BACKGROUND PAPER FOR
THE 2021 STATEMENT ON THE
LONG-TERM FISCAL POSITION:
How Fiscal Strategy Affects Living Standards

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Executive Summary

This paper supports the forthcoming 2021 Statement on the Long-term Fiscal Position by explaining in more detail why fiscal sustainability matters. The Treasury regularly produces stewardship reports that seek to inform foresighted fiscal policy. The Public Finance Act 1989 (PFA) requires the Treasury to produce a Statement on the Long-term Fiscal Position, an Investment Statement, and a Wellbeing Report at least every four years. These reports identify trends and risks to our assets, fiscal position, and governments’ ability to provide services that support New Zealanders’ living standards. The Public Service Act 2020 requires the Treasury to produce a Long-term Insights Briefing at least every three years, to provide analysis on policy options to address long-term trends and risks. This year, the Treasury is producing a combined Statement on the Long-term Fiscal Position and Long-term Insights Briefing (the 2021 Statement).

The COVID-19 pandemic has had a sizeable impact on the fiscal position. Prior to the pandemic, net debt was 19% of GDP. Net debt is now forecast to peak at 48% of GDP in 2023, with further years of fiscal deficits. While the response to the COVID-19 pandemic has led to net debt increasing significantly, it has helped prevent a deeper and longer lasting recession, which could have had long-term impacts on our country’s wellbeing.

COVID-19 has raised significant questions about fiscal sustainability, and this paper does not resolve many of those questions. Foremost, the Government has choices about the level of debt to target in the future, and when it makes any policy adjustments to achieve that. The Treasury’s judgement is that there is no immediate need to reduce debt, but policy action will be necessary to achieve and maintain a sustainable and equitable debt trajectory over time. In the near term, increased uncertainty makes choices on the level of debt, speed of adjustment, and policy measures more challenging. In this context, it is timely to consider how New Zealand’s fiscal framework has operated to date and how well-placed it is to support governments to make future fiscal strategy decisions.

This paper considers how fiscal strategy choices affect the living standards of New Zealanders now and in the future, and how New Zealand’s fiscal framework currently supports a focus on intergenerational wellbeing. A fiscal strategy is a set of choices about how and when governments collect revenues, spend and borrow. The fiscal framework, as set out in the PFA, guides governments to consider the sustainability and equity of their fiscal strategies. In particular, the PFA requires governments to consider the likely impact of their fiscal strategy on present and future generations. Understanding the living standards impacts of fiscal strategy can support governments to set fiscal strategy with a focus on intergenerational wellbeing.

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1 This paper was initially drafted in 2019, before the COVID-19 pandemic. Since then, the paper has been updated to reflect changes in New Zealand’s fiscal position, changes in economic conditions globally, and increased uncertainty. In this context, there is greater uncertainty about the extent to which our fiscal frameworks remain fit-for-purpose. To address these emerging challenges, the Treasury is undertaking a multi-year review of our macroeconomic frameworks.
The Treasury’s Living Standards Framework frames living standards as depending on access to the four capital stocks – natural, human, social, and physical & financial. Fiscal strategy decisions are one way in which governments can affect the rate at which these capital stocks are run down, maintained or built up over time, and how they are shared across time and people. In turn, fiscal strategy affects the distribution of living standards within and across generations.

**Fiscal strategy decisions made now have long-term consequences.** Future living standards depend on the capital stocks passed down through generations, and on future governments’ ability to borrow, tax and spend. Often, capital stocks can be managed in ways that support both present and future living standards. However, policymakers also face inter-temporal trade-offs between consuming and investing in the capital stocks. Depending on which generations benefit from and pay for government spending, fiscal strategies will have different implications for intergenerational equity. Therefore, fiscal strategies imply value judgements about how to weight different generations’ living standards, and how to manage risk. New Zealand’s fiscal frameworks can support governments to realise their distributional and risk management objectives, consistent with a focus on intergenerational wellbeing.

**A strong government balance sheet is an important, liquid store of resilience.** Prudent debt levels ensure that, when risks eventuate, the Government can afford to borrow to manage the effects of that shock. Given the unpredictability of future shocks, the liquidity of financial capital – which can readily buy a range of goods and services, targeted to support affected groups – makes it an especially effective form of resilience. But ensuring access to debt finance is not the only way in which governments can build resilience.

**Introduction**

This paper considers how fiscal strategy choices affect the living standards of New Zealanders now and in the future. New Zealanders’ living standards are a function of many different factors. Living standards depend on the environmental and international context that New Zealanders occupy but do not fully control. Living standards also depend on decisions made by individuals, businesses, families and government. Governments’ fiscal strategies are one significant determinant of living standards.

**Fiscal strategies are choices about how and when governments collect revenues, spend and borrow.** Over time, choices about the flows of revenue and spending determine the assets we can use and the liabilities we owe. These assets and liabilities are not only financial. For example, revenue and spending decisions can affect investment in education and the accumulation of human capital. Whilst the stock of human capital is not readily monetised, it is an asset that supports New Zealanders’ living standards.

