

# Bulletin

## Our response to the 2022 monetary policy review: A summary of actions and outcomes.

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policy review*

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## Introduction

The Reserve Bank of New Zealand (Monetary Policy) Amendment Act 2018 legally required that a comprehensive report on the formulation and implementation of monetary policy be published at least once every five years. The Reserve Bank of New Zealand – Te Pūtea Matua (Reserve Bank/We) published the first ever *Review and Assessment of the Formulation and Implementation of Monetary Policy* (RAFIMP/Review) in 2022<sup>1</sup> — assessing whether its framework, decision-making tools, and communication practices were fit for purpose between 2017 to 2022. Monetary policy during this period was assessed as being consistent with its objectives. However, the review proposed nine recommendations aimed at improving the Reserve Bank’s ability to achieve price stability and support maximum sustainable employment amidst economic uncertainty and complex shocks.

Since then, the Reserve Bank has responded with a comprehensive and sustained programme of work. This Bulletin provides an account of the research, modelling, policy development, and operational improvements that we have made in response to each of the nine recommendations.

Our work has ranged from investing in more timely and granular data sources, to improving how we measure the neutral interest rate, and building models that help distinguish between supply- and demand-driven inflation. We have also deepened coordination with the New Zealand Treasury (the Treasury) to better understand interactions between fiscal and monetary policy, assessed the impact of large scale asset purchases (LSAPs), and ensured that the Reserve Bank remains operationally ready to deploy additional monetary policy (AMP) tools when needed.

The goal of this Bulletin is twofold: (1) to demonstrate accountability to the public; and (2) to help New Zealanders — including policymakers, media, and the wider public — better understand how monetary policy decisions are made, and how we are continuously improving our practices to ensure New Zealand’s monetary policy framework is able to meet the challenges of the future.

The Bulletin is organised as follows. The **Background** section outlines the purpose of the RAFIMP and its proposed recommendations. Each **Recommendation** section provides context for the recommendation and details our response, supported by key outputs and operational changes. The **Conclusion** summarises our progress to date and identifies areas for future work.

## Background: Continuously improving monetary policy

Monetary policy plays a central role in supporting the wellbeing of New Zealanders. When effective, it ensures price stability that enables businesses to invest with confidence, households to make informed long-term decisions, and finally, stable economic growth.

But in a world shaped by sudden, complex, and concurrent shocks — from global pandemics to climate change to rising geopolitical tensions — the practice of monetary policy is as challenging as ever. During the COVID-19 pandemic, central banks around the world, including the Reserve Bank, were forced to act quickly and decisively in a period of deep uncertainty. New tools were deployed, assumptions tested, and standard operating procedures stretched. In the aftermath, it became essential to take stock of what worked, what did not, and where we could improve.

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<sup>1</sup> [Reserve Bank of New Zealand \(2022\)](#)

That was the purpose of the RAFIMP, completed in 2022. The review closely examined how the Reserve Bank performed during the COVID-19 period, with a particular focus on how the Monetary Policy Committee (MPC) used its tools, interpreted economic conditions, and communicated its decisions. It identified nine areas for improvement:

- 1. Develop broader insight into the impacts of supply shocks on inflation.**
- 2. Develop new sources of data for economic monitoring.**
- 3. Develop better measures of 'neutral' interest rates.**
- 4. Understand the future role of fiscal policy instruments in managing economic shocks.**
- 5. Refine the measure of 'maximum sustainable employment'.**
- 6. Use LSAPs to mitigate financial market dysfunction.**
- 7. Be cautious in providing forward guidance in uncertain times.**
- 8. Maintain the OCR as the preferred tool for setting monetary policy.**
- 9. Maintain operational readiness for AMP tools.**

In response to the above recommendations, we launched a coordinated programme of research, operational review, and policy development. Some responses built on existing initiatives, such as improving our nowcasting models or refreshing our understanding of neutral interest rates. Others, like retrospective evaluations of LSAP effectiveness or the identification of supply- and demand-driven inflation, required new analysis.

The directives of recommendations 7 and 8 for the conduct of monetary policy had become standard practice by the time of the RAFIMP publication. As a result, we will not discuss these recommendations in detail in this Bulletin.

This Bulletin documents the progress we have made. For each recommendation we explain:

- Why the issue matters for effective monetary policy.
- What analytical or operational gaps existed at the time of the review.
- How we have responded — including research papers, models, new tools, and institutional changes.
- What we have learned along the way, and where further work is planned.

The Bulletin draws on internal and published Reserve Bank research, speeches, and presentations completed over the past three years. While some work is still ongoing, what follows is a comprehensive picture of how we have strengthened the Reserve Bank's monetary policy framework in response to the RAFIMP.

## Recommendation 1: Develop broader insight into the impacts of supply shocks on inflation

### The challenge

The COVID-19 pandemic exposed the challenges of understanding inflation dynamics during large and unprecedented economic shocks. Central banks faced challenges differentiating supply-side pressures, such as disrupted supply chains and closed borders, from demand-side responses, including stimulus-driven household spending.

The RAFIMP noted that while the Reserve Bank had the capacity to monitor a wide range of inflation drivers, there was a need to deepen our understanding of how supply shocks influence aggregate inflation. This included relative price movements (such as energy or food costs surging), and how these shocks can transmit across sectors and time. The review encouraged the Reserve Bank to build more robust analytical frameworks that could help interpret these developments in real time, especially given that future shocks were likely to be just as complex.

