business cycle, supports employment opportunities for those at the edge of the labour market, and makes it more affordable for New Zealand to consistently maintain its physical, natural, human and social capital.

We do not think there is a case for using UMP in New Zealand in the near future based on current forecasts. The Treasury, the Reserve Bank and financial market pricing are all anticipating that the official cash rate (OCR) will stay around 1% or higher in the coming years. However, economic forecasts are highly uncertain and there is always a chance that the economy will deteriorate to the point where the Reserve Bank needs to use UMP to achieve its economic objectives. Based on unpublished, confidential research on the difference between historical forecasts and actual outcomes over the past 20 years, the Reserve Bank estimates that there is a 20% chance of the OCR reaching zero at some point over the next 2 years.

The Treasury will keep you updated on the outlook for the economy and interest rates, and what this implies for monetary and fiscal policy options in the lead-up to Budget decisions. The Treasury will provide this information through our regular weekly and monthly reports, economic forecasts, fiscal policy advice, and fortnightly meetings to discuss the economic and fiscal outlook in the lead up to budget decisions.

A range of unconventional monetary policy tools exist, but they bring new uncertainties and trade-offs

The first part of this report sets out background information on what UMP is and how it might be used in New Zealand.

We have defined UMP as any way of further using monetary policy to support the economy as the OCR approaches zero. The key potential UMP tools include negative interest rates, forward guidance, asset purchases/quantitative easing, purchases of foreign currency or assets, intervening in the interest rate swap market and term lending to banks. There are three main issues with UMP in New Zealand.

- As these tools have never been used in New Zealand before, the magnitude of the macroeconomic stabilisation benefits is highly uncertain.

- Although UMP tools entail many of the same trade-offs as conventional monetary policy, the scale of the trade-offs can be larger with UMP. The trade-offs include fiscal risks, financial stability risks, distributional impacts and the impact on financial market functioning. Some of these trade-offs are outside the Reserve Bank's current mandate. We refer to these as 'externalities associated with UMP' in this paper.

- The choice of tool would be highly dependent on the prevailing conditions in the economy and the financial system. A general economic downturn may be best addressed with broad tools (that is, those that operate through multiple channels) such as fiscal policy, negative interest rates, asset purchases and forward guidance. In contrast, disruption to the financial system may be best addressed with targeted monetary interventions such as term lending to banks.

Figure A over the page provides further detail on the trade-offs and key considerations with each tool.

Note that this report does not provide comprehensive advice about which tools should be used in specific circumstances. Rather, it recommends that New Zealand positions itself to be able to use a range of tools as a number of countries have done. If the economy deteriorates, the Treasury would provide you with advice at that time about possible fiscal policy responses in the context of the monetary policy options available. The Reserve Bank would then respond to the circumstances in accordance with their mandate. The Reserve Bank and the Treasury are undertaking ongoing research into how different tools might be used to support the economy, achieve the remit, and support living standards in a downturn.

We propose undertaking work to advise on institutional arrangements for unconventional monetary policy

The Reserve Bank can already use UMP tools, and the Reserve Bank of New Zealand Act 1989 (Reserve Bank Act) provides a solid foundation for their use. There are, however, some challenges that should be addressed:

- Making sure the externalities of UMP are appropriately considered by decision-makers.

- Ensuring UMP and fiscal policy are appropriately coordinated in a significant downturn.

- Ensuring decision-making responsibilities for UMP are clearly assigned to make implementation smoother. Parties likely to have an interest include the Reserve Bank's MPC, Governor, and Board. In addition, the practical implementation of some UMP tools could be subject to decisions by the Minister of Finance, such as the Minister's decisions regarding the provision of additional capital to the Reserve Bank.

- Addressing practical impediments to the use of UMP tools, such as by positioning the Reserve Bank to expand its balance sheet if necessary.

- Managing reputation risks arising from the use of UMP tools. Reputation risks may arise as the public are not as familiar with these tools and their externalities as they are with conventional monetary policy.

To address these challenges, the Treasury and the Reserve Bank recommend a 6-month work programme to develop policy proposals. This timeframe will allow us to provide robust advice before UMP is likely to be needed, but we will need to limit the scope of our work to achieve it. If you agree, we will report back to you by July 2020 with our advice for institutional arrangements. We will keep you informed as we undertake the work. If there are decisions that you can make on specific aspects of the institutional arrangements ahead of our July 2020 report back to speed up progress, we will advise you on these earlier. After we provide you with advice, we will implement any changes to institutional arrangements to which you agree. The timeframe to implement these changes would depend on their nature: some changes are likely to take relatively little time (for example, a matter of months), whereas others, such as those requiring legislative change, would require a longer timeframe.

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Figure A: Key trade-offs for each of the main UMP tools

<table>
<tr><th></th><th>Macroeconomic stabilisation</th><th>Fiscal risks</th><th>Financial stability risks</th><th>Impact on market functioning</th><th>Distributional impacts</th><th>Other considerations</th></tr>
<tr><td>Negative OCR</td><td rowspan="5">Each of the tools would have benefits for macroeconomic stabilisation depending on the circumstances and the extent to which they were used.</td><td rowspan="2">No change required to RBNZ balance sheet.</td><td rowspan="5">Low interest rates have financial stability tradeoffs regardless of the tool used. These include encouraging leverage and impacting on bank profitability.

Some tools may encourage the market to increase risk in particular ways, such as LSAPs that encourage investors to switch to higher risk assets, and term lending may encourage riskier lending by banks.</td><td rowspan="2">Operates broadly similarly to conventional monetary policy. Some financial institutions' systems and financial contracts will need to be adjusted to handle negative interest rates.</td><td rowspan="3">Distributional impacts similar to conventional monetary policy.</td><td></td></tr>
<tr><td>Forward guidance</td><td>Would need to be credible and go beyond publishing a forward track to be effective.</td></tr>
<tr><td>Intervention in the interest rate swap market</td><td rowspan="3">Potential for the RBNZ to make significant financial losses as these options require much more extensive use of the balance sheet than conventional policy. The amount of risk depends on the assets being acquired and risk governance.

Risk will also depend on whether the Bank has a credible exit strategy. To date, no central bank that has undertaken large scale asset purchases has effectively unwound their purchases.</td><td>Low impact on market functioning</td><td>Not previously done by other central banks, likely reflecting the lesser importance of the swap market in the US/Europe/Japan compared to NZ.</td></tr>
<tr><td>Large scale asset purchases, including:
• Domestic government bonds,
• Foreign currency or foreign government bonds, and
• Corporate bonds</td><td>If the RBNZ becomes dominant in any particular market it could result in investors permanently exiting. This is a particular concern for the NZGB market, as it would become harder to fund government debt if the investor base was eroded. This concern would be mitigated if NZGB issuance increased at the same time (eg. to fund a fiscal deficit)</td><td>The impact may not be neutral across society:
• It may increase wealth inequality by more than conventional monetary policy by raising asset prices more directly. On the other hand, a stable macroeconomy supports those at the edge of the labour market.
• It could disproportionately benefit those the RBNZ buys from (eg. corporate issuers for corporate bonds).</td><td>Purchase of foreign assets may be politically challenging from various angles (eg. perceptions of a currency war, and supporting foreign governments over the NZ government).

New Zealand capital markets are small. Excluding NZGB, the NZD debt market is just 35% of GDP.</td></tr>
<tr><td>Term lending to banks</td><td>If term lending were large scale, it could increase banks' reliance on central bank funding and reduce their access to market debt</td><td>May favour banks over non-banks, and may favour sectors reliant on bank debt over other sectors.</td><td></td></tr>
</table>

Note: Based on our initial judgement, the most benign trade-offs are in green, the more significant trade-offs are in orange, and the most significant trade-offs are in red.

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Recommended Action

We recommend that you:

a **agree** that the Treasury and the Reserve Bank prepare advice on changes to institutional arrangements necessary to support the use of unconventional monetary policy, to prepare for circumstances where unconventional monetary policy may be required, and

Agree/disagree.

b **provide** any feedback on the proposed scope and timing of our work.