The Living Standards Framework (LSF) distinguishes between four types of capital stocks – natural, human, social, and physical & financial – that support living standards. Fiscal strategy decisions affect the rate at which these capital stocks are run down, maintained or built up over time, and how they are shared across time and people. In turn, access to the capital stocks shapes the living standards of New Zealanders.
Fiscal strategy choices will have different effects on New Zealanders within and across generations. The Public Finance Act 1989 (PFA) requires governments to consider the likely impact of fiscal strategy decisions on present and future generations. However, the PFA does not prescribe how governments must incorporate intergenerational considerations in their decision-making. The flexibility of this requirement reflects both uncertainty about how fiscal strategy will affect different generations, and that value judgements are required to weight the living standards of different generations. To support intergenerational wellbeing, fiscal strategy choices must be both sustainable and equitable.

- Fiscal sustainability requires the government to meet its intertemporal budget constraint.²
- Intergenerational equity requires a value judgement about how to weight the living standards of current and future generations. Concepts of fairness will differ across individuals, groups and time.

One possible definition of a sustainable and equitable fiscal strategy is that which meets the needs of New Zealanders today, without compromising the ability of future generations to meet their own needs.³

Section 1 of this paper sets out what we mean by fiscal strategy, the context within which New Zealand’s policymakers make fiscal strategy choices, and how the Treasury’s LSF can support informed fiscal strategy choices.

Section 2 briefly notes how fiscal strategy levers – expenditure, tax, and debt timing and levels – affect the living standards of present generations. These concepts are explained more fully in the annexes, which set out how fiscal strategy affects the near-term structure and stability of the economy, and in turn affects present generations’ living standards.

Section 3 considers the long-term effects of near-term fiscal strategy choices. This section sets out requirements for fiscal sustainability and discusses trade-offs and complementarities of fiscal strategy choices on different generations’ living standards. Future living standards depend on near-term decisions about how to manage the four capital stocks, which are transferred through generations. These choices constrain or enable future governments’ fiscal strategy options, and future governments’ scope to support living standards.

Section 4 explains what the above sections mean for policymaking. Fiscal strategy choices are value-laden, must navigate uncertainty and are subject to political economy pressures. Faced with these challenges, we outline how New Zealand’s current fiscal framework, set out in the PFA, guides governments to set sustainable and equitable fiscal strategies.

² The intertemporal budget constraint requires the net present value of all future primary balances to be equal to the initial stock of public debt.

Considering the impact of fiscal strategy choices on living standards is not ground-breaking. In the past, explanations of fiscal strategy have primarily focused on how fiscal strategy supports economic growth (see, for example, Buckle et al 2008). Implicitly, these explanations treat economic growth as a partial proxy for living standards. Economic growth supports living standards through its contribution to individuals' and governments' income, which expands opportunities for things that matter like housing, healthcare, and education. However, living standards depend on more than just economic growth. The distribution of growth and its social or environmental cost matters, as do non-financial contributors to living standards.

In this paper, we explicitly discuss the effects of fiscal strategy on living standards across people and time. We conclude that New Zealand’s fiscal framework is consistent with taking a Living Standards approach to fiscal strategy. This is because New Zealand’s fiscal framework guides governments to consider the sustainability and equity of their fiscal strategy choices. Foremost, the PFA sets out eight principles of responsible fiscal management which flexibly guide governments in setting fiscal strategy. However, the fiscal framework is not sufficient to ensure intergenerational wellbeing. This is because governments face uncertainty about the effects of fiscal policies and need to make value judgements.

New Zealanders will have different views on what a sustainable and equitable fiscal strategy looks like, depending on their value judgements and attitudes to uncertainty. New Zealand’s fiscal framework acknowledges legitimate differences of view about what fiscal strategy best supports living standards. The PFA requires governments to be transparent about and accountable for the value judgements that underlie their fiscal strategies, without prescribing what these judgements should be.

1 New Zealand’s Fiscal Framework and the Treasury’s Living Standards Framework

1.1 New Zealand’s Fiscal Framework

What is a fiscal strategy? Fiscal strategy decisions are government choices about managing public money – how and when to collect revenue, consume, invest and borrow. Over time, choices about the flows of revenue and expenditure shape the balance sheet that shows the assets the Government can use and the liabilities the Government owes. Together, the Government’s overarching goals and constraints for fiscal policy decisions comprise its fiscal strategy.

The primary fiscal strategy levers are:

- expenditure – setting the level and timing of consumption and investment,
- revenue – setting the level and timing of revenue, and
- balance sheet management – managing the levels and types of assets and liabilities held.
Macroeconomic objectives about *how much* and *when* to spend, tax and borrow affect *microeconomic fiscal policy choices*. Microeconomic policy choices concern the structure and composition of spending, taxation and borrowing. In New Zealand, fiscal strategy objectives can constrain other fiscal choices where they set a limit on how much a government will borrow, tax and/or spend. At the same time, fiscal strategy can ensure future governments maintain a broad range of fiscal policy options, by supporting fiscal sustainability – the long-term ability of the government to tax, spend and borrow.

