

21 September 2023

Michael Reddell  
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Dear Mr Reddell

Thank you for your official information request of 17 August 2023 for:

*... copies of any internal research, analysis or other less formal material undertaken by Reserve Bank staff in the last 12 months on the effect of fiscal policy on aggregate demand and inflation pressures. I am also interested in (and thus this request includes) any material, internal or external, the Bank relies on to support the Governor's claim at FEC this morning that what matters about fiscal policy for monetary policy purposes is government consumption and investment spending, or that explains why the Bank no longer appears to regard the Treasury fiscal impulse measure or a change in a structural fiscal balance measure as the relevant sorts of metrics.*

## Response

The table below lists the documents in scope of your request, including details of any withholding grounds under the OIA. The documents are enclosed with this letter.

### Information for Release

Item	Date	Document / information description	Action
1.	31 July 2023	Paper: Measuring Fiscal Policy	Release in part S 9(2)(d)
2.	August 2023	Fiscal policy in the August 2023 MPS	Release in full

Some information has been withheld for the following reasons:

Section 9(2)(d) – to avoid prejudice to the substantial economic interests of New Zealand.

### Information to be Withheld

The information outlined in the table below is being withheld in full under section 9(2)(d) – to avoid prejudice to the substantial economic interests of New Zealand.

Item	Document / Information Description	Reason / Grounds for Withholding
1.	Excerpt from Monetary Policy Advisory Group Minutes August 2023	Withhold in full, 9(2)(d)

Item	Document / Information Description	Reason / Grounds for Withholding
2.	Paper 4: Economic projections (October 2022)	Withhold in full, 9(2)(d)
3.	Paper 5: Economic projections (November 2022)	Withhold in full, 9(2)(d)
4.	Paper 5: Economic projections (February 2023)	Withhold in full, 9(2)(d)
5.	Paper 5: Economic projections (April 2023)	Withhold in full, 9(2)(d)
6.	Paper 6: Economic projections (May 2023)	Withhold in full, 9(2)(d)
7.	Paper 5: Economic projections (July 2023)	Withhold in full, 9(2)(d)
8.	Paper 6: Economic projections (August 2023)	Withhold in full, 9(2)(d)

In making our decisions, we have considered the public interest considerations in section 9(1) of the OIA.

You have the right to seek an investigation and review of this decision by the Ombudsman. Information about how to make a complaint is available at [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz) or freephone 0800 802 602.

### Charging

The OIA allows charges to be imposed for the preparation of information in response to requests. The RBNZ is resourced to meet disclosure obligations for a reasonable level of requests and the cost of providing free responses to official information requests is generally borne by taxpayers. However, the RBNZ believes that requesters should bear some of the costs, where allowable under the OIA, when requests are made for large amounts of information, where a response is particularly complex, or where individuals or organisations make frequent requests. In this instance, no charge is being made under the OIA.

We intend to publish this response on the Reserve Bank's website at: [www.rbnz.govt.nz/research-and-publications/official-information-requests](http://www.rbnz.govt.nz/research-and-publications/official-information-requests). We do this in order to improve transparency and provide an additional resource for anyone seeking information.

Yours sincerely

A handwritten signature in blue ink that reads "J McDowall". The signature is written in a cursive style with a large initial 'J' and 'M'.

Jean McDowall

Senior Adviser, Government and Industry Relations

## Fiscal policy – seeking a common understanding

31 July 2023

<b>Team name</b>	Policy Research & Development, Forecasting
<b>Authors</b>	Anna Hamer-Adams, Nele McHattie

### Motivation

Understanding fiscal policy is vital for monetary policy decision-making and communications. There are a wide range of measures and each convey useful information. But these measures have important differences, and some are more useful than others for monetary policy.

This paper aims to facilitate a common understanding of fiscal policy measures – what they can and can't tell us, and suggest a suite of fiscal policy measures for the Committee to focus on when making monetary policy decisions and communications. The paper then summarises research on the economic impact of fiscal policy. The assumed impact of current fiscal policy on activity and inflation is covered in Paper 6: Economic projections.

### Summary

- The most important information for monetary policy decision-makers is about fiscal policy's:
  - Stance: its net impact on aggregate demand;
  - Magnitude: size adjusted for inflation and relative to potential GDP; and
  - Specifics: the areas of fiscal activity.
- We prefer measures that are commonly used in public discussion and that are consistent with our analytical frameworks. <sup>s 9(2)(d)</sup>

s 9(2)(d)

s 9(2)(d)
- Recent empirical studies in New Zealand have shown that:
  - A \$1 increase in government spending increases GDP by around \$0.1-0.3 to \$0.8, cumulatively over one year.
  - A \$1 increase in government investment or \$1 decrease in tax revenue increases GDP by around \$0.1-0.2 to \$1.3-1.4, cumulatively over one year.
  - However, it is worth noting that the literature on fiscal multipliers is inconclusive, and results could significantly vary depending on methodologies used even with the same data.

The paper is structured as follows:

- Section 1 outlines the key features of fiscal policy measures and discusses which are most useful for monetary policy purposes.
- Section 2 summarises research on the macroeconomic impact of fiscal policy in New Zealand, highlighting the uncertainty around the magnitude of impact.

# 1. Key fiscal measures for monetary policy

## Key features of fiscal policy measures

There are many measures of fiscal policy. This paper categorises fiscal measures as ‘Treasury’ or ‘StatsNZ’ measures depending on which agency produces the measure in question. Table 1 details the key differences in the measures produced by each agency.