Ben Gaukrodger
Acting Manager, Macroeconomic and Fiscal Policy, The Treasury

Rebecca Williams
Manager, Policy Analysis, Reserve Bank

Hon Grant Robertson
Minister of Finance

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Joint Report: Institutional Arrangements for Unconventional Monetary Policy

Purpose of Report

1. This report informs you about unconventional monetary policy (UMP) in New Zealand. The first section sets out background information on the potential use of UMP in New Zealand, including the economic circumstances that could lead to UMP being used, possible tools, and the benefits, risks and costs of these tools. The second section recommends a continuing work programme to ensure that institutional arrangements are in place to support the use of UMP, in order to prepare for circumstances where it may be required. It also seeks any feedback from you on the proposed scope and timing of our work.

The Economic Context for Unconventional Monetary Policy

Macroeconomic stabilisation is important for living standards

2. This report builds on previous advice you have received [T2019/2337] on options for responding to an economic slowdown. It is important to have tools available to minimise the severity of downturns. Economic downturns have negative consequences for living standards, including by:

    a. weakening financial and physical capital by reducing incomes, investment and aggregate economic activity

    b. weakening economic resilience, such as by exacerbating financial sector vulnerabilities or by making it more difficult to afford the maintenance of physical and natural capital

    c. weakening human capital, such as through unemployed people missing out on work experience and on-the-job training, particularly for those at the edge of the labour market, and because downturns encourage New Zealanders to emigrate abroad for work, and

    d. potentially eroding social capital and civic engagement to the extent that the negative consequences of a downturn generate dissatisfaction.

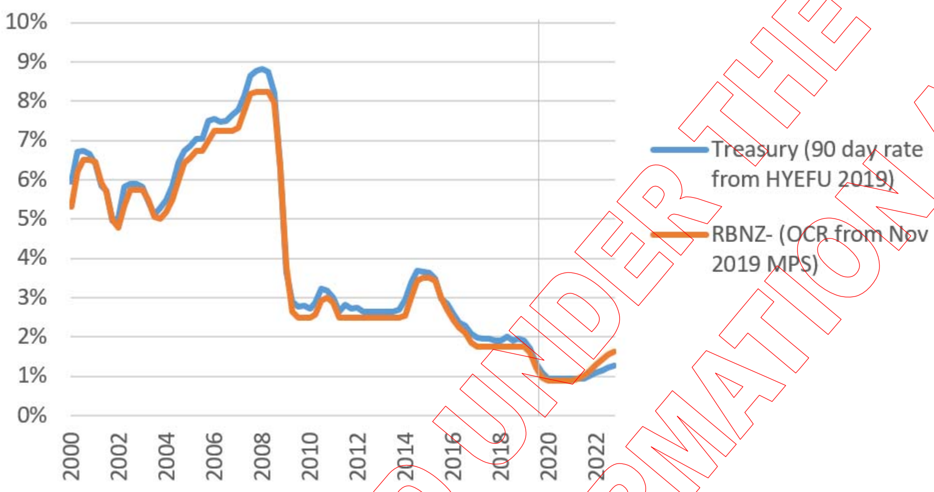
3. Monetary policy has been New Zealand's primary economic stabilisation tool over recent decades. Equipping the Reserve Bank with the tools it needs to meet its economic objectives (price stability and maximum sustainable employment) will support economic stabilisation and thereby help support living standards.

We do not think there is a case for deploying UMP in New Zealand in the near future based on current forecasts

4. The economy slowed over 2019, but we do not see a case to use UMP in the near future based on current forecasts. The economy is starting from a good position, with unemployment at 4.2% and annual inflation at 1.5%. The Treasury's Half Year Economic and Fiscal Update (HYEFU) forecasts project annual average GDP growth of 2.2% in the year to June 2020. This is 0.8 percentage points lower than was forecast in the Budget Economic and Fiscal Update (BEFU), but the economy does not appear to be headed towards a significant economic downturn.

5. We expect to be able to manage the recent modest economic slowdown observed using conventional monetary and fiscal policy, with no need to use UMP. The Reserve Bank has reduced the OCR over the past year to provide support to the economy and the Government announced an easing of fiscal policy in the HYEFU. The Treasury and the Reserve Bank expect the OCR to stay near 1% over the next two years (Figure 1). Likewise, financial markets are currently pricing in only a 40% chance of one 25 basis point interest rate cut by September 2020.

Figure 1: Reserve Bank and Treasury interest rate forecasts



There is still a chance that UMP will be required in the future, as shocks can occur and interest rates are expected to average around lower levels in the future

6. There is a lot of uncertainty around any set of economic forecasts, and the economic outlook could deteriorate (or improve) without much warning. Based on unpublished, confidential research on the difference between historical forecasts and actual outcomes over the past 20 years, the Reserve Bank estimates that there is a 20% chance of the OCR reaching zero at some point over the next 2 years.

7. A recession or other significant economic downturn in New Zealand would pose a major challenge for economic stabilisation using just conventional policy options. Interest rate cuts of 300 to 600 basis points have been required in previous New Zealand economic downturns. With the OCR at 1.0%, cuts of this size would not be possible without significant changes to the cash system.

8. In addition, interest rates are expected to average around 3% over the coming decade, down from around 5% in the mid-2000s, reflecting a decline in the nominal neutral interest rate.[1] This decline reflects a range of global and domestic structural changes, which typically cannot be affected by monetary policy, and means there is a larger risk that interest rates will reach zero in future economic downturns.

[1] The nominal neutral interest rate is the rate at which monetary policy is neither expansionary nor contractionary, and is the level which we expect interest rates to move around over the long-term.

We will monitor the risk of interest rates falling towards zero and the need to use UMP

9. The Treasury will keep you updated on the outlook for the economy and interest rates in the lead up to Budget decisions through its Weekly Economic Updates, Monthly Economic Indicators reports, economic forecasts and fiscal policy advice. The Treasury will provide you with its fiscal strategy advice and preliminary economic forecasts in late February, its final economic forecasts in early April and its final fiscal forecasts in late April. The Reserve Bank will continue to present the outlook for monetary policy in its six-weekly OCR review announcements and quarterly Monetary Policy Statements. The Treasury will also meet with you each fortnight to discuss the economic and fiscal outlook in the lead up to budget decisions.

10. The key New Zealand data releases between 29 January and budget decisions on 30 March that will inform the outlook for the New Zealand economy and the OCR are shown in Figure 2. A range of other data will inform the economy's outlook, such as overseas data and financial market developments.

Figure 2: Key New Zealand economic events between 29 January and 30 March 2020

Event	**Date**
Labour market statistics data release (including unemployment and wages)	5 February
Reserve Bank OCR review and Monetary Policy Statement	12 February
GDP data release	19 March
Reserve Bank OCR review	25 March

If interest rates reach zero, the main options for macroeconomic stabilisation are fiscal policy and UMP

11. Discretionary fiscal policy is likely to be an effective option for macroeconomic stabilisation in a downturn. Public debt is at prudent levels, and there are a range of options for delivering a large stimulus in a short amount of time, such as through tax and welfare changes.

12. While fiscal policy may be an effective option, it is unlikely to be sufficient in all circumstances for the following reasons:

- Discretionary fiscal policy may not be able to be implemented quickly enough or at a large enough scale to adequately mitigate the effects of a downturn on wellbeing (that said, monetary policy also operates with lags).

- Fiscal policy may not be preferred by all governments in all downturns due to political pressures.

- UMP may be able to target the source of economic disruptions more directly. For example, problems arising from financial market disruption may be best addressed with a targeted central bank intervention, rather than, for example, a general easing of fiscal policy. Experiences with UMP overseas have reflected this, with many UMP tools being targeted at addressing specific financial market disruptions arising between 2008 and 2012.[2]

- Fiscal policy can be constrained by fiscal sustainability risks and investor confidence.

[2] Bank for International Settlements (2019). *Unconventional monetary policy tools: a cross-country analysis*. https://www.bis.org/publ/cgfs63.htm

13. Given the limitations of fiscal policy, there is a chance that UMP may be required for the Reserve Bank to meet its statutory objectives (maximum sustainable employment and price stability).[3]

14. Central banks overseas have turned to UMP to support their economies over the past decade as interest rates have fallen towards zero. Places that have used UMP include the United States, the euro area, the UK, Japan, Switzerland, the Czech Republic and Sweden.