Macroeconomic fiscal strategy objectives and microeconomic fiscal policy choices should be considered together. For example, if the value of spending increases but the costs of financing spending remain constant, then the fiscal strategy should allow for relatively more spending.

**New Zealand’s fiscal framework is ‘principles-based’**. This means that the Government of the day can choose its own fiscal strategy provided it is consistent with principles of responsible fiscal management. Our principles-based framework is relatively uncommon. By contrast, many countries’ fiscal frameworks centre on legislated numerical fiscal rules.

The PFA is the legislative core of New Zealand’s fiscal policy framework – a set of principles that governments must adhere to when setting fiscal policy. The PFA provides for regular and independent economic and fiscal reporting by the Treasury and requires the Government to regularly report on its fiscal strategy. Specifically, the PFA requires the Government to set out short-term intentions and long-term objectives for revenue, expenses, the operating balance, debt and net worth. These intentions and objectives must relate to at least the next two and ten years, respectively. The Treasury’s Long-term Fiscal Statements help to inform the Government’s long-term fiscal strategy, by providing information about fiscal challenges and opportunities over the next forty years. By contrast, the Treasury’s regular Economic and Fiscal Updates are only required to provide forecasts for the current year and at least the next two financial years.

The PFA sets out eight principles of responsible fiscal management. Each government’s fiscal strategy must be consistent with these PFA principles, and can support other policy objectives that matter to the Government of the day. Briefly, the principles of responsible fiscal management require governments to:

- Achieve and maintain prudent public debt levels.
- Ensure that, on average, total operating expenses do not exceed total operating revenues.

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5 The principles of responsible fiscal management are set out in full in Section 26(G) of the PFA.

6 At the time this principle was legislated, an operating surplus was required to reduce net debt. This is no longer the case, given that interest rates on government debt are less than the growth rate of the economy.
Achieve and maintain total net worth at levels that provide a buffer against future changes.

Manage fiscal risks facing the government prudently.

When formulating revenue strategy, have regard to efficiency and equity, including the predictability and stability of tax rates.

Have regard to the interaction between fiscal policy and monetary policy.

Consider the likely impact of fiscal strategy on present and future generations.

Ensure that the Crown’s resources are managed effectively and efficiently.

The main purpose of this paper is to expand on the bolded principle – to consider the likely impact of fiscal strategy on present and future generations.

The PFA leaves each government to define what the PFA principles mean to it, providing flexibility over time. Governments may depart from these principles temporarily, so long as they set out their reasons for doing so and their plan to return to the principles. Behind this transparency-based framework is a judgement that a government that has flexibility to choose a responsible fiscal strategy is more likely to own and deliver on that strategy.

New Zealand’s flexible fiscal framework has performed well with respect to fiscal sustainability (Ter-Minassian 2014). Since the passage of the PFA in 1989, New Zealand’s legislative framework for fiscal management has evolved in response to changing circumstances. Governments have frequently adapted the fiscal strategy over time, and the fiscal framework has been flexible enough to accommodate these changes. Despite this flexibility, the fiscal framework does face some challenges and scope for innovation (see for example Buckle 2018; Gill 2019). In this spirit, Parliament recently amended the PFA to embed a focus on wellbeing.7 The Treasury is also undertaking a multi-year work programme to respond to challenges to stabilisation policy – driven by low interest rates, weak inflation and demand pressures – that emerged since the global financial crisis (GFC) and have been exacerbated by the COVID-19 economic shock. This programme is likely to inform the evolution of our fiscal frameworks.

By international standards, New Zealand has a strong fiscal position. New Zealand does not have a track record of persistent fiscal deficits and, prior to the COVID-19 shock, had low levels of net debt (19% at the Treasury’s Half Year Economic and Fiscal Update 2019). Even after accounting for the fiscal impact of COVID-19, New Zealand’s debt levels remain very low compared to other countries.

Low debt levels position New Zealand well to respond to unexpected shocks, like pandemics and earthquakes, and buffer the impact of the economic cycle on individuals. This was evident in the immediate response to the COVID-19 shock. Low debt levels meant the Government could affordably increase spending to support New Zealanders’ incomes and access to services in a relatively unconstrained way. As the 2021 Statement sets out, future governments’ ability to respond well to shocks will depend on near-term choices about how to manage ongoing fiscal ‘stresses’, like climate change and population ageing.

The PFA is complemented by non-legislative conventions. Foremost, New Zealand’s Fiscal Management Approach is an internally agreed set of ‘rules’ designed to assist governments to achieve their fiscal strategies. Whereas the fiscal framework legislates overarching principles and requirements for governments’ fiscal strategies, the Fiscal Management Approach sets out a flexible set of non-legislated operational ‘rules’. These ‘rules’ are designed to ensure day-to-day government decisions are consistent with the Government’s overarching fiscal strategy.8

1.2 The Treasury’s Living Standards Framework

The purpose of the LSF is to help the Treasury provide economic advice that considers the wellbeing effects of policy choices.9 The LSF is a Treasury framework for considering how policy choices affect living standards through their impact on the ‘domains of wellbeing’ and four ‘capital stocks’. The LSF encourages us to think explicitly about system dynamics and the distribution of living standards across people, places and time.