### Our response

In the years since the RAFIMP review, we have made significant progress in strengthening our ability to identify and interpret supply-side shocks. This has involved expanding our modelling toolkit, investing in new research, and improving how we communicate the underlying drivers of inflation to the public.

#### 1.1 Decomposing recent inflation: Distinguishing supply and demand

At the heart of the challenge is the need to separate inflation caused by demand-side factors from inflation driven by supply-side developments. This distinction matters enormously for monetary policy, since central banks may respond asymmetrically to different drivers of inflation — interest rate adjustments are more effective at cooling demand than they are at addressing supply chain disruptions or weather-related food shortages.

To this end, we published two important *Analytical Notes* and a forthcoming Discussion paper also dwells on closely related issues:

- A Bernanke-Blanchard model decomposition of New Zealand headline inflation,<sup>2</sup> which identifies the main factors influencing inflation since 2019. The research showed that supply chain constraints and a tight labour market played a larger role in later inflation peaks, particularly in 2022–23. Relative to other advanced economies, labour market tightness appeared to play a more prominent role in driving inflation in New Zealand.
- Decomposing supply- and demand-driven retail inflation<sup>3</sup> complemented our understanding of individual inflation components by applying econometric techniques to detailed retail pricing data. This research enabled us to quantify the proportion of price changes attributable to cost-push versus demand-pull factors, showing demand-based drivers contributed significantly to inflation at the onset of the pandemic but supply-side factors have dominated since late 2022.

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<sup>2</sup> [Bayarmagnai and Jacob \(2024\)](#)

<sup>3</sup> [Dudson \(2024\)](#)

- Decomposing New Zealand’s inflation into a trimmed mean core inflation<sup>4</sup> provides valuable insight into the evolution of inflation dynamics over time. This research helps identify the transitory components often associated with shocks and provides a more structured framework for assessing whether observed pricing behaviour is likely to persist or revert.

Together, these tools have already influenced how we explain inflation in our public communication and Monetary Policy Statements (*MPSs*), providing a clearer narrative around the drivers of price pressures. A speech by Chief Economist Paul Conway in 2024<sup>5</sup> outlined how these models were being used to inform our judgements around inflation dynamics.

## 1.2 Enhancing our ability to conduct detailed supply-side scenario analysis

Our core macroeconomic forecasting framework, NZSIM<sup>6</sup>, is not optimised to conduct detailed scenario analysis of supply-side developments – particularly where supply-side shocks have significant cross-country interactions. Faced with this limitation, we have explored modelling frameworks that would accommodate this type of scenario analysis to improve our understanding of the transmission of supply shocks.

In response, we have adapted the G-Cubed<sup>7</sup> global macroeconomic model to the New Zealand context. The initial intention was to simulate the impact of specific climate-related supply shocks, such as a major weather event or changes in global climate policy, on inflation, output, and interest rates.

While this remains a focus for future applications of G-Cubed, the model was initially used to produce scenarios to assess the potential impacts of increased trade barriers in the United States and the corresponding international response. This modelling framework has been key in advising the MPC’s policy response to recent tariff increases, as outlined in our May 2025 *MPS*.<sup>8</sup>

## 1.3 Structural drivers: Linking supply shocks to long-term interest rates

Whilst some supply shocks such as the cost-push pressures as we saw during COVID-19 are temporary, others can affect the economy much more persistently. Demographic changes or productivity slowdowns have long-run effects on the economy’s productive capacity and on the long-run real rate of return.

To understand these better, we have developed a new overlapping generations model of the New Zealand economy<sup>9</sup>, which allows us to quantify how structural forces like ageing populations or slower global productivity growth push the natural rate of interest lower. Lower long-run real interest rates make monetary policy more likely to encounter the effective lower bound on the policy rate during future downturns, constraining our ability to respond with conventional interest rate cuts. The model, and future work, is discussed in more detail in the section on Recommendation 3.

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4 Coleman (forthcoming)

5 [Conway \(2024\)](#)

6 [Kamber et. al. \(2015\)](#)

7 The G-Cubed model is a hybrid of dynamic stochastic general equilibrium (DSGE) models and computable general equilibrium (CGE) models developed initially by Warwick McKibbin and Peter Wilcoxon (McKibbin and Wilcoxon [1999](#), [2013](#))

8 [Reserve Bank of New Zealand \(2025\)](#)

9 [Kirkby, Lockyer and Coleman \(2025\)](#)

## Summary and implications

The Reserve Bank has responded to the RAFIMP recommendation by deepening its analysis of supply-side inflation dynamics, expanding its modelling capability, and producing clear, public-facing insights into the drivers of recent inflation.

These efforts help us:

- Distinguish between supply- and demand-driven inflation.
- Conduct scenario analysis of how major supply shocks could affect the New Zealand economy.
- Recognise when long-run structural changes may shift the neutral interest rate.

## Recommendation 2: Develop new sources of data for economic monitoring

### The challenge

Monetary policy depends on an accurate understanding of the current state of the economy. Yet official macroeconomic statistics like GDP or employment are published with long lags and often subject to major revisions. As highlighted in the RAFIMP, this renders policy decisions susceptible to 'starting point uncertainty'; it is challenging to calibrate an appropriate policy stance when there is uncertainty not only about the economy's likely trajectory, but even its current state.

The review encouraged the Reserve Bank to broaden its use of high-frequency and alternative data — not as a replacement for official statistics, but to enable timely and independent checks on activity and inflation, particularly during periods of heightened uncertainty. It also emphasised the importance of developing models that could integrate these data meaningfully into the forecasting and policy process.