15. There is evidence that UMP has been effective at supporting GDP, employment and inflation, although estimates of UMP's effectiveness vary.[4] Regardless of whether UMP is ultimately used, the Treasury and the Reserve Bank consider there to be a strong case for being prepared to use it in New Zealand should the need arise.

The choice of tool will depend on the circumstances at the time

16. If the Reserve Bank were to use UMP, the choice of tool would be highly dependent on the prevailing conditions in the economy and financial system, and the Reserve Bank's scope to use the tool within current institutional arrangements.

17. For example, if there was a general economic downturn, the Reserve Bank and the Government may be inclined to use broad tools that have a widespread effect on the economy. These could include fiscal policy, negative interest rates, forward guidance, and asset purchases of New Zealand government bonds.

18. Alternatively, if the disruption to the economy was more specific to a particular sector, the Reserve Bank may be more likely to undertake narrower, more targeted interventions. For example, a crisis in the banking sector may be best targeted with term lending, and many of the responses to the global financial crisis undertaken overseas were intended to address restricted credit supply. The Reserve Bank can also take targeted actions for other reasons, such as altering the parameters of their repurchase operations to protect financial stability.

Using Unconventional Monetary Policy in New Zealand

We have defined UMP as any way of further using monetary policy to support the economy once the OCR reaches zero

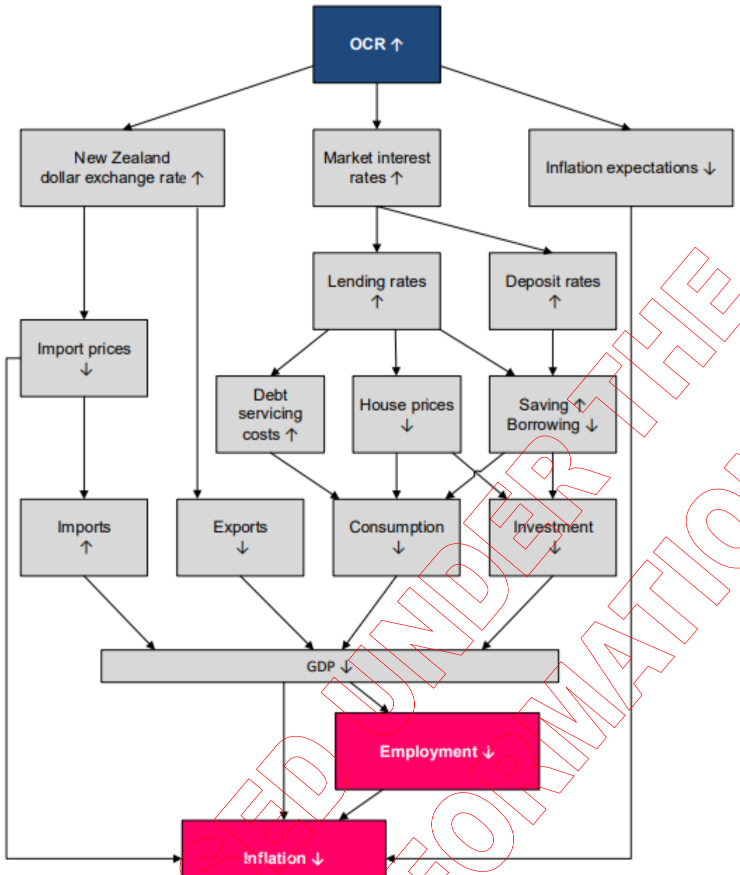
19. The Reserve Bank implements <u>conventional</u> monetary policy by setting the OCR, a daily benchmark interest rate that applies to lending and borrowing between the Reserve Bank and financial institutions.[5] The OCR influences key market interest rates (such as mortgage rates), the exchange rate, and households' expectations about the future path of the economy. These, in turn, influence economic activity. The monetary policy transmission mechanism of an OCR increase is illustrated in Figure 3 (the transmission mechanism operates the same in reverse for OCR cuts).

[3] The Reserve Bank can also stabilise the economy to a small extent by using macro-prudential policies (such as loan-to-value ratio restrictions or countercyclical capital buffers), but these are unlikely to be able to make more than a minor contribution to supporting the economy in a significant economic downturn (and indeed, this is not their intended purpose). Macro-prudential policies primarily help by reducing the risk that the financial system amplifies severe economic downturns. They can reduce the probability and severity of financial crises, but cannot eliminate fluctuations in the business cycle.

[4] Bank for International Settlements (2019). *Unconventional monetary policy tools: a cross-country analysis*. https://www.bis.org/publ/cgfs63.htm

[5] Entities that hold an Exchange Settlement Account System account can lend and borrow with the Reserve Bank. These are predominantly commercial banks.

Figure 3: The monetary policy transmission mechanism



Source: Reserve Bank Monetary Policy Handbook https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/monetary-policy-handbook/Monetary-Policy-Handbook.pdf?revision=4922a7fe-d539-4cab-a0d6-9bd47fb152fa

20. As the OCR approaches zero, the Reserve Bank can further ease monetary policy using the six UMP tools outlined in Figure 4 below. Annex 1 provides further detail on each of the possible tools.

21. The UMP tools can be used separately or in various combinations as other central banks have done. In addition, the Reserve Bank could use UMP tools while the OCR remains slightly positive, as some other central banks have done. The lowest cash rate the Bank of England has set is 25 basis points, despite making extensive use of other UMP tools. The Governor of the Reserve Bank of Australia has stated that he considers negative interest rates in Australia to be extraordinarily unlikely, and that quantitative easing would become an option for Australia at a cash rate of 25 basis points.[6]

22. Monetary financing (that is, the Reserve Bank directly and permanently purchasing domestic government debt) is another possible UMP tool. However, this report does not discuss monetary financing in detail as it has had negative consequences for countries that have used it and it would involve drastic changes to institutional arrangements, including significantly limiting the Reserve Bank's independence. The Treasury can provide you with analysis of monetary financing in the coming months if you wish.

[6] Reserve Bank of Australia speech, 26 November 2019, Unconventional Monetary Policy: Some Lessons From Overseas https://www.rba.gov.au/speeches/2019/sp-gov-2019-11-26.html#fn6

Figure 4: Possible unconventional monetary policy tools in New Zealand

Tool	**Brief summary of the tool**
Negative OCR	If the Effective Lower Bound (ELB) is negative, the Reserve Bank could reduce the OCR below zero. The ELB is the point where either banks choose not to pass on reductions in the OCR to market interest rates, or people start withdrawing their funds as cash. The ELB is not known in New Zealand (nor any other country), but it has not yet been reached in New Zealand.
Forward guidance	The Reserve Bank commits to more accommodative monetary policy in the future than would typically be the case given economic conditions, thereby lowering medium and long-term interest rates and raising inflation expectations.
Large scale asset purchases - of domestic government bonds (also referred to as 'quantitative easing')	The Reserve Bank creates settlement cash and uses it to purchase New Zealand government bonds (NZGB) on the secondary market. This supports the economy through two main channels. First, it signals that the Reserve Bank expects interest rates to stay low for a long time, lowering long-term interest rates (the 'signalling channel'). Second, it drives investors to reinvest their money elsewhere, resulting in lower yields across asset classes (the 'portfolio rebalancing channel'). In New Zealand, the exchange rate could be a key way these channels affect the economy. Lower domestic interest rates may result in a lower exchange rate. The sizable participation of offshore investors in NZGB markets may mean that much of the portfolio rebalancing channel would work through offshore investors selling NZGBs denominated in NZDs and buying assets denominated other currencies. If this occurred in sufficiently large volume, it could impact the value of the NZD.
Large scale asset purchases - of foreign currency or foreign government bonds	The Reserve Bank creates settlement cash and uses it to purchase foreign currency or foreign government bonds. This would be similar to the exchange rate interventions the Reserve Bank has undertaken in the past as the main effect is to influence the relative supply of New Zealand and foreign currency. However, when used as a UMP tool, the scale of the purchases would likely be much larger than previous instances of exchange rate intervention.
Large scale asset purchases - of domestic private sector assets (also referred to as 'credit easing')	The Reserve Bank creates settlement cash and uses it to purchase private sector bonds on the secondary market to lower market interest rates and improve market liquidity. Other central banks have typically used this tool to address issues in the corporate bond market or because their private bond markets are particularly large and important. Given the relatively small size of New Zealand's corporate bond market, this tool is likely to be less powerful here.