This paper references the version of the LSF that was issued in 2018. The LSF is currently under review, and we expect to deliver a refreshed version of the LSF in late 2021.

Living standards comprise more than just material wellbeing. Living standards of New Zealanders comprise wellbeing ‘domains’ that make life worth living. The LSF highlights twelve domains that reflect our current understanding of the things that contribute to New Zealanders’ living standards.

Figure 1 – The LSF Wellbeing ‘Domains’

New Zealanders’ access to the domains of wellbeing depends on the level and distribution of the ‘four capital’ stocks – natural, human, social and physical & financial capital. For example, health outcomes depend on factors including: pollution levels (natural capital); medical expertise (human capital); support networks (social capital); and the quality of our hospitals (physical capital). The capital stocks support flows of living standards both now and into the future.

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The living standards effects of policies are complex. The LSF encourages policy advisors to consider the benefits and costs of policies comprehensively. The LSF prompts us to think about policy effects on ultimate living standards by considering the intermediate effects of policies on the domains of wellbeing and the capital stocks.

To illustrate, consider the costs and benefits of a reforestation policy from an LSF perspective. The benefits of this policy include the likely increase to the natural capital stock, and increased access to the environment (a wellbeing domain), which support living standards. At the same time, the LSF highlights potential costs of reforestation to living standards. These costs include the financial cost of the policy, which implies the opportunity cost of not funding alternative initiatives. Further, reforestation may jeopardise the jobs, income and consumption of some groups. For example, if farmland is reforested, some primary industry workers risk unemployment and the communities they sustain may suffer. In turn, unemployment is likely to erode both the financial and social capital stocks of affected communities.

The LSF emphasises the distribution of living standards effects, not just their aggregate levels. The benefits of a reforestation policy, for example, will vary across time as seedlings gradually mature into forest. Equally, the benefits are likely to vary across place. New Zealanders nearer the regenerated area may reap more environmental benefits, but may suffer from the displacement of existing jobs. The policy effect on individuals' living standards will also differ according to the weights that individuals put on the contribution of jobs, income and the environment to their living standards.

Living standards analysis is grounded in welfare economics. Wellbeing, which is termed ‘utility’ in much existing economic literature, is a function of individuals’ unique preferences. The LSF provides a framework for systematically considering and measuring what New Zealanders value. Access to the four capitals and domains of wellbeing provide New Zealanders with the capability to satisfy their preferences, and live lives they value.

The LSF does not absolve policymaking of uncertainty or value judgements. Instead, the LSF helps policymakers to weigh the different living standards effects of policies, and make considered trade-offs between investments in living standards across people, places and time. In this way, the LSF makes policy trade-offs more transparent, and enables policymakers to choose policies that best align with their priorities and values.¹⁰

Fiscal strategy affects living standards by influencing the allocation of resources in society. Fiscal strategy can support intergenerational wellbeing by specifying overarching levels and timing of consumption, investment, borrowing and taxation that are fiscally sustainable and equitable.

2 Present living standards

This section briefly considers the near-term effects of fiscal strategy choices on living standards. In the short term, decisions about fiscal structure – what revenue to collect, and what to spend it on – affect New Zealanders’ access to the domains of wellbeing that underpin living standards. Over the medium term, for example across a business cycle or generation, governments also face choices about when to collect revenues and spend. Government decisions about the timing of expenditure and revenue can support living standards through their contribution to macroeconomic stability.

Fiscal structure and stability also have long-term effects on fiscal sustainability and living standards. These effects are discussed in section 3.

2.1 Fiscal structure in the short term

Fiscal structure – expenditure and tax settings – affects living standards. In a single period, government interventions through tax and spending programmes have short-term effects on living standards. Governments make decisions about individual expenditure and taxation interventions. Aggregated together, these decisions reflect a broader choice about the size of government, and reveal value judgements about what the role of government should be.

Governments intervene to tax New Zealanders and spend that revenue on their behalf. Governments may regulate, reprice, acquire, pool and redistribute resources to achieve more efficient or equitable outcomes. However, government interventions can also give rise to new problems. For example, government interventions may undermine living standards where governments or their advisors face regulatory capture or time inconsistency problems.

Governments’ judgements about the appropriate overall role of government will influence individual fiscal choices. Over time, the sum of individual choices about government expenditure, taxation and regulatory interventions imply New Zealanders’ views about the appropriate role of government.

Government spending can support short-term living standards by: directly purchasing goods and services; providing a social security net; and funding regulatory governance.