### Our response

We have consistently leveraged and integrated new data as they become available to us. More granular and more timely data complements our traditional toolkit and provides greater confidence for our real-time assessment of the New Zealand economy.

In response to Recommendation 2, we have expanded our use of high-frequency and granular data sources to improve the timeliness and accuracy of economic monitoring and improve our research insights. This has been supported by efforts to build greater transparency and analytical capability in our forecasting processes.

## 2.1 Beyond the official data: High-frequency and alternative data sources

The use of high-frequency data in forecasting and economic analysis is not new to the Reserve Bank. During the emergence of COVID-19 in 2020, we quickly expanded our suite of high-frequency modelling to capture early indications of economic activity as the virus unfolded, and public health measures evolved. We have expanded our use of alternative indicators, such as:

- Development of the New Zealand Activity Indicator (NZAC) alongside Stats NZ and the Treasury.<sup>10</sup> The NZAC is a composite index that reflects the underlying movements of eight high-frequency economic indicators.
- Activated the use of daily retail spending statistics to monitor the impacts of lockdowns on household consumption.
- Traffic sensor data, used to develop regional, monthly (and daily if needed) indicators of activity that align closely with GDP trends but are available in almost real time.<sup>11</sup>
- Unit record data on household and business inflation expectations. Unit record data help reveal the behaviour of individual firms and households, helping to monitor the emergence of asymmetric or non-linear responses to economic shocks, that may be hard to detect in aggregated data.<sup>12</sup>
- Increased use of microdata from administrative sources, government surveys, and surveys conducted by third party providers. Microdata supports the analysis of the distributional impacts of policy, help us identify the causal impacts of policy, construct new aggregate indicators, and improve our nowcasting accuracy.<sup>13</sup>

A key caveat is that more timely or more disaggregated data are not always better in macroeconomic modelling and analysis. High-frequency data, by its very nature, tends to be volatile and have a lower 'signal-to-noise' ratio. This means that alongside valuable information, there is a substantial amount of noise — random variation that can obscure the important economic trends. While aggregate monthly statistics are generally sufficient during normal circumstances, daily data such as electronic card spending has been invaluable during times of significant change.

Stats NZ has also helped in expanding the range of higher frequency data available to us. Publication of monthly components of CPI have helped improve our monitoring of inflation trends as well as our forecast accuracy. The recent initiative to introduce a monthly CPI will further enhance our monitoring.<sup>14</sup>

## 2.2 Communicating forecasting practices more clearly

Along with expanding our use of alternative data, we have also focussed on making our use of these data more transparent. Our intention is to improve media, public and expert understanding of what we forecast and how to interpret the forecasts that we produce.

<sup>10</sup> [The New Zealand Treasury \(2020\)](#)

<sup>11</sup> [Ball and Graham \(2025\)](#)

<sup>12</sup> [Bayarmagnai \(2023\)](#); Chadwick, Cherry and Galimberti (forthcoming)

<sup>13</sup> A selection of papers using this approach include: [Zheng et. al. \(2022\)](#); [Zheng and Sing \(2023\)](#); [Ball \(2024\)](#)

<sup>14</sup> [The New Zealand Treasury \(2025a\)](#)

One of the ways in which we have strengthened transparency is by explaining more clearly how we ‘nowcast’. Nowcasting is the process of using higher frequency data and economic modelling techniques to get a timely read on the current state of the economy — in advance of that provided by official statistics like GDP and CPI. Nowcasting intensively uses higher frequency and alternative data sets. A recent Bulletin article and speech<sup>15</sup> set out the how and why of forecasting and nowcasting. Two *Analytical Notes* were published alongside this work, outlining the modelling techniques we use to nowcast a range of variables at the Reserve Bank.<sup>16</sup>

### 2.3 From model to public tool: Nowcasts on the Kiwi-GDP dashboard

The Kiwi-GDP dashboard on the Reserve Bank’s website that provides real-time estimates of GDP growth every week, is based on these *Analytical Notes*. The underpinning modelling framework is a dynamic factor model that nowcasts New Zealand GDP growth using a wide array of high-frequency indicators. The model extracts a ‘common factor’ from multiple timely data series — including business surveys, trade flows, and card spending — to form a cohesive estimate of current and very near-term GDP growth. It updates automatically as new data arrive, making it particularly valuable during fast-moving economic developments.

While the Reserve Bank has used models like this internally for more than two decades, in April 2025, we began to regularly publish Kiwi-GDP estimates on our website to improve external understanding and transparency around our forecasting process. Though it is only one of the many inputs into our nowcasting framework for GDP, we hope that the Kiwi-GDP dashboard will help external analysts track the same data flow we use, demonstrate how we manage the trade-off between timeliness and reliability, and complement existing innovative techniques that are being used to nowcast GDP.

### Summary and implications

Our response has delivered:

- New real-time monitoring tools.
- A broader array of data to answer research questions relevant to monetary policy.
- Stronger integration of alternative and granular data.
- More open communication about our processes.

These improvements help ensure that monetary policy remains informed by the best available evidence even when the official data are lagged or difficult to interpret.

The use of high frequency and alternative data sets will be something that the Reserve Bank continues to improve. We have an ongoing pipeline of research using high frequency data and microdata that we will use to inform policy decisions and improve our forecasting practices.