**Table 1. Key features of fiscal policy measures from the Treasury and StatsNZ**

Key features	Treasury measures	StatsNZ measures
Accounting standards	Generally accepted accounting practice (GAAP) <sup>1</sup> or constructed from GAAP measures <sup>2</sup>	System of National Accounts (SNA) Government Financial Statistics <sup>*3</sup>
Objectives	Financial reporting or fiscal sustainability <sup>4</sup>	Economic analysis, decision taking and peace making <sup>5</sup>
Timing	June year-end and/or monthly	March year-end (annual) and/or quarterly
Entity coverage	Range from core Crown <sup>6</sup> to total Crown <sup>7</sup>	<i>Govt consumption:</i> Central and local government <i>Govt investment:</i> We receive customised data on ‘non-market’ (Core Crown and most Crown entities, excluding State-Owned Enterprises, the RBNZ and Kāinga Ora). <sup>8</sup>
Scope of activity	Both cash and accrual measures. <sup>9</sup> Some exclude spending not directly under the Minister of Finance’s control (e.g., automatic stabilisers) or due to one-off events.	Measures in expenditure GDP do not explicitly capture government revenue or transfers or debt financing costs (however income GDP does directly show these flows).

\* These measures are not commonly used by the media or other groups in New Zealand so will not be discussed further in this paper.

<sup>1</sup> The financial statements of the Government comply with generally accepted accounting practice (GAAP) and are prepared in accordance with Public Sector Public Benefit Entity (PBE) Accounting Standards. Financial statements of the government were prepared on a cash basis from 1972-1993, then consistent with GAAP and equivalents of NZ International Financial Reporting Standards from 1994-2014, then GAAP and PBE thereafter. The New Zealand Treasury. (2018).

<sup>2</sup> The Public Finance Act 1989 requires the Government to set a fiscal strategy and choose indicators with which to measure its progress towards this strategy. These indicators may be drawn directly from the elements in the financial statements (and be GAAP compliant), or they may be constructed from some of those elements (and not necessarily be GAAP compliant).

<sup>3</sup> StatsNZ (and the Treasury and International Monetary Fund (IMF)) prepare Government Finance Statistics (GFS) using concepts and principles developed by the IMF to measure government financial activity in an internationally comparable way. “It is important to note that even though the GFS framework provides a consistent presentation format there are underlying differences between countries in measurement and recognition. These differences mean that it can be difficult to make meaningful cross-country comparisons. The New Zealand Treasury. (2018).

Unlike accounting-based financial statements, GFS is an economic representation of a government’s financial activity and is the IMF’s preferred standard for publishing financial statistics on government. General government expenses are compiled under the Classification of the Functions of Government (COFOG) framework. For interest, the measures produced by the Treasury in the financial statements of the government and the GFS measures have a few key differences. The New Zealand Treasury. (2017).

<sup>4</sup> The objective of GAAP (underpinning most Treasury derived measures) is to “provide financial information about the reporting entity that is useful to users of financial information in making decisions about providing resources to the entities”. Australian accounting standards board, (2016).

<sup>5</sup> The SNA is “designed for economic analysis, decision taking and peace making” and is “a statistical framework that provides a comprehensive, consistent and flexible set of macroeconomic accounts for policymaking, analysis and research purposes.” World Bank et al. (2009)

<sup>6</sup> Core Crown is a reporting segment consisting of the Crown, government departments, Offices of Parliament, the New Zealand Superannuation (NZS) Fund and the Reserve Bank.

<sup>7</sup> Total Crown is a reporting segment consisting of the core Crown, Crown Entities and State-Owned Enterprises.

<sup>8</sup> As a result, the Government’s interest in the Reserve Bank and State-owned enterprises is equity accounted rather than consolidated line-by-line. The New Zealand Treasury. (2018).

<sup>9</sup> Under accrual, a financial event is recognised when it occurs rather than when the cash settlement occurs. For example, business subsidy payments are recognised as they are approved. Cash measures capture capital spending as it occurs, whereas accrual measures capture capital spending largely through depreciation.

## Which measures are most useful for monetary policy purposes?

Understanding fiscal policy is vital for monetary policy decision-making. This section outlines aspects of fiscal policy that are most important for monetary policy decision-makers to monitor and suggests a suite of fiscal measures suitable for those purposes.

For the absolute story of fiscal policy, it is important to understand:

- **The stance of fiscal policy** – the net impact of fiscal policy on aggregate demand.
- **The specifics of fiscal policy** – research on fiscal multipliers suggests different types of fiscal activity may have different economic impacts (see section 2). This suggests that decision-makers should distinguish between the specific areas where fiscal activity is taking place (e.g, transfer, investment or consumption spending, or revenue).
- **The magnitude of fiscal policy** – how large is fiscal policy in real terms, or compared to potential output?

For the relative story of fiscal policy, it is important to understand:

- **Comparison to previous forecasts** – to discern how fiscal policy changed relative expectations.
- **Comparison to previous time periods** – to prompt insight from past experiences and assess the size of fiscal policy compared to history.

To understand the impact of fiscal policy on activity and inflation, we need to know direct, indirect and second round impacts on the economy. The economic projections paper (see Paper 6) provides our best judgement on the impacts of *current* fiscal policy, and section 2 provides a summary of New Zealand fiscal multiplier research and factors that may influence the impact of fiscal policy.

Measures of fiscal policy would ideally **be consistent with our analytical frameworks**. NZSIM is a ‘gaps’ model and presents final output in line with SNA data from StatsNZ. This makes measures that aren’t in levels or in SNA (e.g., Treasury measures) difficult to reconcile with our forecasts. Box 1 provides a brief overview of how fiscal policy is captured in the forecast system.