Importantly, not all government expenditure is the same. One significant distinction between different kinds of expenditure is the split between ‘consumption’ and ‘investment’ expenditure. Consumption spending is that which uses the four capital stocks. By contrast, investment spending builds the non-financial capital stocks (human, social, natural and/or physical capital), at a cost to the financial capital stock. In general, consumption spending supports current living standards, whereas investment spending supports future flows of wellbeing.

The benefits of government expenditure must be weighed against the costs of financing them. The tax system has several roles: a source of revenue; a means of redistribution; a policy instrument; and a macroeconomic stabiliser. Any given tax policy will have numerous impacts on individuals’ incentives, behaviours, income and consumption. Some of these impacts will be intended, and help to achieve the aim of that policy – to raise revenue, redistribute or change behaviours. Other effects of the tax policy will be unintended, and often carry costs.
At a macroeconomic level, the size of government – how individual expenditure and taxation policies sum together – also matters for living standards. Expenditure and taxation enable government redistribution and provision of goods, services and income. In turn, government expenditure and tax decisions affect individuals’ access to the domains of wellbeing, like income and consumption (via tax or income support), health (via healthcare programs), and housing (via the provision of, or subsidies for, housing). Because fiscal strategy sets out the overall levels of government expenditure and taxation, fiscal strategy affects governments’ ability to support New Zealanders’ access to the domains of wellbeing.

Annex 1 discusses how fiscal structure affects short-term living standards through the above channels in more detail.

2.2 Macroeconomic stability in the medium term

Macroeconomic stability can support New Zealanders’ access to the domains of wellbeing in bad times. Government policies support macroeconomic stability where they stabilise the economic cycle and/or offset economic shocks. Fiscal policies can stabilise the economy by running ‘looser’ in bad times, meaning governments provide more goods and services when they are needed most.11 The ability to borrow enables governments to run stabilising, countercyclical fiscal policy.12 Debt finance can be used to balance revenue and expenditure flows over the medium term – allowing debt to fluctuate around a given level – rather than requiring revenue and expenditure to be equal in each period.

Debt finance can support living standards by contributing to macroeconomic stability. Debt finance relaxes the government’s annual budget constraint, by allowing governments to smooth the costs of expenditure over multiple periods. This flexibility enables governments to buffer systemic risks to individuals’ living standards and to moderate the effects of business cycles.

In downturns or following negative shocks, the value of government expenditure increases, but the capacity to fund expenditure from tax revenues decreases. In bad times, debt finance can supplement tax revenue to support New Zealanders’ access to income, goods and services when they need it most. In this way, debt finance bridges the mismatch between the need and capacity to fund expenditure, by smoothing the costs of expenditure over time. If the costs of expenditure are repaid by the same generation that benefits, debt finance maintains intergenerational neutrality.

The ability to borrow is constrained by fiscal sustainability requirements. Over an infinite timeframe, the government faces an intertemporal government budget constraint (IGBC). The IGBC prescribes that the net present value of all future primary balances must be equal to the initial stock of public debt.13

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11 Conversely, poorly managed fiscal policy can add to economic volatility.
12 Section 3.1 discusses the long-term effects of economic stability and the role of debt as an investment tool.
For fiscal sustainability, it matters whether debt is used to finance recurring or temporary expenditure. There is a stronger case for debt-financing temporary expenditure than permanent expenditure. Debt-financing permanent consumption risks intergenerational equity and fiscal sustainability in ways that temporary debt finance does not. From a sustainability perspective, the debt-to-GDP ratio cannot be increased in perpetuity, without a plan to service the interest costs. From an equity perspective, debt-financed consumption may be considered unfair, because it imposes a liability on future generations without transferring a matching asset.

Cyclical or one-off increases to debt can be incurred to support living standards in economic downturns or following negative shocks, such as COVID-19, and can then be repaid in more stable times. Unlike permanent debt finance, cyclical and one-off increases of debt to GDP make the level of debt to GDP over time more volatile around its trend level, but do not change the underlying trend of debt to GDP.

Fiscal policy works alongside monetary policy to determine the overall macroeconomic policy mix for stability. Traditionally, monetary policy has been assigned primary responsibility for stabilising the economic cycle. As government spending is a large part of the economy, fiscal policy can support (or exacerbate) the role of monetary policy by being more (or less) countercyclical. The relative composition of fiscal and monetary policy matters for interest rates, exchange rates, and the distribution of goods, services and income.

Given their respective advantages and limitations, some mix of both fiscal policy and monetary policy is likely to be appropriate. The appropriate policy mix will also depend on the economic context.

Annex 2 discusses in more detail how debt finance can affect living standards over the medium term by contributing to macroeconomic stability.

3 Future living standards

Fiscal strategy decisions made now have long-term consequences. Fiscal strategy decisions today will shape the needs of future generations, and the ability of future generations to meet those needs in support of their living standards. This section discusses some of the trade-offs between supporting living standards now and in the future. In particular, this section explores how future living standards depend on:

3.1 The capital stocks accumulated or safeguarded in previous periods, and

3.2 Fiscal sustainability – the ability to continue to tax, borrow and spend.

This discussion directly relates to the government’s PFA requirement to consider the likely impact of fiscal strategy choices on present and future generations.