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<sup>15</sup> Richardson and Williams (2025); Conway (2025)

<sup>16</sup> Bayarmagnai (2025); Smith and Lockyer (2025)

## Recommendation 3: Develop better measures of ‘neutral’ interest rates

### The challenge

The neutral interest rate, defined as “the level of the Official Cash Rate that, over time, would be consistent with no over- or under-utilisation of economic resources and stable inflation”<sup>17</sup>, serves as a key benchmark for guiding monetary policy. Accurate measurement of the neutral rate is pertinent to correctly calibrating monetary policy and ensuring desired inflation objectives are achieved. Prior to the COVID-19 pandemic, structural changes drove the long-run neutral rate lower than anticipated, causing our monetary policy stance to be tighter than intended. In hindsight, the COVID-19 shock may have challenged our prior judgements of the neutral rate and exacerbated uncertainty for decision-makers.

The RAFIMP noted the challenge in estimating an inherently ‘unobservable’ measure, and how the Reserve Bank needed to develop better measures of neutral rates. This includes research to improve our understanding of the short-term factors that influence neutral rates as well as long-term structural changes. The RAFIMP further notes the difficulty in assessing neutral rates in real time and recommended the development of additional measures of the stance of monetary policy.

### Our response

In the years since the RAFIMP review, we have improved and validated our suite of indicators for the neutral rate (‘the neutral suite’). We have also produced research to enhance our understanding of factors influencing neutral rates and developed new measures to provide greater confidence in our existing estimates.

#### 3.1 Estimates of the neutral rate

Estimates of the neutral rate are highly uncertain. Model estimates encompass diverse ranges — reflecting different specifications, parameters, data, term structure, and conceptual frameworks which underpin measures of the neutral rate. Hence, advanced economy central banks typically rely on an indicator suite, rather than a single measure, to inform monetary policy stance.

We published a Bulletin on the ‘Estimates of New Zealand’s Nominal Neutral Interest Rate’<sup>18</sup> to articulate our process in estimating neutral rates and provides both internal and external clarity on how these measures feed into our core forecasting system. The Bulletin details our comprehensive suite of indicators — comprising of model-based measures, market-based measures, and survey-based measures — and clarifies the role of inflation expectations in our modelling assumptions.

Inflation expectations can significantly diverge across time horizons and the decision on how to incorporate inflation expectations into our estimates of the neutral rate is particularly important. The Bulletin highlighted the strengths and limitations of our suite of indicators as well as the risks that accompany different conceptual approaches. While a simple average of the indicators in the suite offers a high-level reference point, it serves only as a loose guide for our core forecasting

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<sup>17</sup> [Castaing et. al. \(2024\)](#)

<sup>18</sup> [Castaing et. al. \(2024\)](#)

and modelling processes. Expert judgement is required to ensure the appropriate measure aligns with its intended purpose.

### 3.2 Enhancing our modelling capabilities and governance

The RAFIMP specifically referenced a need to develop additional measures of the neutral rate to inform the tightness of policy settings.

We have developed two new models in response:

- A vector error correction model to estimate New Zealand’s neutral rate to complement our existing suite of estimates.<sup>19</sup> This is a modern approach which incorporates macroeconomic drivers such as productivity, exchange rates, investment, and public debt. This model provides decomposition tools to attribute shifts in the neutral rate to specific economic variables, thus enabling more timely insight of underlying structural changes.
- An overlapping generations model to understand the contribution of different drivers to New Zealand’s natural interest rate over time.<sup>20</sup> The research finds that the long-term decline in the natural rate since 2000 has been driven by a mix of domestic and global factors. Global interest rates and persistently low domestic labour productivity growth contributes significantly to New Zealand’s long-term natural rate decline.

The review also highlighted risks around periodic revisions and time lags in central bank estimates of the neutral rate. Our processes around model governance of the existing suite have significantly improved to better mitigate these risks and ensure greater confidence in the robustness of our neutral rate estimates. The suite now undergoes ongoing monitoring, an annual evaluation cycle, and ad hoc assessments. Each time the neutral rate suite is updated, automated reporting allows us to understand the impact of data releases and examine the extent of revisions to the estimate over history.

## Summary and implications

Our response has delivered:

- Increased transparency around our neutral interest rate modelling framework.
- New indicators of the neutral interest rate.
- Research to understand the structural drivers and factors influencing the neutral interest rate.
- Deepening of our modelling capabilities, with better processes around validation and evaluation of the neutral interest rate suite.

These efforts ensure our understanding of the neutral interest rate is robust, our neutral suite remains fit-for-purpose, and our processes align with international best practices.

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<sup>19</sup> [Alanya-Beltran \(2025\)](#)

<sup>20</sup> [Kirkby, Lockyer and Coleman \(2025\)](#). The natural rate is a longer-term concept closely related to the neutral rate and provides insight into where the neutral rate can be expected to fluctuate around over time.

## Recommendation 4: Understand the future role of fiscal policy instruments in managing economic shocks

### The challenge

The COVID-19 pandemic brought into sharp focus the importance of coordinated monetary and fiscal policy responses. With the Official Cash Rate (OCR) at its effective lower bound and the transmission of monetary policy tools constrained by lockdowns, fiscal stimulus became a more important lever for supporting demand. Globally, the policy mix shifted quickly and often substantially toward public spending, wage subsidies, and business support programmes.

The RAFIMP highlighted that the economic effects of the Government's large, rapid fiscal easing during the COVID-19 pandemic were underestimated. The RAFIMP suggested that, in partnership with the Treasury, the Reserve Bank needed to improve its understanding of the potential use and impact of the suite of fiscal tools in demand management.