Further, measures constructed with **additional transformations or assumptions** (e.g., presented in real terms or as a share of potential GDP) **may be harder to communicate**. When discussing the outlook for fiscal policy, it is not always clear which forecasts of inflation should or have been used to deflate measures, or which forecasts of GDP or potential GDP (Treasury or RBNZ) should be the denominator.

That said, monitoring **commonly used measures of fiscal policy** would allow us to purposefully participate in or benefit from public discussion of fiscal policy. Market participants, the media and the Finance and Expenditure Committee tend to refer to the following measures of fiscal policy:

- the operating balance before gains and losses (OBEGAL);
- residual cash;
- net debt;
- operating and multi-year allowances;



- core tax revenue and expenses,
- the total fiscal impulse;
- Government consumption and investment; and
- Government spending as percentage of GDP.

Finally, there is the question of timeframe – monetary policy targets inflation and employment at a medium-term horizon, therefore this leads us to favour information about medium-term trends more highly – with the challenge being that short-term information tends to be more timely.

### Box 1. Fiscal policy in the forecast system

How fiscal policy is captured in NZSIM:

- Government consumption – **SNA** forecasts from Treasury released in Budget or Half-Year or Pre-Election Economic and Fiscal Updates (BEFU/HYEFU/PREFU).
- Government investment – **fiscal** forecasts from Treasury released in BEFU/HYEFU/PREFU; scaled due to persistently delayed spending, adjusted to SNA.
- The government variable in NZSIM ('g') is government consumption plus government investment (i.e., they are treated the same in NZSIM, although additional judgement can be added to other parts of the model when differences between consumption and investment are likely to be pronounced). It also includes inventories and some statistical discrepancies.
- The government trend in NZSIM is the residual trend as a share of potential GDP after all other trends for the other GDP components are set.
- Taxes are only implicitly captured through the estimated model coefficients (no explicit tax rate in NZSIM).
- Transfers are only included through judgement in private consumption (transfers mostly present additional income for households).

### Suggested suite of fiscal policy measures

Table 2 presents a suggested suite of fiscal policy measures. These provide information on the stance, specifics, and magnitude of fiscal policy, with preference for those being commonly used in public discussion and that are consistent with our analytical frameworks where possible.

An expanded table that summarises several fiscal measures published by the Treasury and StatsNZ respectively, detailing what they include, their usefulness for monetary policy purposes, and their outlook as of Budget 2023 is in Appendix (Tables 4-5).

**Table 2. Suggested suite of fiscal policy measures**

Purpose	Suggested measure	Measure description	Outlook as at BEFU 2023 (year end 30 June)
Stance of fiscal policy	s 9(2)(d)		
Specifics of fiscal policy			
Magnitude of fiscal policy			

s 9(2)(d)



## 2. The economic impact of fiscal policy

While Paper 6: Economic projections contains the current assumptions for the outlook and impact of fiscal policy, this section summarises the range of impacts that have been estimated empirically in New Zealand and circumstances identified in the international literature where these impacts may vary. These highlight the uncertainty around the magnitude of the impact of fiscal policy on the New Zealand economy.

### New Zealand fiscal multiplier research

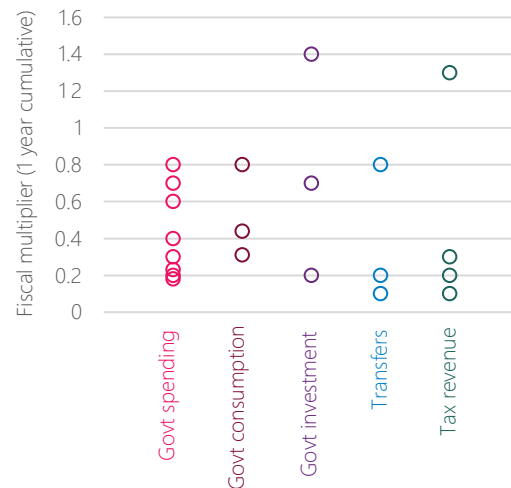
A key measure of the economic impact of fiscal policy is the **fiscal multiplier**. This represents the change in output caused by a \$1 change in spending or revenue.

There is no consensus on the empirical size of fiscal multipliers (Ramey, 2019). However, research to date on New Zealand's fiscal multipliers has produced several insights (summarised in Figure 1, with more detail in Table 3 below):

- **Government spending, consumption, and transfers have similar fiscal multipliers**, where a \$1 increase in spending increases GDP by around \$0.1-0.3 to \$0.8, cumulatively over one year.
- **The estimated range for government investment and tax revenue multipliers is wider**, where a \$1 increase in investment, or \$1 decrease in tax revenue, increases GDP by around \$0.1-0.2 to \$1.3-1.4, cumulatively over one year.
- **Haug and Power's (2022) research suggests that an increase in government investment does not increase real GDP when monetary policy is tight** but does increase real GDP in times of loose monetary policy as there is capacity in the economy to expand.<sup>12</sup> In contrast, they find that the impact of government consumption is similar regardless of the stance of monetary policy.
- **The effect of fiscal policy on output over a longer timeframe is unclear.** Lyu (2021) and Haug and Power (2022) find the impact of government consumption fades completely after three years but find opposite results for the impact of government investment after three years – in one the impact fades completely, in the other it persists strongly.