3.1 Accumulating, safeguarding and running down capital stocks

Living standards in a given period depend on the level and distribution of the four capital stocks. Because capital stocks are passed through generations, current period decisions about whether to maintain, grow, or run down capital stocks bear on future generations’ living standards.

Countercyclical fiscal policies can support future living standards by reducing volatility and the uncertainty it causes. Economic stability supports living standards by avoiding uncertainty, which can lower investment in a range of capital stocks. For example, Bloom (2014) finds that uncertainty reduces the willingness of firms to hire and invest. This inhibits growth of human and physical & financial capital stocks. Potential consequences of instability include erosion to:

- Human capital – the hysteresis effects of extended periods of unemployment diminish labour market attachment, skills, and labour productivity (Blanchard and Summers 1987). Increasingly, it seems likely that labour market scarring and lower productivity reduce subsequent potential output (Furman and Summers 2020). Conversely, as unemployment rises, people tend to substitute work for study (Statistics New Zealand). To some degree, this substitution effect may help to build the human capital stock.

- Social capital – a wide literature points to unemployment and low income as a barrier to social participation and increasing the risk of social isolation (see for example Gallie 2003; Canduela 2014; Lindsay 2010). The impact of unemployment on social capital may affect human capital; decreased social capital can increase feelings of social isolation, which may harm individuals’ mental health, social connection and civic engagement.

- Financial capital – macroeconomic stability protects individuals’ access to income and employment, and the fiscal position (by maintaining revenue streams and mitigating expenditure pressures).
Often, capital stocks can be managed in ways that support both present and future living standards. For example, countercyclical fiscal policy can support both present and future living standards. As discussed in section 2, countercyclical spending in response to shocks supports living standards in the near-term, by supporting individuals’ access to the domains of wellbeing. Economic stability also supports future living standards, by preserving the capital stocks. Increasingly, economists are identifying links between business cycles and trend economic growth. These studies emphasize the importance of stabilisation policy to protect against economic scarring and support higher trend growth (Cerra 2020).

However, policymakers sometimes face inter-temporal trade-offs between managing the capital stocks for present or future living standards. Given scarce resources, making investments in the four capital stocks may require trading off consumption in the current period. For example, safeguarding and investing in our natural assets for the next generation means limiting our own use of those assets – limiting deforestation, carbon emissions, pollution – all of which can limit access to domains of wellbeing today, like income, consumption and housing.

Governments also ought to consider how regulations and public investment affect private investment incentives. New Zealand’s total capital stocks depend on both public and private investment decisions, and these choices are interdependent. For example, government borrowing can crowd out private investment, by raising interest rates. Equally, the structure of government finance can reduce New Zealanders’ incentives for private savings, for example by providing a social security net which reduces individual risk.

Underinvestment in the capital stocks now will undermine future living standards. If we care about present living standards, there are limits to how much we’ll pay for goods and services that will primarily benefit future generations. This mismatch between the costs and benefits of investments across time may lead to under-provision of intergenerational assets. This might lead, for example, to underinvestment in public infrastructure, research and development, and pollution management. Equally, current generations face incentives to overconsume the capital stocks. For example, current generations may overconsume common resources like fish stocks, forestry and fiscal space. Because the capital stocks are passed down across time, such resources can be considered intergenerational assets.15

It is also possible to overinvest in the capital stocks, to the detriment of current and future living standards. Overinvestment occurs where the time and effort spent building and maintaining the capital stocks lowers living standards, compared to directing that time and effort to using the capital stocks. At this point, the economy is ‘dynamically inefficient’ (Diamond 1965). In this case, current generations could increase their own consumption without reducing future generations’ consumption. Conversely, an economy is dynamically efficient when capital goods are scarce and the marginal return to capital is greater than the economic growth rate. In this case, increases in long-term consumption require short-term reductions in consumption, to instead invest resources in the capital stocks. Therefore, a dynamically efficient economy forces trade-offs between current and future consumption and living standards.

15  Lee and Mason’s method of National Transfer Accounts presents one way to measure intergenerational assets. Resources are available at http://www.ntaccounts.org/web/nta/show/
Traditionally, the concept of dynamic efficiency has been applied to physical capital. Analogously, the concept can be applied to the four LSF capital stocks. For example, at some point, current and future living standards would be better served by having trained professionals enter the workforce, rather than continue training (investing in their human capital). The optimal level of capital occurs when the return to capital is equal to the growth rate of the economy. This level of capital maximises living standards. Different structures of government finance can bring the level of capital nearer its optimal level, by affecting individuals’ savings and investment incentives. For example, the structure of government pension programmes affects individuals’ incentives to save for their retirement (see for example Coleman 2012).