Relatedly, the Royal Commission of Inquiry into COVID-19 Lessons Learned<sup>21</sup> reviewed the roles of monetary and fiscal policy in the pandemic response. Its initial report recommended that the Treasury and the Reserve Bank develop a shared understanding of the appropriate level, sequencing, and composition of fiscal and monetary support measures in a pandemic, as well as the institutional arrangements needed to ensure appropriate monetary and fiscal policy collaboration during emergencies.

### Our response

In response to the RAFIMP and the Royal Commission's recommendations, we made meaningful progress in four areas: institutional coordination, empirical modelling and analysis, a review of the tools to measure fiscal stance and a review of the emerging international consensus on optimal monetary and fiscal policy coordination post COVID-19. At the same time, recent work from the Treasury has helped shed light on the effectiveness of fiscal tools in demand management.

#### 4.1 Strengthened institutional coordination

In 2024, the Reserve Bank and the Treasury signed a revised Memorandum of Understanding (MoU) clarifying the role of the Treasury observer on the MPC.<sup>22</sup> This updated MoU ensures that both institutions are clear on expectations regarding information-sharing, independence, and communication protocols. It also establishes a stronger foundation for ongoing policy dialogue, especially in periods of economic stress or near the effective lower bound.

The revised MoU helps the Treasury observer contribute more effectively to the MPC's situational awareness, without compromising the operational independence of monetary policy. This is a small but important institutional refinement that supports better policy outcomes over time.

<sup>21</sup> NZ Royal Commission COVID-19 Lessons Learned (2024)

<sup>22</sup> Reserve Bank of New Zealand (2024)

## 4.2 New empirical tools to study fiscal-monetary interactions

To deepen our understanding of how monetary and fiscal policies interact across different economic states, we commissioned research assessing how fiscal policy may influence the effectiveness of monetary policy in New Zealand, to complement our past research on the transmission of fiscal shocks to the economy.<sup>23</sup>

Initial results suggest that contractionary monetary policy can better achieve disinflation in an environment of fiscal consolidation. This supports international findings and helps quantify how fiscal spending influences inflation and output under different conditions — insights that are highly relevant for MPC deliberations.

## 4.3 Reviewed measures of fiscal stance

Understanding the stance of fiscal policy is crucial for monetary policymakers but measuring it is challenging. The Reserve Bank conducted a thorough internal review of fiscal indicators to evaluate which measures are most useful for assessing the macroeconomic impulse of fiscal policy.

These included:

- The change in the cyclically adjusted primary balance (CAPB)
- Core Crown expenditure growth
- Estimated changes in net government lending
- Model-consistent measures of the fiscal impulse

Each measure has strengths and weaknesses, particularly when it comes to timeliness, interpretability, and consistency with macroeconomic theory. For instance, CAPB measures are useful for international comparisons but require assumptions about the output gap, which can be volatile and revised frequently. Core Crown spending is simple and transparent but does not account for the economic cycle. Our internal analysis has lent more structure and depth to our thinking on the fiscal stance, clarifying these trade-offs and strengthening our interpretation of fiscal data.

## 4.4 Reviewed the emerging international literature on fiscal and monetary co-ordination

To ensure our thinking reflects best practice, the Reserve Bank undertook a comprehensive review of the post-COVID international literature on fiscal–monetary policy coordination.<sup>24</sup> This work highlights that:

- In ‘normal’ times, the consensus assignment — where monetary policy handles macro-stabilisation and fiscal policy focuses on longer-term structural goals — remains broadly appropriate.

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<sup>23</sup> Javed and Morley (forthcoming); see [Ball et. al. \(2025\)](#) for a summary of the paper. For previous research, see [Hamer-Adams and Wong \(2018\)](#).

<sup>24</sup> Wood and Wills (forthcoming)

- However, in low-interest-rate environments or during extreme shocks, fiscal policy becomes a more powerful and necessary stabilisation tool.
- The objectives, sequencing and design of fiscal interventions matter as does clarity around the policy mix, to ensure credibility and avoid undermining inflation targeting frameworks.
- The building of sufficient fiscal buffers in normal times is an important component of effective macroeconomic coordination, cyclical stabilisation, and to ensure debt sustainability.
- Central bank operational independence is key to eventual outcomes, with any loss of independence likely to undermine the credibility of central banks and reduce the effectiveness of monetary policy actions to control inflation.

This literature has helped inform both our internal modelling and our engagement with the Treasury on future contingency planning.

### Work from the Treasury

The Treasury's Long-Term insights briefing focussed on the role that fiscal policy can and should play across the business cycle.<sup>25</sup> The report conducted a thorough review of the full range of fiscal management tools available to New Zealand governments and their effectiveness in the face of different shocks. This has helped the Reserve Bank further build its understanding of the impact of fiscal policy and its persistence.

At the same time, the report has reinforced the emerging international consensus on fiscal management that the 'consensus assignment' makes sense in normal times. However, fiscal policy has a bigger role to play when the economy is facing highly disruptive shocks and when the interest rate approaches its effective lower bound.

The report notes that although there are limited avenues for improvements on the formal coordination mechanism, there is scope to develop high-level frameworks to manage times of crisis. The report further emphasises the importance of continuing to improve our collective knowledge of the optimal policy response to a range of likely economic shocks.

### Summary and implications

The COVID-19 pandemic underscored the importance of a well-coordinated macroeconomic policy response. The RAFIMP review challenged the Reserve Bank to think more deeply about how fiscal and monetary policies interact — and to be better prepared for future crises.

We have responded by strengthening institutional ties with the Treasury, developing new empirical tools, reviewing international best practice, and maintaining a forward-looking research programme on fiscal–monetary coordination which continues to be refined. These steps position us to deliver independent, coherent, credible and effective policy making.