Intervening in the interest rate swap market	Interest rate swaps are financial contracts involving an exchange of fixed and floating interest rates between parties. The interest rate swap market is important in New Zealand because the major banks use it to hedge their interest rate risk exposures. This means that financial products, including mortgages, are influenced by the swap rate. The Reserve Bank's intervention in the swap market could support economic activity in two ways. First, the weight of the Reserve Bank's transactions in the market could lower interest rates. Second, it could strengthen the Reserve Bank's forward guidance by the Reserve Bank entering into transactions where it would make large losses if it reneged on its commitment.
Term lending to banks	The Reserve Bank offers funds to banks to directly encourage lending.

The effectiveness of UMP in New Zealand is uncertain

23. All UMP tools can help with macroeconomic stabilisation, helping to avoid the harm to living standards arising from an economic downturn. UMP tools affect interest rates, the exchange rate and household expectations in ways that support economic activity similarly to conventional monetary policy. However, the magnitude of the benefits of UMP for economic stabilisation is uncertain. Where UMP has been used internationally, estimates of its effectiveness vary across studies and instances of its use. As UMP has not been used in New Zealand before, it is even more difficult to estimate how effective it will be. The Reserve Bank is undertaking ongoing research into the likely effectiveness of different UMP tools.

UMP tools may have larger trade-offs than conventional monetary policy tools

24. Conventional monetary policy has a range of trade-offs, including distributional impacts, impacts on financial stability risks, impacts on the Crown's balance sheet, and impacts on financial market functioning. These impacts are generally well understood by stakeholders and accepted as part of the ordinary functioning of the economy (although the Reserve Bank does occasionally receive criticism about the impact of OCR decisions on segments of the economy). UMP involves similar trade-offs, but they can be larger and different in nature. The key trade-offs are as follows and are further outlined in Figure A on page 4.

    a. **Fiscal risks**. Conventional monetary policy impacts on the Crown accounts, such as affecting debt servicing costs and the value of the Crown's long-term liabilities (such as ACC payments). However, tools like asset purchases and intervention in the interest rate swaps market will expose the Reserve Bank to new financial risks. If the Reserve Bank makes financial losses, these will ultimately flow through to the Crown.

    b. **Financial stability risks**. Low interest rates have financial stability trade-offs regardless of the tool used. These include encouraging higher private debt levels and potentially impacting bank and insurer profitability. However, some tools will involve additional financial stability risks on top of this as part of their intended effects or as side-effects. For example, quantitative easing is intended to encourage a shift towards riskier assets that better support economic activity, and term lending is designed to encourage banks to lend when they might not otherwise.

c. **Distributional impacts**. Conventional monetary policy has distributional impacts, such as on savers versus borrowers, wealthy versus less wealthy individuals, and importers versus exporters. However, some UMP tools may have greater or different distributional impacts to conventional monetary policy. For example, purchases of private assets and term lending could disproportionately benefit the counterparties (for example, banks and industries reliant on bank lending, issuers of corporate bonds, and investors that sell assets to the Reserve Bank). On the other hand, supporting the macroeconomy, through either conventional or unconventional monetary policy, supports equality by raising employment, particularly for those at the edge of the labour market.

d. **Impacts on market functioning**. Heavy Reserve Bank involvement in financial markets could distort or erode capability in financial markets. For example, if the Reserve Bank became dominant in the New Zealand Government Bond (NZGB) market, investors may leave the market permanently, leading to a high cost of, or more difficulty in sourcing, future funding. The Government currently aims to maintain gross NZGB issuance of at least 20% of GDP over time, to support fiscal resilience by maintaining a well-functioning NZGB market. Gross NZGB issuance was 23.3% of GDP at the year ended June 2019. This means there is only a small amount of headroom for large scale asset purchases before the value of bonds available to trade in the market drops below the 20% of GDP minimum target level (absent increased government debt issuance to, for example, fund a fiscal deficit).

25. The MPC is required to consider some aspects of these trade-offs. The remit requires the MPC to have regard to the efficiency and soundness of the financial system. The MPC would indirectly consider some distributional impacts as they seek to support maximum sustainable employment and seek to avoid unnecessary instability in output, interest rates and the exchange rate, as required by the remit. However, the MPC is not formally required to consider fiscal risks and distributional impacts beyond those specific areas. We refer to these as 'externalities' in the remainder of the paper as they are external to the current MPC mandate.

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Supporting Unconventional Monetary Policy through Institutional Changes

The Reserve Bank Act provides a solid foundation for UMP

26. The Reserve Bank of New Zealand Act 1989 (the Act) sets the framework for monetary policy decision-making in New Zealand. For the most part, the Act provides a robust basis for the use of UMP, including the following.

    a. **Legal authority for the Reserve Bank to use UMP:** The Act does not define how the Reserve Bank should pursue its economic objectives. Instead, the Act grants wide powers and discretion as to how the Reserve Bank pursues its objectives, with no particular constraint, provided it is acting to further those objectives. Therefore, the MPC has legal authority to allow it to conduct monetary policy using the UMP tools discussed in this report.

    b. **Foreign exchange limits:** While the Act empowers the Reserve Bank to deal in foreign exchange, the Minister of Finance currently sets the overall level of foreign reserves that the Reserve Bank must maintain for the purposes of exercising its powers. Further, for the purposes of influencing the exchange rate, the Minister has a power to direct the Reserve Bank's foreign exchange dealings within guidelines provided by the Minister. The latest guidelines were set in a 2004 memorandum from the Minister of Finance to the Reserve Bank Governor, s9(2)(d) Currently, the Act also provides a power for the Minister to fix exchange rates for foreign exchange dealing by the Reserve Bank.[8]

    c. **Clear objectives and operational independence to achieve its objectives:** The Act defines the objectives of the Reserve Bank and the MPC, with operational objectives further defined in the MPC's remit. The Reserve Bank has operational independence to achieve its objectives.

    d. **Group decision-making with external input:** Monetary policy decisions are the responsibility of the MPC. The MPC includes members that are external to the Reserve Bank to ensure diverse perspectives are brought into decision-making processes.

    e. **Transparency:** The Act requires a minimum level of transparency from the Reserve Bank. The Reserve Bank must report on monetary policy at least four times per year, and the MPC Charter allows the Minister of Finance and the MPC to agree to detailed transparency requirements that the MPC must follow.

    f. **Monitoring, ex-post review and accountability:** The MPC is monitored by the Reserve Bank Board and the Reserve Bank is required to review and assess its performance in formulating and implementing monetary policy at least every five years. The members of the MPC are subject to removal if they breach their duties under the Act.

    g. **Coordination:** The MPC includes an observer from the Treasury to ensure the MPC is informed about fiscal policy and facilitate the co-ordination of monetary and fiscal policy.

    h. **Flexibility to evolve over time:** The use of the remit and charter to set operational details about objectives and transparency and decision-making respectively allows the monetary policy framework to evolve over time.

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[7] The memorandum can be found here: https://www.rbnz.govt.nz/markets-and-payments/foreign-reserves/intervention/memorandum-to-the-governor-of-the-reserve-bank-of-new-zealand

[8] Note that the provision for the Minister to fix exchange rates for foreign exchange dealing is planned to be repealed as part of Phase 2 of the Reserve Bank Act Review.