Debt can be an effective and equitable tool for funding investments in future living standards. In the same way that governments intervene to redress market failures at a point in time, governments can remedy market failures across time. Given the chance, many future generations of New Zealanders would invest now to build capital stocks that they can benefit from later. For example, future New Zealanders may be willing to pay for current investments in infrastructure, health, education and environmental conservation. Governments facilitate these transfers across time, by issuing and investing debt on behalf of future New Zealanders. Future New Zealanders then inherit both the invested asset and a liability – the debt to be repaid.

However, uncertainty about future needs complicates investing for future living standards. A range of changes – including population ageing, climate change, technological innovations and natural disasters – will affect New Zealanders’ needs, and reshape the role of government. Building the capital stocks places New Zealanders well to cope with future changes. However, as the future needs and preferences of New Zealanders become increasingly uncertain further out in time, there is a higher risk that benefits from long-term investments won’t be realised.

Making trade-offs between supporting present and future living standards is subjective. Decisions about how to use or safeguard assets reflect trade-offs between supporting current and future living standards. A starting point might be that we want to leave overall assets in no worse state than we received them. New Zealanders today have inherited a wealth of assets – including our cultural identity, governance institutions, natural environment, physical infrastructure and fiscal position. Many of these assets preceded us, and present generations may feel a duty to safeguard these assets, to be inherited by future generations and support their living standards.

Fairness in fiscal strategy depends on the generational incidence of fiscal policies. ‘Intergenerational neutrality’ is one possible interpretation of fairness. This means that the same generation bears both the costs and benefits of an initiative. Generally, this means funding goods and services that benefit current generations from tax revenue, and saving to fund goods and services that will benefit current generations in the future, such as pensions (Coleman 2012, 2014). By contrast, debt finance would shift the cost of those goods and services to future generations. A sense of fairness in the fiscal strategy makes an important contribution to social capital, which can support civic engagement, cultural identity and subjective wellbeing.
Intergenerational neutrality underpins the ‘Golden Rule’ of fiscal policy which states that, over the economic cycle, the government should only borrow to invest, not to fund consumption spending. In some ways, New Zealand’s fiscal framework provides for a ‘Golden Rule’ approach to spending. The PFA principles require that operating expenses do not exceed operating revenues, over a reasonable period of time. This principle allows governments to debt-finance capital (non-operating) spending, subject to maintaining debt at prudent levels. However, this principle does not guarantee intergenerational neutrality. This is because some operating expenses, like education and health, build intergenerational assets, and because pay-as-you-go welfare models may lead to intergenerational transfers from young to old (Coleman 2012).

### 3.2 Fiscal Sustainability

**Future living standards depend on future governments’ ability to borrow, tax and spend.** As discussed in section 2 and the annexes, governments’ ability to tax, borrow and spend can be used to support living standards at that point in time. Tax policies can redistribute resources and induce behavioural changes in ways that support living standards. Debt finance can insulate New Zealanders from the negative living standards effects of shock events and economic volatility. Together, debt and tax enable the government to spend – to provide goods, services and transfers that support living standards.

**Fiscal sustainability is necessary to ensure governments may spend, tax and borrow in the future.** Fiscal sustainability is a forward-looking concept, meaning that, over the long term, governments can afford their spending. Fiscal sustainability is necessary to sustain everyday spending and respond to future shocks and cycles, in support of living standards.

Fiscal sustainability requires satisfying the IGBC. The IGBC (discussed further in annex 2) sets out how current fiscal strategy choices affect future governments’ fiscal strategy options. The IGBC can be expressed (notation is defined in annex 2):  

\[
\frac{B_{-1}}{Y_{-1}} - \rho_N \frac{B_N}{Y_N} = \sum_{n=0}^{N} \rho_n \left( \frac{T_n - G_n}{Y_n} \right)
\]

Where \( \rho_n = \frac{1 + g_n}{1 + r_n} \), \( \rho_{n-1} \) and \( \rho_{-1} \equiv 1 \)

Given a binding debt target in year \( N \), the finite-horizon IGBC states that the present discounted value of future primary balances to year \( N \) must be equal to the difference between the initial debt and the present discounted value of terminal debt in year \( N \). There are many different fiscal strategies that can satisfy this constraint, with different implications for intergenerational equity. Section 3 discussed implications of the IGBC for debt sustainability and intergenerational equity. For the discussion in this annex, what matters is that governments have flexibility about when they pay for goods and services they provide.

Within the IGBC, two relationships underpin fiscal sustainability: the relationship between taxes and spending in each period (the primary balance); and the relationship between the interest rate and economic growth rate. Below, we set out how these relationships affect fiscal sustainability.

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**Primary balance** – The primary balance is the annual shortfall/surplus between taxation and spending (excluding net finance costs), which is made up by issuing/repaying debt. Over time, the flow of primary balances adds to or subtracts from the stock of public debt. Debt obligations impose costs on future generations that limit their ability to spend on other things. The costs of debt finance may include:

- Obligations to pay the interest on incurred debts.
- The costs of raising distortionary taxes to service debt obligations.
- Limited ability and/or higher costs for issuing new debt.