Estimates of New Zealand's fiscal multipliers are generally smaller than those found internationally. Ramey (2019) surveys the evidence from developed countries and finds that the bulk of the multiplier estimates for government spending lie in the range of 0.6 to 1 – whereas New Zealand estimates for government spending range from 0.2 to 0.8. Likewise, the bulk of tax rate cut peak multipliers vary from below 1 to 3, while New Zealand one-year estimates range from 0.1 to 1.3. There is very little international evidence on transfer multipliers, with studies suggesting multipliers similar to government consumption. New Zealand has several structural features that are

Figure 1. New Zealand fiscal multiplier estimates (each dot is an estimate)



<sup>12</sup> They define the state of tight monetary policy as a 5YBR value greater than its stochastic trend value and loose monetary policy as a 5YBR value equal to, or below, its stochastic trend value.

associated with smaller fiscal multipliers, including a floating exchange rate, more flexible wages, and high import volumes.

It is important to note some caveats associated with the fiscal multiplier literature. Different methodologies and ways of presenting the multiplier statistic can lead to materially different results, even with the same data. Confidence intervals for estimates are often wide. Further, these multipliers are estimated for unanticipated fiscal shocks as opposed to say, fiscal policy announced in advance at Budget time.

The impact of fiscal policy on inflation is not as widely reported as the impact of fiscal policy on output. The empirical literature suggests that expansionary fiscal policy tends to lead to higher inflation, although the evidence is not always conclusive.<sup>13</sup> In their April 2023 Fiscal Monitor, the IMF find a 1 percentage point of GDP rise in government spending leads to a 50 basis point rise in inflation in less than one year after the spending news. They also use a HANK model to find that by taming spending, governments can help monetary policy curb inflation at lower costs for the overall economy.

## Factors influencing the impact of fiscal policy

There is no consensus on the fiscal multiplier literature, but some trends have emerged about factors that influence the impact of fiscal policy:

- **Structural characteristics** can influence the economy's response to fiscal shocks. For instance, a floating exchange rate,<sup>14</sup> large automatic stabilisers,<sup>15</sup> more flexible wages<sup>16</sup> and a high import propensity<sup>17</sup> can offset or dampen the impact of fiscal policy (ie, lead to multipliers closer to zero than otherwise, IMF 2014).
- **Debt levels.** Fiscal multipliers can be larger when public spending is financed with foreign capital,<sup>18</sup> when household debt is high,<sup>19</sup> and when the government is in a sound fiscal position (if debt is high, fiscal stimulus is likely to have negative credibility and confidence effects on private demand and the interest rate risk premium).<sup>20</sup>
- **The state of the economy.** Fiscal spending and transfer multipliers may be larger in downturns than in expansions, though evidence is fragile.<sup>21</sup> Stimulus may be less effective in an expansion because at full capacity an increase in public demand crowds out private demand, leaving output unchanged (with higher prices). In contrast, some research suggests tax multipliers may be insensitive to the cycle or even procyclical – with tax changes having a larger effect during expansions than in recession.<sup>22</sup>
- **Monetary policy.** Monetary policy can complement or offset the effects of fiscal policy.

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<sup>13</sup> Checherita-Westphal et al. 2023.

<sup>14</sup> **Floating exchange rate.** Countries with flexible exchange rate regimes tend to have smaller multipliers, because exchange rate movements can offset the impact of discretionary fiscal policy on the economy (Born and others, 2013; Iztetki and others, 2013.)

<sup>15</sup> **Large automatic stabilisers.** Larger automatic stabilizers reduce fiscal multipliers, since mechanically the automatic response of transfers and taxes offsets part of the initial fiscal shock, thus lowering its effect on GDP

<sup>16</sup> Labor market rigidity Countries with more rigid labor markets (i.e., with stronger unions, and/or with stronger labor market regulation) have larger fiscal multipliers if such rigidity implies reduced wage flexibility, since rigid wages tend to amplify the response of output to demand shocks (Cole and Ohanian, 2004; Gorodnichenko and others, 2012).

<sup>17</sup> Trade-openness Countries with a higher propensity to import (trade-openness) tend to have lower fiscal multipliers because the demand leakage through imports is more pronounced (Barrell and others, 2012; Iztetki and others, 2013)

<sup>18</sup> Broner et al. 2018, Priftis and Zimic 2020.

<sup>19</sup> Andres, Bosca and Ferri 2015, Klein 2017, Bernardini and Peersman 2018, Demyanyk, Loutschina and Murphy 2019.

<sup>20</sup> Iztetki, Mendoza and Vegh 2013, Nickel and Tudyka 2014, Huidrom et al. 2019

<sup>21</sup> Research finding multipliers above one during recessions tend to be sensitive to small changes in specification or in the methods for calculating multipliers. More robust methods generally do not find multipliers above one (Ramey, 2019).

<sup>22</sup> Ramey 2019, Gechert & Rannenber 2018.

- **Effective Lower Bound.** Numerous studies find fiscal multipliers can be larger when the use and/or the transmission of monetary policy is impaired, such as at the effective interest lower bound.<sup>23</sup>
- **Policy regime.** There is a growing literature around the roles of fiscal and monetary policy in stabilising inflation and government debt levels (eg, 'active' vs 'passive' policy, fiscal dominance, the fiscal theory of the price level).<sup>24</sup> Several studies indicate fiscal policy has only a small impact on inflation when monetary policy is actively targeting inflation and fiscal policy is prudently managing government debt – but can have a large inflationary impact when monetary policy is less responsive to inflation and fiscal policy is excessive.<sup>25</sup> Likewise, a monetary policy shock may only have the expected impact on inflation and output growth when coordinated with fiscal policy.<sup>26</sup>
- **Public expenditure management and revenue administration.** Fiscal multipliers are likely smaller when expenditure inefficiencies and difficulties collecting taxes limit the impact of announced fiscal policy on output. For instance, the Treasury's forecasts include a top-down adjustment that takes into account the tendency of government departments to spend less than the upper limits of approved spending.<sup>27</sup> Implementation delays can significantly shrink the short-run multiplier for government investment without affecting the long-run multiplier.<sup>28</sup>