Looking ahead, our focus remains on building robust analytical tools that help us to understand the economy, design and execute appropriate policy responses and clearly communicate with the public — while working constructively with the Treasury to support New Zealand's economic stability and wellbeing.

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<sup>25</sup> [The New Zealand Treasury \(2025b\)](#)

## What comes next

The Reserve Bank is committed to building on this progress. Several initiatives are underway:

### 1. Developing a blueprint for coordination near the effective lower bound

We are developing a high-level blueprint for how effective coordination during a crisis could look in practice. This blueprint will cover periods when approaching, at, or exiting the effective lower bound of conventional monetary policy. It will consider when, how, and why engagement between monetary and fiscal policymakers could change as a crisis evolves. The blueprint will also explore how policy and operational independence across policy areas can be maintained throughout crisis periods.

### 2. Advancing DSGE modelling for welfare analysis

We have developed a new Dynamic Stochastic General Equilibrium (DSGE) model that incorporates both fiscal and monetary policy tools. This model is designed to explore welfare-maximising combinations of policies under different types of shocks, including deep downturns and supply disruptions. It provides a theoretical foundation for thinking through optimal coordination, and will be a key input into our research agenda going forward.

### 3. Refining measures of the fiscal impulse

We note the importance of continuing to improve how we measure the fiscal stance and impulse, with the goal of developing a wider range of timely indicators that can inform forecasting and policy calibration in real time. This includes more work on estimating automatic stabilisers, discretionary actions, and their combined impact on the economy.

### 4. Ongoing research on fiscal transmission

Finally, our research programme will continue to explore how different types of fiscal policies such as infrastructure investment, targeted transfers, or tax cuts affect output and inflation. This research will feed into our monetary policy strategy.

## Recommendation 5: Refine the measures of 'maximum sustainable employment'

### The challenge

The Reserve Bank of New Zealand (Monetary Policy) Amendment Act 2018 formally added "*supporting maximum sustainable employment*" as one of the Reserve Bank's economic objectives, alongside "*achieving and maintaining stability in the general level of prices over the medium term*", effectively establishing a dual mandate central bank. The maximum sustainable employment (MSE) objective was subsequently removed by the Reserve Bank of New Zealand (Economic Objective) Amendment Act 2023 and reverted the Reserve Bank back to a primary focus on price stability.

The RAFIMP was published prior to the 2023 amendment taking effect and reviewed the period during which the MPC had a dual mandate. During this period, the Reserve Bank interpreted MSE as *“the highest level of labour utilisation that can be maintained over time without generating an acceleration in inflation”*.<sup>26</sup> This aligns MSE with the well-established concept of the ‘Non-Accelerating Inflation Rate of Unemployment’ (NAIRU) in the academic literature and provides us with a theoretical benchmark. The Reserve Bank’s interpretation of MSE is consistent with peer central banks with dual mandates, such as the Reserve Bank of Australia and the Federal Reserve.<sup>27</sup>

The review noted that MSE is *“somewhat opaque and is not well understood”* by the public, underscoring the need for clearer explanations of this monetary policy objective. Communication difficulties are exacerbated by measurement challenges as MSE is not inherently measurable and dependent on non-monetary factors affecting labour market policy, structures and longer-term dynamics.

## Our response

While supporting MSE is no longer an operational objective of monetary policy, we have significantly improved the way we understand the New Zealand labour market and we still use these tools to monitor the labour market and inform monetary policy. In addition, the current Monetary Policy Remit states that *“the MPC shall...seek to avoid unnecessary instability in output, employment, interest rates and the exchange rate”*.<sup>28</sup>

### 5.1 Understanding ‘maximum sustainable employment’

Unlike the inflation target which has a precise numerical benchmark (1–3%), the MSE objective was not specified numerically in the Remit. This was because the level of MSE is unobservable and evolves with demographics, skills mismatches, and broader economic policies which are independent of monetary policy. Thus, to ‘support MSE’, the Reserve Bank requires nuanced judgement-based analysis, presenting a significant communication challenge for conveying the criteria for success.

In response, we have published research outlining our extensive set of labour market indicators (44 in total), categorised into labour supply and demand, market tightness, and wage growth, for gauging their impact on inflationary pressures, thereby evaluating MSE.<sup>29</sup> While being comprehensive, this broad indicator suite can be challenging for non-expert audiences to interpret. The research proposes the use of heatmap charts to visually represent our indicator suite used for labour market assessment. Heatmap charts can intuitively illustrate the relative strength of employment-related inflationary pressures, while also providing valuable time-series context. Our MPSs have subsequently adopted this new visual representation and reporting of key indicators, complemented by clear explanatory narratives.

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<sup>26</sup> [Ball \(2024\)](#)

<sup>27</sup> [Kugler \(2025\)](#); [Reserve Bank of Australia \(2024\)](#)

<sup>28</sup> The latest Remit is available from the Reserve Bank’s website.

<sup>29</sup> [Ball \(2024\)](#)

## 5.2 Methodological improvements

This statistical evaluation of MSE recommends focusing on a smaller, high-quality subset of indicators, enhancing the robustness and clarity of MSE assessment. Specifically, the job transition rate, the vacancy-unemployment ratio, the unemployment rate, and business survey measures of labour as a limiting factor for production have been identified as highly effective in reflecting inflationary pressures linked to employment.