There are, however, gaps in the institutional arrangements for UMP

27. While the Act supports the use of UMP, the institutional arrangements may not address all the unique challenges associated with the use of UMP tools. For example:

    a. **It is unclear how the MPC would consider the externalities associated with UMP.** The MPC's objectives require monetary policy decisions to prioritise maximum sustainable employment and price stability, while having regard to the soundness and efficiency of the financial system and any other matters set out in the remit. At present, the remit requires the MPC to seek to avoid unnecessary instability in output, interest rates and the exchange rate, but does not mention the impact of fiscal risk to the Crown or the distributional impacts of monetary policy. While conventional monetary policy has fiscal and distributional impacts, UMP could potentially have impacts that are more significant. Further work is required to consider whether and how these matters should be considered by the MPC or the Reserve Bank when using UMP.

    b. **Policy coordination will likely result in better outcomes.** As conventional monetary policy nears its limits, the case for coordination between monetary and fiscal policy becomes stronger. The optimal policy mix will depend on the prevailing circumstances, so making the right decision will require closer coordination, especially if the use of UMP has larger fiscal risks or other externalities than conventional monetary policy. While current arrangements do not prohibit coordination, there is scope for coordination to be enhanced.

    c. **The fiscal implications of some UMP tools means decision-making responsibilities are not neatly separated.** While the MPC is responsible for monetary policy decisions, the Governor is responsible for the Reserve Bank's balance sheet.[9] Moreover, as the Reserve Bank is part of the consolidated Crown accounts, decisions with a balance sheet impact will automatically affect the Crown's balance sheet, for which the Minister of Finance is responsible.

    d. **While legally empowered to use UMP, the Reserve Bank's capital poses a practical constraint.** Some UMP tools will increase the size of the Reserve Bank's balance sheet or see the Reserve Bank taking on more financial risk. Without a corresponding increase in the Reserve Bank's loss-absorbing capital (or an equivalent arrangement, such as an indemnity from the Crown), using these tools would increase the Reserve Bank's risk exposure. If the Reserve Bank is unwilling to increase its risk exposure, they could not practically use these tools.[10]

    e. **Using new tools brings reputational risks.** While the Act does not specify what tools the Reserve Bank should use to achieve its objectives, the use of the OCR is well understood and has wide public acceptance. Conversely, using new tools, especially tools with externalities that may not be well understood, creates reputational risks for the Reserve Bank.

[9] After Phase 2 of the Reserve Bank Act Review is complete, this responsibility will sit with the Reserve Bank Board.

[10] Practically, a higher risk exposure makes it more likely that losses result in the Reserve Bank having negative equity. The Reserve Bank would still be able to perform its functions with a higher risk exposure or negative equity, but this could have significant indirect effects. For example, the Reserve Bank's ability to influence inflation expectations could be reduced if a negative equity position were interpreted as a binding constraint on the Reserve Bank's ability to continue using unconventional policy tools.

We recommend addressing these gaps in the institutional arrangements for UMP

28. The Treasury and the Reserve Bank recommend addressing the gaps in the institutional arrangements for UMP set out in paragraph 27. This recommendation recognises two distinct factors relating to the use of UMP tools. First, UMP tools might be required in a time of severe economic stress. Second, there are risks and uncertainties associated with using UMP tools. This means that it is important to establish clear arrangements governing their use prior to them being needed. Having clear institutional arrangements could also support the long-term credibility and legitimacy of New Zealand's macroeconomic institutions.

Work to identify the required changes to the institutional arrangements for UMP tools is ongoing

29. The Treasury and the Reserve Bank are working together to identify how institutional arrangements could change to support the use of UMP tools. While more work is required before changes can be recommended, the specific policy challenges that we are seeking to address are set out in Table 1 below, along with an indication of the challenges that are likely to arise when trying to address them.

30. Table 1 also includes examples of the types of policy changes that could be considered in New Zealand, alongside relevant changes that have been implemented in New Zealand and overseas. We stress that these policy options are illustrative only and intended to provide context. Any policy response in New Zealand will need to be tailored to New Zealand's unique situation. This means that when recommendations are made the options may differ substantially from the examples included below.

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Table 1: Policy questions to resolve

Issue	Questions to resolve	Challenges	Policy options and approaches followed overseas
Externalities of UMP	How do we ensure that all the externalities of UMP are appropriately taken into account when decisions are taken by the MPC?	Broadening the focus of the MPC risks undermining the effectiveness of monetary policy. For example, an explicit focus on fiscal risk could make it harder for the MPC to credibly commit to its price stability and employment mandates where doing so presents a fiscal risk. An explicit fiscal focus for the MPC may also reduce the effectiveness of the UMP tools if it constrains the Reserve Bank's ability to use those tools.	The Bank for International Settlements (BIS) notes that some externalities can only be addressed by other policy areas, particularly fiscal policy. The BIS recommends central banks have a clear mandate, and communicate clearly and transparently about the use of UMP tools and their expected benefits, so that other policy-makers can effectively respond to externalities. Non-legislative options for New Zealand include revisiting the issues the MPC must have regard for in the remit.
Coordinating policy responses	What processes should be put in place to improve the coordination of fiscal and monetary policy?	The separation of fiscal and monetary policy decision-making creates coordination challenges. For example, there may be constraints on the sharing of confidential information. In addition, it is important that the coordinating procedures do not weaken the Reserve Bank's operational independence.	Phase 1 of the Reserve Bank Act Review introduced the Treasury observer to the MPC. One of the functions of the Treasury observer is to support the coordination of monetary and fiscal policy. How this role is performed could be reconsidered in light of the challenges of UMP. While the Public Finance Act 1989 already requires the fiscal strategy to be developed with regard to the interaction of fiscal and monetary policy, there is scope to formalise and strengthen processes for including Reserve Bank views in the development of fiscal policy.
Decision-making rights	How should decisions be made, given the respective responsibilities of the MPC, the Governor/Board and the Minister of Finance?	The consolidated Crown accounts mean any decisions that affect the Reserve Bank's balance sheet are automatically reflected on the Crown's balance sheet. Under the existing decision-making framework, the MPC is responsible for monetary policy and has operational independence to achieve its objectives, despite the fact that monetary policy can affect the Reserve Bank's balance sheet (for which the Governor/Board is responsible) and the Crown accounts (for which the Minister of Finance is responsible).	In the UK, in an exchange of letters between the Chancellor and the Bank of England (BoE) Governor, the Chancellor defined what assets the MPC could purchase by the issuance of central bank reserves and set a ceiling on the value of those assets. The Chancellor can authorise increases in the ceiling, but below that ceiling the MPC has decision rights. The BoE also established a special purpose vehicle (SPV) controlled by the MPC to hold UMP assets. This shifted responsibility from the BoE to the MPC, and helped to align policy and risk management responsibilities.

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Issue	Questions to resolve	Challenges	Policy options and approaches followed overseas
Removing practical impediments to the use of UMP	Does an increase in risk exposure for the Reserve Bank require an effective increase in loss-absorbing capital? How should the Reserve Bank manage its risk exposure and what controls should be put in place?	Any provision of capital will need to be designed in a way that supports the use of UMP tools. For example, tools such as interest rate swaps, which seek to commit the Reserve Bank to lower future interest rates, could be weakened if an indemnity from the Crown nullifies the Reserve Bank's incentive to avoid losses. The approach to managing risk could be perceived to reduce the Reserve Bank's operational independence, for example, if the provision of capital is highly conditional.	Internationally, central banks that have taken on risk through UMP have often had indemnities from the government or capital injections that allow them to sustain losses. In 2004, when the Reserve Bank took on a more active role in foreign exchange markets, the Reserve Bank's capital was increased. The Reserve Bank Act Review is proposing a "balance sheet management framework" that is set by the Reserve Bank Board. That framework could be used to set governance frameworks and control processes.
Minimising reputational risks	Does anything need to be done to re-confirm the Reserve Bank's mandate to use UMP? Are any changes required to support transparency, reporting and ex-post review?	Confirming the Reserve Bank's powers to use UMP tools, and clarifying to the public in advance how UMP tools would be used to support the achievement of the Reserve Bank's economic objectives, can support the tools' effectiveness by increasing their legitimacy. However, such an approach can also limit flexibility to respond to unforeseen circumstances if it is overly prescriptive.	In New Zealand, the use of macro-prudential policy tools was foreshadowed by a Memorandum of Understanding between the Minister of Finance and the Governor. This sought to confirm the Reserve Bank's mandate and the Governor's powers, while also clarifying the objectives of macro-prudential policy. It also listed the macro-prudential policies available to the Reserve Bank, outlined how macro-prudential policies would be used, and outlined the reporting and accountability frameworks.

Progressing Institutional Changes

Successful institutional arrangements will help the Reserve Bank meet its monetary policy objectives

31. As we develop recommendations for institutional arrangements for UMP, our overarching objective is to enhance the Reserve Bank's ability to achieve its monetary policy objectives, and ultimately support living standards. To this end, successful institutional arrangements will be those that enable good decision-making and policy choices.