**Table 3. New Zealand one-year cumulative fiscal multiplier research**

Paper	Date range	Government spending	Government consumption	Government investment	Transfers	Tax revenue
Haug and Power (2022)	1991-2019	0.2 Tight MP: -0.2 (not s.s) Loose MP: 0.6	0.3 Tight MP: 0.4 Loose MP: 0.3	0.2 Tight MP: -0.2 (not s.s) Loose MP: 0.8		
Lyu (2021)	1991-2019	0.6	0.4	1.4		
Hamer-Adams and Wong (2018)	1990-2017	0.2	0.8	0.7 <sup>29</sup>	0.8	1.3
Parkyn & Vehbi (2013)	1983- 2010	0.4			0.1*	0.1*
Murray (2013)	1993- 2012	0.3 <sup>30+</sup>				0.3+
Dungey & Fry (2009)	1983- 2006	0.2+				

<sup>23</sup> Ramey 2019, Christiano, Eichenbaum, and Rebelo (2011) and Coenen et al. (2012)

<sup>24</sup> Cochrane, J. H. (2021). Bianchi and Melosi, (2022); Leeper et al (2017).

<sup>25</sup> Banerjee, Boctor, Mehrotra, Zampolli, 2022

<sup>26</sup> Kloosterman, R., Bonam, D. and van der Veer, K. (2022), Bianchi, F. and Ilut, C. (2017).

<sup>27</sup> BEFU page 24; <https://budget.govt.nz/budget/pdfs/befu2023/befu23.pdf>

<sup>28</sup> IMF 2014, Ramey (2020)

<sup>29</sup> Using re-estimated results from Lyu (2021). Hamer-Adams and Wong (2018) initially found negative multipliers using an interpolated central government investment series, which Lyu found were due to the choice of series spuriously biasing the results. The results presented are re-estimated by Lyu using the official general government investment series based on the specification in Hamer-Adams and Wong (2018).

<sup>30</sup> Murray (2013) does not differentiate between government spending and taxation.

Paper	Date range	Government spending	Government consumption	Government investment	Transfers	Tax revenue
Claus et al (2006)	1989- 2003	0.8			0.2*	0.2*
Overall range		0.2 to 0.8	0.3 to 0.8	0.2 to 1.4	0.1 to 0.8	0.1 to 1.3

+ Estimate for first quarter impact \*Estimate based on net tax (tax less transfers)

## APPENDIX

**Table 4. Treasury measures of fiscal policy**

Measure	Description	Usefulness for monetary policy purposes	Outlook as at BEFU 2023 (dates for year end 30 June)
Operating allowance (\$ billion)	The amount of <i>new</i> funding available at each Budget for the day-to-day operating costs of the government (incl. new policy initiatives, revenue policy changes, or adjustments for inflation), net of reprioritised spending. <sup>31</sup>	§ 9(2)(d) Operating allowances provide information about the government’s intentions for discretionary fiscal policy at each Budget. <sup>32</sup>	Budget 2023 package operating decisions amounted to \$6.2bn in 2022/23. Operating allowances are \$3.5 billion for Budgets 2024 to Budget 2026. <sup>33</sup>
Multi-year capital allowance (MYCA) (\$ billion)	The amount of <i>new</i> funding available to spend on assets that will increase the value of the Crown’s balance sheet (e.g., infrastructure like schools and hospitals). This spending is one-off and only captures new spending.	§ 9(2)(d) The MYCA provides information about the government’s intentions around capital spending. However, capital spending announced at a Budget can differ the signalled MYCA, for instance be delayed or unspent (recognised in the Treasury’s top-down capital adjustment). <sup>34</sup>	Budget 2023 announced capital investments totalling \$10.7 billion. This leaves \$3.1 billion available in the MYCA for future capital investments for Budget 2024 through to Budget 2026.
Core Crown expenses and revenue (\$ billion) <i>Accrual measure</i>	<b>Core Crown expenses.</b> The day-to-day spending that does not build or purchase physical assets by the core Crown. This includes non-cash items such as depreciation on physical assets but does not include capital spending. <sup>35</sup> <b>Core Crown revenue.</b> Consists primarily of tax revenue collected by the Government but also includes investment income, sales of goods and	§ 9(2)(d) Core Crown expenses and revenue provide information about government activity.  Actual expenses can differ from forecast (often due to Department underspend, recognised in the Treasury’s top-down operating expense adjustment). <sup>37</sup>	Core Crown expenses and revenue are forecast <b>grow steadily</b> from 2023 to 2026 (by 15% and 20% respectively).

<sup>31</sup> Lomax et al (2016)

<sup>32</sup> Operating allowances don't capture

One-off or time-limited spending (including the costs associated with the COVID-19 response), changes in the cost of debt servicing, the Jobseeker Support benefit or tax revenue (but not tax rates), impairments and revaluation and other changes due to large assets and liabilities (these items are highly volatile, and are often non-cash), previously forecast growth in expenditure (incl. NZ Superannuation and early childhood education subsidies), fiscally neutral changes, contingencies and between-budget spending, see Lomax et al (2016).