The New Zealand job transition rate is a recent analytical innovation leveraging high-frequency administrative tax data to refine our assessment of labour market dynamics.<sup>30</sup> The measure's broad coverage allows for disaggregated analysis by region, industry, age, and gender, enabling more targeted assessments of labour market resilience, sectoral reallocation, and migration effects, especially useful in times of economic volatility. The job transition rate is highly correlated to both the output gap and other high-quality labour market indicators in our suite, thus providing additional confidence in our labour market assessments.

## Summary and implications

Our response has delivered:

- Clearer narratives around assessing and communicating inflationary pressures emerging from the labour market.
- Enhanced visual representation of our indicator suite for assessing inflationary pressures linked to employment.
- Development of the job transition rate drawn from high frequency administrative tax data.

Although the Remit has reverted to a single operational objective for monetary policy focusing on price stability, it still requires the MPC to consider stability in employment when making their policy decisions, subject to meeting the price stability objective. Understanding labour market dynamics remains critically important for the Reserve Bank as labour market indicators are integral to our forecasting framework, informing estimates of the output gap, a key summary measure of economic capacity and inflationary pressures.

## Recommendation 6: Use LSAPs to mitigate financial market dysfunction

### The challenge

In March 2020, as the global COVID-19 crisis intensified, New Zealand's government bond market — the most liquid in the economy — showed clear signs of dysfunction. Bid-offer spreads widened sharply, trading volumes dried up, and yields became disconnected from economic fundamentals. This disruption was not limited to New Zealand; it was part of a global liquidity squeeze that triggered abrupt price moves and threatened to undermine monetary policy transmission, financial stability, and confidence.

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<sup>30</sup> Ball (forthcoming)

Under these circumstances, the Reserve Bank launched its Bond Market Liquidity Support (BMLS) programme to directly support liquidity in the markets for government bonds and bonds issued by the Local Government Funding Agency (LGFA). A Large Scale Asset Purchase (LSAP) programme quickly followed, initially to purchase up to NZD 30 billion of government bonds and later expanded to allow for the purchase of up to NZD 100 billion. While the LSAP programme had a broader monetary policy objective, its initial and most immediate impact was to further restore market functioning. Yields stabilised, liquidity returned, and pricing anomalies corrected.

The RAFIMP recognised the success of the BMLS and LSAP programme in addressing market dysfunction and recommended that the Reserve Bank develops a more explicit framework for using such tools in future episodes of financial market dysfunction.

## Our response

Following the RAFIMP recommendation, we undertook a detailed work programme to ensure that the Reserve Bank is better prepared to respond to future episodes of market dysfunction — both conceptually and operationally.

### 6.1 Developed principles for addressing financial market dysfunction

We established a set of internal principles to guide future interventions<sup>31</sup> aimed at restoring market functioning. These principles clarify the conditions under which central bank action may be warranted, the appropriate choice of tools (including bond purchases or liquidity facilities), and the key trade-offs involved.

The principles draw on lessons from the COVID-19 response but also reflect broader international best practice — including the need to balance market support with long-term discipline, ensure interventions are targeted and temporary, and guard against moral hazard. Importantly, they emphasise the distinction between interventions that support market function and those designed to loosen the monetary policy stance.

### 6.2 Reviewed and strengthened the Bond Market Liquidity Support (BMLS) facility

The BMLS facility was one of the key instruments used during the early COVID-19 period to address market dysfunction. Although subsequently overshadowed by the size of the LSAP programme, the facility is more targeted at addressing market dysfunction, independent of the required stance of monetary policy.

In 2023, we published a Bulletin article<sup>32</sup> reviewing the activation, usage, and impact of the BMLS facility. This work confirmed that:

- The facility provided an effective backstop during extreme stress.
- Market conditions improved quickly once purchases began.
- Communication of the facility's intent was critical in restoring confidence.

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<sup>31</sup> Silk (2024)

<sup>32</sup> Robinson and Watson (2024)

The RAFIMP also identified areas for improvement. It was noted that communications around the launch of the facility could have been stronger, initial purchase volumes were not commensurate with the scale of dysfunction, and asset purchase coverage was initially too narrow. The review also recommended developing stronger frameworks for when and how the facility should be scaled back.

## Summary and implications

The LSAP and BMLS programmes were a critical part of New Zealand’s initial economic response to COVID-19, restoring market functioning, supporting monetary transmission, and bolstering confidence. The RAFIMP highlighted the importance of building on that experience to improve future effectiveness and improve the efficiency of use.

In response, the Reserve Bank has reviewed the effect of the tools on addressing financial market dysfunction during the emergence of COVID-19. At the same time, we have developed a broader set of principles for how the Bank should address financial market dysfunction more generally. We have used the insights from this work internally to enhance our market monitoring and liquidity operations. This leaves us better prepared to address financial market dysfunction in the future.

## Recommendation 9: Maintain operational readiness for AMP tools

### The challenge

Over the past two decades, neutral interest rates have declined significantly, both in New Zealand and globally. This structural shift increases the likelihood that the OCR could reach its effective lower bound in future downturns; a situation where conventional monetary policy alone may be insufficient to stabilise inflation.

The COVID-19 pandemic brought this risk into sharp focus. The Reserve Bank was able to respond swiftly using AMP tools, including the LSAP programme, forward guidance, and later, a Funding for Lending Programme. However, the experience revealed key areas for improvement, especially the need for operational readiness to deploy a negative OCR.

The RAFIMP highlighted the importance of ensuring that the Reserve Bank remains prepared to use its full AMP toolkit when needed, with systems, frameworks, and coordination mechanisms in place. In particular, the review noted that a future crisis could require rapid activation of LSAPs or use of a negative OCR — and that such tools should be ready for deployment.