32. In the previous section of this report, we have set out the gaps in the existing institutional arrangements that we intend to address:

    a. ensuring the externalities of UMP are fully considered

    b. ensuring macroeconomic decision-making is coordinated

    c. ensuring decision-making responsibilities are clear

    d. removing practical impediments to the use of UMP tools, and

    e. minimising reputational risks arising from using UMP tools.

33. Given the interrelated nature of these issues, there will be trade-offs across these objectives when implementing any recommendations. In many cases, there will likely be a range of viable policy options, with the best option dependent on policy priorities.

Success also requires timely policy responses

34. While it is important to ensure the institutional arrangements that are put in place are robust and well considered, it is also important that institutional arrangements are in place before they need to be used. The Bank of International Settlements (BIS) suggests that acting promptly and decisively when UMP is required is preferable to policy gradualism, as excessive caution in reacting to a severe negative shock could have adverse effects. For example, the BIS warns that a slow reaction could result in un-anchoring long-term inflation expectations, or in a higher risk of a prolonged period of depressed interest rates and low inflation, or in damaging the credibility of the central bank.

35. Neither the Treasury nor the Reserve Bank are forecasting the use of UMP tools, but the risk of an unforeseen downturn makes preparing promptly a priority.

36. With this in mind we intend to report to you by July 2020 with our initial recommendations for institutional arrangements. We will provide you with earlier advice on specific aspects of institutional arrangements where such advice is ready and doing so will speed up preparations.

37. Depending on decisions taken, our expectation is that some changes will be able to be made immediately, some will require several months of development, while any changes requiring legislation could take years to implement (although we do not expect any legislative changes at this stage aside from those already underway through Phase 2 of the Review of the Reserve Bank Act). Should a situation arise where UMP tools are needed, the ongoing work programme will mean that we are better prepared to respond quickly.

As a result, we will limit the scope of our work

38. To ensure that preparations are made in a timely manner, we do not intend to conduct a first principles review of New Zealand's monetary policy framework. Instead, our aim is to identify ways that the existing framework can be modified to address the specific challenges raised by the use of UMP tools. We consider this to be appropriate given that fundamental changes to the monetary policy framework were only recently considered in Phase 1 of the Reserve Bank Act Review, and that the potential need for UMP was understood when the Phase 1 changes were implemented.

39. Similarly, this specific project will not consider whether structural changes to New Zealand's economic policy settings could be effective in lifting the neutral interest rate. Identifying the extent to which structural issues are the cause of persistently low levels of inflation, and the policy changes that could address the issue, constitutes a major, long-term work programme. The Treasury is undertaking work to better understand New Zealand's structural challenges such as low productivity growth, and we want to build on this work to understand structural policy options to support macroeconomic stabilisation.

The work will be coordinated with the Reserve Bank Act Review and the Reserve Bank

40. The work by the Treasury and the Reserve Bank on UMP will be coordinated with Phase 2 of the Review as far as possible. To avoid duplication, policy changes emerging through the Review will be proposed with the use of UMP tools in mind. We expect that the most relevant changes in Phase 2 will be those relating to the management of the Reserve Bank's balance sheet, the foreign exchange provisions in the Act, and the respective roles of the Reserve Bank Board and the MPC.

41. Advice on UMP will be developed jointly by the Treasury and the Reserve Bank. The aim is to present a single set of recommendations for changes. Should agreement not be possible, any advice will draw out the different options and the trade-offs so that informed decisions can be taken.

Next Steps

42. If you agree to the recommendations, we will report to you by the end of July 2020 with initial recommendations for changes to the institutional arrangements relating to UMP. Your office will be provided with regular progress updates in advance of that advice, and if there are decisions that you can make ahead of our July 2020 report back to speed up progress we will advise you on these sooner. After we provide you with advice, we will implement any changes to institutional arrangements that you agree to.

43. The Reserve Bank has a research programme into UMP underway, and will publish this analysis during 2020. Your office will be notified ahead of release. The Treasury will provide you with ongoing advice on the Fiscal Strategy.

Annex 1: Further information on unconventional monetary policy tools

Negative OCR

44. The Reserve Bank can theoretically set the OCR below zero. Mechanically, this is an extension of conventional monetary policy. Central banks in the euro area, Sweden, Denmark, Switzerland and Japan have all, at some point, set their official interest rates below zero.

45. The OCR could usefully be reduced to the point where it ceases to influence interest rates experienced by businesses and households. This point would be where banks choose not to pass on further reductions in the OCR (for example, due to the risk of negative customer and public reactions to applying a negative interest rate) or where people and businesses begin withdrawing large amounts of cash to avoid paying negative interest rates. The lowest effective OCR is known as the *effective lower bound (ELB)*. Internationally, commercial banks have generally been reluctant to pass on negative interest rates to retail depositors due to the potential for bad reactions from customers or the public.

46. The ELB is unknown in New Zealand (or anywhere) and will not be knowable until it is reached. The lowest interest rate implemented by any central bank has been the Swiss National Bank's -0.75% rate, but the ELB in any given country depends on the specific characteristics of its financial markets and its economy. The ELB can also change over time.

47. The transmission of a negative OCR to the economy is similar to the transmission for a positive OCR, although the strength of its impact could vary. Banks overseas have been more inclined to pass negative interest rates on to wholesale customers than retail customers. Interest rates on financial products with naturally low interest rates (such as on-call bank deposits) would reach their lowest practical level sooner than products with naturally higher interest rates (such as loans to small businesses).

48. Negative interest rates can have a range of potentially detrimental impacts, although the balance between their detrimental impacts and their positive contribution to economic stability is still a matter of debate. Potential detrimental impacts of negative interest rates include:

   - a reduction in bank profitability as reductions in deposit interest rates become harder to pass on than reductions in lending interest rates, or as depositors withdraw their deposits, thereby harming financial stability
   - the potential for negative interest rates to damage confidence in the general economic outlook and make people more cautious
   - strain on some types of organisations reliant on interest income, such as insurers and pension funds, and
   - creating challenges for organisations' IT systems, although this may be a transitory issue while these systems are updated.

49. As the international experience with negative interest rates has grown, some analysts now refer to the 'rate reversal threshold': an additional interest rate threshold sitting between zero and the ELB. This is a threshold above the ELB, but beyond which further reductions in interest rates harm the economy rather than help it due to their negative broader impacts, such as those noted above. Like the ELB, it is difficult to put a number on the rate reversal threshold. The existence, level and drivers of the rate reversal threshold are still a matter of active debate among economists.

Forward guidance

50. Forward guidance is more similar to conventional monetary policy tools than many of the other UMP tools as it does not involve a change to the Reserve Bank's balance sheet or the way the Reserve Bank transacts with financial markets. While forward guidance would not further lower short-term interest rates, it would transmit to the economy through many other standard channels. These include lowering long-term interest rates (since long-term interest rates are partially driven by market expectations of future short-term interest rates) and the exchange rate, and by increasing inflation expectations.

51. To be effective, this forward guidance would need to credibly communicate to the market that there is a higher hurdle to tightening monetary policy than normal (that is, the MPC would allow inflation to rise above target in the future in order to stimulate inflation now). It would do that by communicating, via its interest rate projection and broader communications, more accommodative monetary policy intentions than would typically be the case given economic conditions. However, the MPC would only be able to provide forward guidance that met their legal requirements under the current monetary policy framework.

Asset purchases (also known as Large Scale Asset Purchases or LSAPs)

52. During asset purchases, the central bank creates money (central bank settlement cash) and uses it to purchase assets in the secondary market. Various assets could be purchased, including:

    a. New Zealand government bonds

    b. foreign currency or foreign government bonds, and

    c. private sector bonds (sometimes referred to as 'credit easing').

53. The effects of each of these differ as outlined below.

(a) Asset purchases of New Zealand government bonds (also known as Quantitative Easing)

54. New Zealand government bonds (NZGBs) appear to be the most straightforward asset for the Reserve Bank to purchase. There is a sizable market and purchases of New Zealand government assets may have smaller distributional impacts than purchases of private sector or foreign assets.