<sup>33</sup> The New Zealand Treasury (2023)

<sup>34</sup> In Budget 2023, the top-down capital adjustment for 2023-2027 is \$5.4bn, compared to future (unallocated) new capital spending forecast as \$9.1bn and forecast net purchase of physical assets of \$19.2bn, see The New Zealand Treasury (2023)

<sup>35</sup> Expenses include inputs such as personnel, depreciation and amortization, interest, insurance, and transfer payments and subsidies.

<sup>37</sup> Often as departments will continue to spend less than the upper limits of approved spending. The top-down operating expense adjustment is set at \$2.6bn in 2024 (p. 125 BEFU 2023). For context, forecast new operating spending is forecast to be \$5.7bn in 2024 and total cash disbursed to operations is forecast to be \$159.2bn.

Measure	Description	Usefulness for monetary policy purposes	Outlook as at BEFU 2023 (dates for year end 30 June)
	services and other revenue of the core Crown. <sup>36</sup>		
<b>Net debt</b> (% of nominal GDP) <i>Cash measure</i>	Net debt represents core Crown and Crown entity borrowings (excluding Kiwi Group <sup>38</sup> ) less core Crown financial assets (including advances and settlement cash). It includes the financial assets and borrowings of the NZ Super Fund. In 2022, net debt replaced net core Crown debt as the Government's primary debt indicator <sup>39</sup> and it is not GAAP measure <sup>40</sup> .	s 9(2)(d) Net debt is designed to provide information about the sustainability of the Government's accounts.	Net debt <b>increases slightly</b> from 2023 to 2026 (from 18.0% to 20.7% of GDP).
<b>Residual cash</b> (% of nominal GDP) <i>Cash measure</i>	The change in net debt from year to year is primarily driven by core Crown residual cash – the Crown's cash surplus (or deficit) after the government's operating and investing requirements are met. It excludes NZ Super Fund activity but captures purchase of assets and loans to others. It is not a GAAP measure.	s 9(2)(d) Residual cash provides information about the magnitude of fiscal activity (sum of operating and capital cash flows).  However, it is a net figure and is influenced by activity that might not affect aggregate demand (like contributions to NZS Fund and advances).	The residual cash deficit <b>shrinks</b> from 2023 to 2026 (rising from -5.7% to 0.0% of GDP).
<b>Operating balance before gains and losses</b> (OBEGAL) (% of nominal GDP) <i>Accrual measure</i>	Total Crown revenue less total Crown expenses (excluding SOE minority interest share). OBEGAL includes non-cash items such as depreciation on physical assets but does not include capital spending or gains and losses. <sup>41</sup> It is not a GAAP measure.	s 9(2)(d) OBEGAL is designed to measure the sustainability of the fiscal position. However, it is a net figure and does not include capital spending.	The OBEGAL remains relatively <b>stable</b> in 2024, <b>then rises</b> thereafter (from -1.8% in 2024 to 0.7% in 2027).

<sup>36</sup> Revenue includes taxation revenue and other revenue levied through the Crown's sovereign power (e.g., levies and court fines) and from the operations of government (including interest revenue, dividends, rental income, sales of goods and services).

<sup>38</sup> Kiwi Group Capital was established in November 2022 as a holding company to oversee the Crown's investment in its subsidiaries Kiwibank and NZ Home Loans, and indirectly through those subsidiaries, to carry out and develop their businesses, including the provision of banking and financial services.

<sup>39</sup> The New Zealand Treasury (2022)

<sup>40</sup> Non-GAAP measures are often not internationally comparable. To compare NZ internationally on these metrics, the IMF produce GFS indicators (e.g., general government net debt).

<sup>41</sup> Gains and losses typically arise from the revaluation of assets and liabilities, such as investments in financial assets and long-term liabilities for ACC and GSF.



Measure	Description	Usefulness for monetary policy purposes	Outlook as at BEFU 2023 (dates for year end 30 June)
<b>Cyclically adjusted balance (CAB)</b> (% of nominal potential GDP) <i>Accrual measure</i>	OBEGAL adjusted for fluctuations of actual GDP around potential GDP.	<b>s 9(2)(d)</b> CAB is designed to measure the sustainability of the fiscal position, excluding the impacts of the economic cycle. Similar downsides as OBEGAL and it is sensitive to forecasts of potential GDP.	The CAB <b>increases steadily</b> from -2.5% in 2023 to 1.0% in 2027.
<b>Structural balance</b> <sup>42</sup> (% of nominal potential GDP) <i>Accrual measure</i>	CAB excluding significant expenditure or revenue associated with one-off events.	<b>s 9(2)(d)</b> Structural balance is designed to measure the sustainability of the fiscal position, excluding the impact of one-off events. Similar downsides as OBEGAL.	The structural balance is <b>relatively stable</b> in 2024 (from -0.9% in 2023 to -1.0%), <b>then rises</b> thereafter (reaching 1.0% in 2027).
<b>Total fiscal impulse</b> <sup>43</sup> (% of nominal potential GDP) <i>Cash measure</i>	The change in the fiscal balance as a percentage of nominal potential GDP. The fiscal balance describes the support to aggregate demand and includes the impacts of discretionary fiscal policy, automatic stabilisers, and finance costs. The fiscal balance is residual cash adjusted for some expenditure items that do not directly affect domestic demand.	<b>s 9(2)(d)</b> <sup>44</sup> Shows the change in the magnitude of fiscal support from one year to the next. Increases in the fiscal impulse indicate when spending/revenue outpaces growth in potential output, and this may be inflationary/disinflationary. However, is a net measure, so harder to interpret the absolute story of fiscal policy. Sensitive to forecasts of potential GDP.	The total fiscal impulse is <b>expansionary in 2024</b> (rising from -1.4% in 2023 to 1.7% in 2024). Then <b>contractionary thereafter</b> (falling to -2.0% in 2025 and reaching -1.2% in 2027).