### Our response

In response, the Reserve Bank has taken several steps to maintain and strengthen its operational readiness for AMP tools.

## 9.1 Reviewed the liquidity management framework

As we transition from a period of ‘abundant’ settlement cash — a legacy of the LSAP programme — to an ‘ample’ reserves regime, we are reviewing and updating our liquidity management framework.<sup>33</sup>

We have adopted a hybrid approach to liquidity provision that is more suited to this new environment. This approach supports more efficient monetary policy transmission while maintaining flexibility to accommodate future changes in market conditions or policy settings.

Crucially, the revised framework has been designed with resilience in mind. Should a future crisis prompt the deployment of AMP tools that create a large increase in settlement cash balances, the system can be scaled back up to an abundant reserves regime without needing major structural changes.

Since 2020, we have operated an interest rate floor system, which remains the foundation of our operational approach. This framework is robust to a wide range of monetary policy and liquidity conditions and can easily accommodate both:

- A return to large-scale liquidity injections, such as AMP tools.
- The implementation of a negative OCR, if required.

By retaining and refining this system, we have effectively ‘future-proofed’ our operations, ensuring that we can respond flexibly and quickly under a range of monetary policy scenarios and liquidity environments.

## 9.2 Built a quantitative macroeconomic model for LSAP evaluation

A key priority has been to improve how we assess the full economic and fiscal implications of deploying AMP tools, particularly LSAPs. To this end, we have developed a model that estimates the effects of LSAP programmes across both macroeconomic and fiscal dimensions.<sup>34</sup>

This model allows us to:

- Compare macroeconomic outcomes (e.g. inflation, GDP) under different counterfactuals.
- Evaluate the fiscal implications for the consolidated Crown balance sheet, not merely that of the Reserve Bank.
- Provide more comprehensive advice to government on the use of AMP tools.

The results of this modelling show that:

- The LSAP programme improved macroeconomic outcomes, delivering inflation closer to target relative to a scenario without LSAPs.

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<sup>33</sup> Silk (2024)

<sup>34</sup> Chipeniuk et. al. (forthcoming); see Ball et. al. (2025) for a summary of the paper.

- While there were significant mark-to-market losses on the LSAP portfolio during the interest rate tightening cycle, these were largely offset by gains elsewhere — including higher tax revenues and lower government borrowing costs.
- As a result, the overall impact of the LSAP on the Crown’s fiscal position was broadly neutral.

This work allows us to engage more effectively in public and cross-agency discussions about the role of AMP tools and their fiscal consequences. It also allows us to more accurately outline the potential costs and benefits of any future potential LSAP programme.

### 9.3 Ensured readiness for a negative OCR

A key operational gap in 2020 was the banking sector’s lack of preparedness to accommodate a negative OCR. At the time, most New Zealand banks did not have the technical systems or processes in place to support negative wholesale or interest rates.

Since then, we have worked closely with the sector to close these gaps. As of late 2021, all major banks in New Zealand are technically and operationally ready to support a negative OCR if required.

Beyond LSAPs and the negative OCR, we have continued to maintain our broader suite of AMP tools.

### Summary and implications

The experience of the COVID-19 crisis underscored the vital role that AMP tools can play when conventional interest rate policy reaches its limits. As neutral interest rates remain low, the probability that the OCR again reaches its effective lower bound is significant. This makes the operational readiness for AMP tools not just a contingency, but a core component of monetary policy strategy.

In response to this challenge, the Reserve Bank has taken practical steps to ensure that its AMP toolkit remains credible, effective, and ready for deployment. We are refining our liquidity operations to be robust across a range of settlement cash environments, preserved our ability to scale up LSAPs or adopt a negative OCR, and developed tools to more thoroughly assess the macroeconomic and fiscal trade-offs involved. Our engagement with the banking sector has ensured that, should negative rates be required in future, the system is operationally prepared.

This programme of work has also improved our ability to provide clear, evidence-based advice to the government, and to engage with the public in a transparent and accountable way.

AMP tools are not a replacement for conventional monetary policy, but they are essential complements in a world where shocks are larger, interest rates are lower, and uncertainty is greater. Ensuring their ongoing effectiveness requires not just technical systems, but institutional memory, strategic foresight, and ongoing coordination across the public sector. The Reserve Bank is committed to maintaining that capability.

## Conclusion

In the years since the outbreak of the COVID-19 pandemic and the unprecedented economic disruption it caused, the Reserve Bank has undertaken a major programme of work to strengthen its monetary policy framework, guided in part by the nine recommendations of the RAFIMP.

This response has spanned the full spectrum of our policy and analytical toolkit: from improving how we understand and monitor supply-side shocks, to strengthening our use of high-frequency and granular data; from refining estimates of neutral interest rates and labour market capacity, to deepening our understanding of fiscal-monetary policy coordination and the transmission of additional tools like LSAPs.

We have reviewed our operational frameworks to ensure that they are flexible across a range of macroeconomic conditions. We have invested in the data, models, and institutional relationships needed to make more effective policy. We have also built tools that help us evaluate the full economic and fiscal consequences of different policy actions — so that we can communicate more transparently with the public and give better advice to government.

The work on the refinement of our policy tools and frameworks does not end here. Monetary policy under low neutral interest rates in a world prone to volatile shocks will continue to present challenges. The lessons of the last five years and the RAFIMP-driven changes leave us better placed to meet those challenges.

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