55. Purchases of NZGBs would transmit to the economy via two main channels. The signalling channel operates similarly to conventional monetary policy, but the portfolio rebalancing channel operates differently.

    a. The <u>signalling channel</u> reinforces that the central bank expects interest rates to stay low, because the value of the bonds held by the central bank would fall if it raised interest rates abruptly. This results in the market pricing in a lower future cash rate track. The market will also factor in less uncertainty about the future path of the cash rate and the related shape of the yield curve. In addition to lowering government bond yields, these factors are also likely to lower borrowing costs in the economy more broadly.

    b. The <u>portfolio rebalancing channel</u> works by encouraging market participants to reinvest their money elsewhere as they sell low-risk bonds to the central bank. This will cause a general increase in asset prices, a shift among investors towards higher risk or longer-term assets, and a reduction in risk premia. This contributes to the 'search for yield' and reduction in market interest rates.

56. International experience has been that a key way both of these channels transmit to the economy is through the exchange rate, and this may particularly be the case in New Zealand if the Reserve Bank undertakes purchases of NZGBs. The portfolio rebalancing effect, in particular, may operate more through impacting the exchange rate in New Zealand than it has in other countries. This is because more than 50% of NZGBs are held by non-residents, and these investors may choose to reinvest their funds in global alternatives rather than higher risk New Zealand assets, selling New Zealand dollars in the process.

57. The NZGB bond market is small by global standards, and significantly reducing the volume of bonds on issue below the current level is likely to impair market functioning and the depth of the investor base. This would be a key trade-off for undertaking asset purchases of NZGBs. The effect on market functioning would be less severe if the government were issuing debt at the same time, such as to fund a fiscal deficit.

(b) Asset purchases of foreign currency or foreign government bonds

58. Purchasing foreign currency or foreign government bonds is equivalent to exchange rate intervention as the main effect is to influence the relative supply of New Zealand and foreign currency. The Reserve Bank has undertaken exchange rate intervention by buying or selling foreign assets several times over the past 15 years, although the scale in which it has bought foreign assets to date is likely much smaller than if it were to do so as a UMP tool. The credit and market risks of purchasing large amounts of non-NZ government bonds would need to be considered, as would the diplomatic implications of actively managing the exchange rate.

(c) Asset purchases of New Zealand private sector bonds (also known as 'Credit Easing')

59. Purchasing New Zealand private sector assets is less likely to be a viable option. The non-government New Zealand debt market is small, and purchasing private sector assets would likely have greater distributional consequences than the other two options as it would directly impact the small number of large firms that issue debt.

Intervening in the interest rate swap market

60. Interest rate swaps are financial contracts involving an exchange of fixed and floating interest rates between parties. The only payment made between the parties is the difference between the fixed and the floating interest rate. This means that each of the parties have the financial exposure they desire (fixed or floating) without the credit risk of swapping the principal amounts or the gross interest.

61. The interest rate swap market is important in New Zealand because the major banks use it to hedge their interest risk exposures. This means that financial products, including mortgages, are influenced by the swap rate (that is, the fixed rate leg of an interest rate swap). Other central banks have not intervened in their swap markets, likely reflecting the lesser importance of swap rates for retail interest rates in Europe, the United States and Japan.

62. Reserve Bank intervention in the swap market could support economic activity in two ways:

    a. The weight of the Reserve Bank's transactions in the market could lower interest rates (although the Reserve Bank is still researching the magnitude of this effect). The Reserve Bank currently considers that intervention is most likely to be at the short end of the interest rate curve (that is, out to about two years).

    b. The Reserve Bank's intervention could support its forward guidance. Specifically, if the market pricing for future interest rates was higher than the Reserve Bank wanted, it could signal its commitment to low interest rates by entering into a transaction where it would pay floating interest and receive fixed interest. That way, the Reserve Bank would make a loss if it reneged on its commitment. This would be seen to increase the Reserve Bank's commitment to forward guidance.

Term lending to banks

63. Term lending is where the central bank offers funds to banks to directly encourage lending. The purpose of term lending programmes overseas has been to counter liquidity constraints during periods of market turmoil and to support the pass through of lower interest rates to lending volumes and economic activity.

64. International evidence is that term lending to banks can be effective at increasing bank lending and stimulating the economy. It could be particularly powerful in New Zealand, given that a larger proportion of lending to the real economy is provided by the banking sector in New Zealand than in most other advanced economies. However, it could have significant distributional impacts in favour of banks over other credit providers, and in favour of industries reliant on bank funding over other industries.

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TE TAI ŌHANGA
THE TREASURY

Reference: T2020/654 MC-1-1-1-2 (RBNZ Institutional Frameworks)

Date: 16 March 2020

To: Minister of Finance (Hon Grant Robertson)

Deadline: Tuesday 17 March 2020, ahead of your announcement of the fiscal package
(if any)

Aide Memoire: The economic and fiscal effects of Large Scale Asset Purchases by the Reserve Bank of New Zealand

This Aide Memoire provides a concise summary of the impact of Large Scale Asset Purchases (LSAPs) by the Reserve Bank of New Zealand (the Bank) for your information. If focusses on LSAPs of New Zealand Government Bonds (NZGBs) because the Monetary Policy Committee (MPC) has stated that this is the tool they would use next to provide further monetary stimulus following their reduction in the Official Cash Rate (OCR) to 0.25%.

Summary

- **LSAPs are a monetary policy tool where the Bank creates money (settlement cash) and uses it to purchase financial assets, often government bonds**. This can further reduce long-term interest rates and the exchange rate, helping to stimulate the economy. The effectiveness of LSAPs in New Zealand is uncertain given they have not been used here before.

- **LSAPs of NZGBs would increase the size of the Bank's balance sheet.** By issuing settlement cash and purchasing Government debt, the Reserve Bank is increasing (equally) both the assets and liabilities on its balance sheet. If bond prices fall – such as through an increase in interest rates – a loss could appear on the Bank's balance sheet.

- **However, LSAPs would not change the overall level of whole-of-Crown liabilities, assets, or core Crown net debt.** Unlike some other countries, the Reserve Bank is consolidated onto the whole-of-Crown accounts. From a whole-of-Crown perspective, during LSAPs the Bank issues settlement cash (which is a liability to the Crown balance sheet) and uses this to purchase a government bond of equal value (reducing debt liabilities to the Crown balance sheet by an equal amount).

- **The Bank has the legal authority to undertake LSAPs but would prefer to have a Crown indemnity against losses on their balance sheet.** Given the relatively limited impacts on the whole-of-Crown balance sheet, and the lack of conventional monetary policy space, we think there would be value in you signalling your willingness to give the Bank an indemnity for LSAPs of NZGBs. Supporting LSAPs will give the Bank the flexibility to use the tools they consider most effective in the current economic situation. We will provide further advice on the terms of the indemnity, such as maximum amounts and requirements to keep you informed.

Questions and answers on LSAPs

1. What are LSAPs?

LSAPs are a monetary policy tool where the Bank creates money (settlement cash) and uses it to purchase financial assets – often government bonds - on the open market. LSAPs are sometimes also called 'quantitative easing'. The annexes provide information on the Bank's other Unconventional Monetary Policy (UMP) tools signalled in the Governor's speech on Tuesday 10 March.

This note explains the impact of the Bank purchasing NZGBs, as opposed to other types of assets, as the Bank have stated that this would be the UMP tool they would prefer to use next. **If the Bank were to purchase different assets i.e. not NZGBs, this would have different impacts on the balance sheet than described below.**

2. How would LSAPs help the economy?

LSAPs increase the supply of settlement cash and reduce the supply of NZGBs available to investors. This can affect markets through two main channels.

- **The signalling channel:** Undertaking LSAPs signals that the Bank envisions that interest rates will stay at low levels for a long time. This could help persuade the market that interest rates will stay low for longer.
- **The portfolio rebalancing channel**: Undertaking LSAPs pushes investors to reinvest the money they receive after selling NZGBs to the Bank into other asset classes. This pushes up the price of a range of assets, helping to flatten yield curves.

These two channels can work to reduce long term interest rates, reduce the exchange rate, and reduce risk premia on risky assets (such as equities and corporate bonds). This would help to stimulate consumption, investment and exports.

It is highly uncertain what magnitude of impact this could have in New Zealand. Arguably, the effect of LSAPs on lowering the exchange rate could be particularly strong in New Zealand due to the high participation of offshore investors in the NZGB market (who might exit the market if interest rates fall, helping to reduce the exchange rate).