**Table 5. StatsNZ government spending measures**

Note: These measures only capture government consumption and investment, not transfers or tax revenue.

<sup>42</sup> The New Zealand Treasury (2023) and The New Zealand Treasury (2021)

<sup>43</sup> There is considerable uncertainty around estimates of the fiscal impulse in the current environment. This reflects unprecedented swings in the output gap and other forecast variables.

<sup>44</sup> See also The Treasury state "the fiscal impulse should be considered alongside the overall level of fiscal spending for a more complete view of the magnitude of fiscal support." "We are able to estimate the point-in-time impact of a new discretionary fiscal policy at the EFU after the policy is announced. However, factors such as delayed spending on discretionary policies by departments mean we are unable to accurately calculate the actual marginal impact of these policies and provide a useful comparison over time." The New Zealand Treasury (2023) and The New Zealand Treasury (2021)



Measure	Description	Usefulness for monetary policy purposes	Outlook as at BEFU23
Government consumption (\$ billion)	Central government final consumption expenditure, largely compensation of employees, also includes consumption of fixed capital.	§ 9(2)(d) Government consumption provides information about the type and size of government activity.	<p><b>Nominal: Moderate growth</b> (13.5%) from 2023Q3 to 2026Q3</p> <p><b>Real: Relatively stable</b> (rising 0.6%) from 2023Q3 to 2026Q3</p> <p><b>% GDP: Slightly falling</b> from 2023Q3 to 2026Q3 (from 20.7% to 19.6% of GDP)</p> <p><b>% potential GDP: Slightly falling</b> from 2023Q3 to 2026Q3 (from 20.7% to 19.3% of potential GDP)</p>
Government investment (\$ billion) <i>Non-market gross fixed capital formation</i>	<p>StatsNZ only publicly publish investment as gross fixed capital formation<sup>45</sup> (GFCF). However, we receive custom data from StatsNZ splitting GFCF into market<sup>46</sup> and non-market investment.</p> <p>Non-market investment is largely government investment – this is what we include in NZSIM. It does not include investment by state-owned enterprises and government corporations such as Kāinga Ora.<sup>47</sup></p>	§ 9(2)(d) Government investment provides information about the type and size of government activity.	<p><b>Nominal: Moderate growth</b> (6.6%) from 2023Q3 to 2026Q3</p> <p><b>Real: Relatively stable</b> (falling 0.3%) from 2023Q3 to 2026Q3</p> <p><b>% GDP: Relatively stable</b> (fluctuating around 5% of GDP) from 2023Q3 to 2026Q3</p> <p><b>% potential GDP: Relatively stable</b> (fluctuating around 5% of potential GDP) from 2023Q3 to 2026Q3</p>
Government spending (government consumption + investment)	Real government spending	§ 9(2)(d) Shows the size of government spending adjusted for inflation.	<b>Slightly below</b> peak-COVID spending in 2023, before <b>returning to COVID-level spending</b> in 2024 and remaining relatively stable thereafter.
	Government spending as a share of GDP (%)	§ 9(2)(d) Shows the size of government spending relative to total economic activity.	Relatively stable over 2023/24 (at just under 26% of GDP, similar to COVID levels), before declining to 24% of GDP in 2027.

<sup>45</sup> Gross fixed capital formation captures Residential buildings, non-residential buildings, other construction, land improvements (central govt not calculated), transport equipment, weapons systems, plant machinery and equipment, transfer costs, intangibles.

<sup>46</sup> Market units include State-owned enterprises and government corporations such as Kāinga Ora.

<sup>47</sup> They are not included because StatsNZ assume they make investment decisions in a similar way to private corporations.

Measure	Description	Usefulness for monetary policy purposes	Outlook as at BEFU23
	Real government spending as a share of potential GDP (%)	<p>§ 9(2)(d) Shows the size of real government spending relative to potential economic activity.</p> <p>Increases indicate growth in spending outpaces growth in potential output, and so may be inflationary (and vice versa).</p> <p>However, the impact of government spending on activity can be influenced by a variety of factors – see Box 1.</p>	<p>Steadily declines over the forecast period (from 25.5% in 2023Q3 to 23.8% 2026Q3)</p> <p>Consistently below levels seen over COVID-19 (with a peak of 26.9% in 2021Q4).</p>
	For example, change in government spending as a share of potential GDP at BEFU23 <sup>48</sup> relative to HYEFU22. (Difference from previous forecasts)	<p>§ 9(2)(d) Shows how the profile of government spending has changed since previous forecasts.</p> <p>Increases in government spending from previous forecasts indicate potentially higher aggregate demand and inflationary pressures (and vice versa).</p> <p>However, the impact of government spending on activity can be influenced by a variety of factors – see Box 1.</p>	Spending over the forecast period is around 1% of GDP higher in BEFU23 than in HYEFU22.

<sup>48</sup> The budget economic and fiscal update (BEFU) presents the Treasury's latest forecasts of the fiscal and economic position alongside the Budget, while the half year economic and fiscal update (HYEFU) presents updates of these forecasts six months after the Budget.

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## Fiscal policy in the August 2023 MPS

**Note:** We assume that government consumption and investment evolve in line with the macroeconomic and fiscal forecasts in the Budget 2023.

**Statement**      **Government spending is assumed to add relatively less to demand and inflationary pressures than previously and is expected to decline in future.**

- Supporting evidence
- Over the medium term, the sum of real government consumption and investment as a share of potential GDP is expected to continue to decline gradually from high levels.
  - **Real government spending as a percentage of potential GDP is forecast to steadily decline** (from 25.6% in 2023Q2 to 23.5% 2026Q3).
  - This means that growth in government spending is slower than growth in potential output, potentially adding less to inflationary pressures over the forecast horizon. However, it remains above levels seen immediately prior to COVID-19 (figure 2).
  - Treasury forecast<sup>1</sup> the **residual cash** deficit to **shrink** from 2023 to 2027 (rising from -5.7% to 0.0% of GDP).
  - Treasury forecast **Core Crown revenue** to grow steadily (by 26%) from 2023 to 2027, **outpacing growth** in **Core Crown expenses** (which includes transfer spending; up 19%).

**Statement**      **Discretionary<sup>2</sup> fiscal policy is reducing aggregate demand.**

- Supporting evidence
- Treasury forecast the **cyclically adjusted balance** to **shrink** from 2023 to 2027 (rising from -2.5% to 1.0% of GDP).
  - The cyclically adjusted balance is the Operating Balance before gains and losses (OBEGAL) less changes in spending and revenue due to fluctuations of actual GDP around potential GDP (i.e., less 'automatic stabilisers').

**Statement**      **Real government consumption is expected to decline over coming years.**

- Supporting evidence
- **Real government consumption** is expected to **gradually decline** over the coming years as most COVID-19 and other support measures have been phased out since early 2022 (falling 0.7% from 2023Q2 to 2026Q3).

**Statement**      **Real government investment is expected to continue growing strongly.**

- Supporting evidence
- **Real government investment** is expected to continue to **grow strongly** (13.1%; 19.4% in nominal terms) from 2023Q2 to its peak in 2025Q2, underpinning activity in civil construction and related industries for an extended period. Then, investment falls (by 10.0%; 7.3% in nominal terms) by 2026Q3.
  - This largely reflects the repair and rebuild work in the aftermath of severe weather events at the start of 2023. However, this will be spread out over several years.

<sup>1</sup> All Treasury forecasts referenced in this note are from the Budget Economic and Fiscal Update 2023, and dates are year end 30 June.

<sup>2</sup> Discretionary refers to fiscal activity related to deliberate policy decisions, rather than automatic changes related to economic conditions (e.g., changes in welfare or tax revenue).



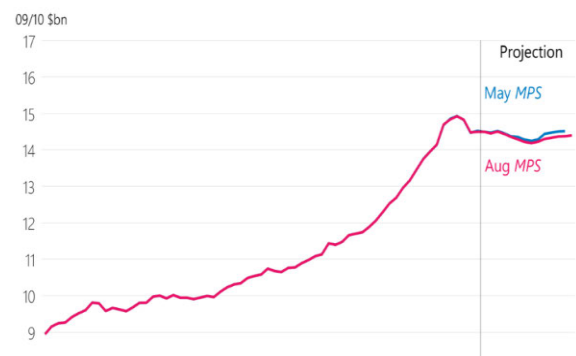
## Why haven't we referred to other measures of fiscal policy?

- **Total fiscal impulse**<sup>3</sup> shows the change in the structural balance (residual cash less items that don't directly impact aggregate demand) from one year to the next, presented as a share of potential GDP. As a change measure, it's hard to see the absolute story or trends when looking at the total fiscal impulse. We prefer to supplement the total fiscal impulse with looking at real government spending as a percentage of potential GDP.
- **Operating Balance Before Gains and Losses (OBEGAL)**<sup>4</sup> doesn't capture capital spending (other than through depreciation) – we prefer residual cash.
- The **operating allowance**<sup>5</sup> doesn't capture some important areas of spending (e.g., forecast growth in spending) – we prefer government consumption or core Crown expenses.
- The **multi-year capital allowance (MYCA)**<sup>6</sup> Capital spending announced at a Budget can differ to the signalled MYCA, for instance be delayed or unspent – we prefer government investment.

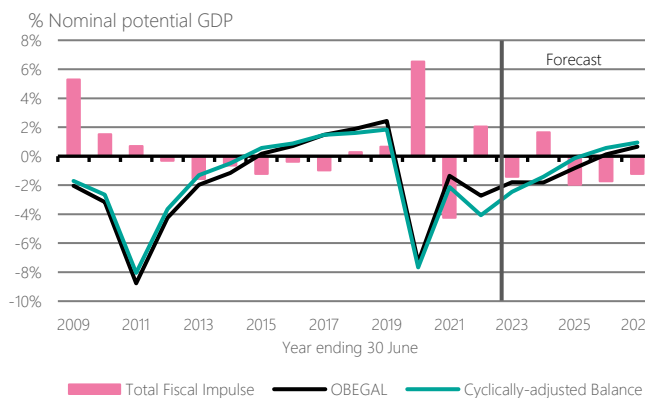
**Figure 1. RBNZ forecast government spending (consumption and investment) as a share of potential GDP**



**Figure 2. RBNZ forecast real government consumption**



**Figure 3. Treasury's fiscal forecasts**



<sup>3</sup> The change in the residual cash (less some items that do not direct domestic demand) as a percentage of nominal potential GDP.

<sup>4</sup> Total Crown revenue less total Crown expenses

<sup>5</sup> The amount of *new* funding available at each Budget for the day-to-day operating costs of the government

<sup>6</sup> The amount of *new* funding available to spend on assets that will increase the value of the Crown's balance sheet