3. How are LSAPs different from fiscal policy?

LSAPs involve the creation of money in the form of settlement cash, but this money is not used by the Crown to purchase goods and services or for transfer payments. It is aimed at altering conditions in financial markets in order to stimulate the economy through monetary transmission channels, such as reductions in long-term interest rates. As explained below, LSAPs of NZGBs do not directly affect the Government's net debt: they are not a fiscal expansion.

LSAPs are distinct from monetary financing (sometimes called helicopter money), which has been discussed to a greater extent since the Global Financial Crisis. Monetary financing is when the central bank is directed to purchase Government bonds in order to finance a fiscal expansion. This would generally only be considered if the Government had lost the confidence of financial markets in providing traditional debt financing.

4. How do LSAPs impact on the Government's balance sheet?

LSAPs have no impact on net core Crown debt (the Government's fiscal anchor), or the overall whole-of-Crown level of assets and liabilities.

LSAPs have the potential to create a substantial increase in the size of the Bank's assets and liabilities. This creates risk on the Reserve Bank balance sheet – for example, if the value of the NZGBs were to decline as interest rates increase. However, unlike in many other countries, the Bank's accounts are consolidated into the whole-of-Crown accounts and, at a whole-of-Crown level, the impacts are significantly muted.

- **The impact on the Bank's balance sheet is that by issuing settlement cash and purchasing Government debt, the Reserve Bank is increasing (equally) both its assets and liabilities.**

- **However, from a whole-of-Crown perspective, the Reserve Bank has issued settlement cash (which is a liability to the Crown balance sheet) and used this to purchase a government bond of equal value (reducing debt liabilities to the Crown balance sheet). Therefore, the overall level of Crown liabilities is unchanged – LSAPs just swap one liability for another.**

By swapping NZGB liabilities for settlement cash, LSAPs shorten the average duration of the government's debt liabilities. Assuming the Reserve Bank pays the OCR on its settlement cash liabilities, the Crown would be more exposed to an unexpected increase in interest rates, than if the Bank had not undertaken LSAPs. The reverse is also true if interest rates were to fall unexpectedly.

The above analysis only holds if the Bank purchases NZGBs. If the Bank purchased other financial assets, this would expand the whole-of-Crown balance sheet. Even then, as long as the Bank purchased liquid financial assets, core Crown net debt would not initially increase, but there would be a greater exposure to valuation movements on net core Crown debt.

For technical reasons, undertaking LSAPs would reduce gross debt. Settlement cash is excluded from gross debt, as its main function is not to finance the operating and capital activities of the Crown which gross debt looks to measure.

5. What are the costs and risks of LSAPs?

There are risks with LSAPs but these should be weighed against the risk of the Bank not providing enough economic stimulus if they do not use this mechanism. As LSAPs have not been used in New Zealand, the scale of stabilisation benefits are uncertain.

- **Distributional impacts:** LSAPs have many of the same distributional impacts as conventional monetary policy, but can raise asset prices more directly than conventional monetary policy, creating wealth inequality. However, they can also mitigate inequality by supporting employment.
- **Financial Stability:** LSAPs encourage investors to switch to higher risk assets in a search for higher yield. The MPC would need to consider any additional risk to the financial system when undertaking LSAPs.
- **Fiscal risk:** a change in the composition of Crown liabilities could have impacts on the Crown balance sheet over time. In particular, it increases the Crown's exposure to rising interest rates (as noted in section 4 above).
- **NZGB market functioning:** if the RBNZ becomes dominant in the NZGB market, this could lead to the permanent exit of traditional investors, eroding the investor base and making government funding harder to undertake. This would be mitigated if there were greater NZGB issuance at the same time e.g. to fund a fiscal deficit.

6. What is your role in enabling LSAPs?

The Bank already has the legal authority to undertake UMP, including LSAPs. We do not think it would be appropriate for you to direct the Bank in its use of UMP tools, but there are opportunities for you to enable and give support to LSAPs. This could also increase the effectiveness of LSAPs by reducing uncertainty as to their use.

The Bank's ability to use LSAPs could be constrained to some extent. This is largely because of the potential impact on the Banks balance sheet: as discussed above, whilst LSAPs have a muted impact at the whole-of-Crown level, the Bank's balance sheet would expand significantly. This does not technically inhibit the Bank's ability to undertake LSAPs but could curtail their use if the Bank is concerned about the risk to its balance sheet position.

To support LSAPs, you could provide an indemnity to the Bank for any losses arising on their balance sheet as a result of their purchases of NZGBs. This would be a relatively low cost option given that losses on NZGBs for the Reserve Bank would not result in losses on the whole-of-Crown accounts.

An indemnity could be provided under Section 65ZD of the Public Finance Act; this section empowers you to give an indemnity on behalf of the Crown if you consider that it is necessary or expedient in the public interest. You can give an indemnity on whatever terms and conditions you think fit. For example, the indemnity could state the type of asset that you were willing to indemnify, the amount that could be purchased under the indemnity and any other conditions e.g. that you are informed of the Bank's LSAP intentions.

Whilst this would not constrain the Bank's legal authority to use LSAPs, we think it is likely that the Bank would operate within the constraints of the indemnity and would request an expansion of the indemnity if necessary.

We are working with the Bank on options for operationalising LSAPs and will provide further advice, including the amount and terms and conditions of any indemnity. At this stage, you could announce a willingness to provide an indemnity and note that the exact details of this are being worked through.

Matthew Galt, Analyst, Macroeconomic and Fiscal Policy, s9(2)(k)
Renee Philip, Manager, Macroeconomic and Fiscal Policy, s9(2)(k)

Annex 1: The Bank's current list of UMP tools

Unconventional Monetary Policy tools

Forward guidance	This would differ from our current approach of publishing our OCR forecast. It may involve publishing a forecast of the shadow short rate, which shows the combined stimulus from the OCR and other monetary policy tools through interest rates. It could also involve the MPC announcing a commitment to keep monetary policy expansionary, in order to hit our monetary policy targets in the medium term, even if the MPC expect this to eventually push inflation above 2% or employment above its sustainable level.
Negative OCR	Reduction of the OCR to the effective lower bound (the point at which further OCR cuts become ineffective), which may be below zero. The Reserve Bank could consider changes to the cash system to mitigate cash hoarding if lower deposit rates led to significant hoarding.
Interest rate swaps	An interest rate swap is a contract where one stream of future interest payments is exchanged for another. The Reserve Bank could enter into interest rate swaps to reinforce forward guidance. We would receive fixed rates and pay floating rates to financial market participants. This would reduce market interest rates.
Large Scale Asset Purchases (LSAPs)	The Reserve Bank could purchase domestic government bonds to lower interest rates and contribute to a flattening of the yield curve through the main channels of policy signalling and portfolio balancing. Unlike the OCR, LSAPs would have more of an effect on longer-term interest rates (2+ years), which are important for mortgage and business lending.
Foreign asset purchases	The purchase of foreign currency or assets to reduce the NZD exchange rate and, if desired, to increase NZD liquidity. This could include the systematic purchase of foreign assets or buying fixed quantities on set dates.
Term lending	The provision of collateralised long-term loans to banks in order to support monetary policy transmission through the banking sector. The loans could be provided with conditions that require banks to increase their credit supply.

Source: Reserve Bank unconventional monetary policy principles and tools
https://www.rbnz.govt.nz/monetary-policy/unconventional-monetary-policy

Annex 2: The MPC's UMP principles

MPC Remit Principles

Effectiveness	Tools would be designed to provide a strong influence over inflation and employment, to ensure that the monetary policy objectives are achieved.
Efficiency	The Committee would take into account the distortionary impact of the tools on the efficient allocation of resources within the economy, including between various groups and sectors of the economy.
Financial system soundness	The Committee would take into account the impact of the tools on financial system risks, to avoid the costs of financial crises.

In addition to these principles are two operational considerations related to the practical implementation of effective monetary policy.

Operational Principles

Public balance sheet risk	The Committee would take into account the financial risks that the tools would create for the Reserve Bank and Crown balance sheets, to protect public funds and central bank independence.
Operational readiness	Use of the tools would take into account the operational readiness of each tool, to ensure the transmission channels function as expected. This includes the readiness of the Reserve Bank to implement each tool and the readiness of financial markets and the New Zealand public to respond appropriately to the tools.