Lower debt provides future governments with more fiscal space – the scope for governments to borrow – which is a store of financial capital and resilience. However, future generations are also likely to benefit from debt-financed expenditure. As discussed in section 3.1, if debt is used to finance intergenerational investments, future generations inherit both a debt liability and an asset that supports living standards. Whether incurred debts are positive for future living standards depends on the resulting balance of inherited assets and liabilities. Therefore, the benefits of lower debt need to be weighed against the opportunity cost of foregone investments in intergenerational assets, like physical, human, natural and social capital.

**Economic growth** – The GDP growth rate determines the effective debt burden and the taxable base of the economy. Whilst primary balances and interest rates determine the nominal level of debt, a more relevant measure of debt is the ratio of debt to GDP. This measure accounts for a country’s ability to service its debt, because nominal GDP is a proxy for the tax base. As GDP grows, the ‘denominator effect’ means that debt decreases, as a percent of GDP.

Growth makes increases to spending more affordable, by increasing the tax base and decreasing the effective debt burden, as a percent of GDP. Conversely, governments’ consumption, investment and financing decisions also influence economic growth. Overall, the effects of government expenditure on long-run growth are inconclusive, and are heavily dependent on the type of expenditure, and how it is financed (Buckle 2008; Cook 2011).

**Interest rates** – Separate to repaying the principal sum of debt, revenue must be raised, or new debt issued, to pay the interest charged on debt.

Interest rates are a function of various factors, including: the risk that the government will not repay the principal sum; the time-value of that money; the relative risk of government bonds and other investment instruments; and the risk appetite of investors. In orthodox models, the interest rate on debt is likely to increase with the level of existing debt and with the riskiness of a country’s economic and fiscal outlook. Because these factors relate to the interest rate non-linearly, the marginal and total costs of servicing debt are higher at higher levels of debt. Therefore, servicing debt at high levels crowds out other government spending in support of living standards, compared to maintaining debt at prudent levels.

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This orthodoxy – that the marginal cost of debt increases with the total stock of debt – is increasingly being challenged. The COVID-19 pandemic, and central banks’ responses to it, have accelerated a steady decline in real interest rates, even as sovereign debt increases (Furman and Summers 2020). Observing this, calls to reconsider how governments measure and consider debt sustainability are gaining traction. If interest rates remain low, then a relatively higher level of debt can be serviced sustainably. If prevailing interest rates are lower than the growth rate of the economy, then deficits could even be sustained indefinitely. Given this, some commentators are advocating for a shift away from targeting debt and operating balance levels, and towards targeting the ongoing cost of debt servicing.

However, uncertainty about the future path of interest rates makes targeting debt finance costs risky. Should interest rates increase significantly and unexpectedly, fiscal policy may need to contract severely to return spending to a sustainable path. At the same time, overly conservative fiscal policies risk missing opportunities to make worthwhile investments now, such as investments that support the transition to ‘greener’ economies. Post-pandemic, emergent debates are weighing the costs of not spending enough now (assuming interest rates remain low), with the potential costs of increasing debt to unsustainable levels, should interest rates increase unexpectedly.

The relationship between the growth rate and interest rate matters for fiscal sustainability. If the rate of return on government spending is greater than the interest rate on the debt used to finance that spending, then spending can actually improve the debt to GDP ratio (Blanchard 2019). As noted above, if the economy is growing, it can sustain increases in nominal debt where the interest rate on debt is less than the growth rate of the economy \((r \leq g)\). Structural changes in growth and interest rates therefore have implications for debt sustainability (Blanchard 2019; Guillemette 2018).

The growth rate and interest rate are likely to be co-dependent. Debt-financed expenditure can spur growth, for example through spending on effective education or research and development programs. Conversely, higher interest rates are likely to hamper growth, by weakening the incentive to invest.

Fiscal sustainability is not sufficient to support living standards across generations. A fiscal strategy may be fiscally sustainable but inter-generationally inequitable. For example, a fiscal strategy which debt-finances short-term consumption to be repaid by future generations may satisfy the IGBC, but is unlikely to be perceived as equitable. Such a fiscal strategy supports living standards today, by compromising future living standards. To support intergenerational wellbeing, fiscal strategy must be both sustainable and equitable.

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19 The economic growth (fiscal multiplier) effects of government spending are discussed in section 2 of annex 3.
4 Intergenerational Wellbeing

We take it as given that New Zealanders and their governments care about both present and future living standards. The preceding sections discussed how fiscal strategy affects living standards over the short, medium and long term. In practice, fiscal strategy objectives to support living standards in the short, medium and long term cannot be pursued in isolation. Governments’ choices about spending and financing today will have consequences in the future. Sometimes, these choices will support living standards across time. Often, these choices imply trade-offs across generations’ living standards.

Setting a fiscal strategy to support intergenerational wellbeing requires value judgements. Views on the ‘optimal’ fiscal strategy will be unique to each New Zealander, reflecting individual preferences about how to best support living standards, and how to weight current and future living standards. Further, setting fiscal strategy requires judgements about how to manage uncertainty, given information limits to individuals’ preferences and needs, which become more uncertain further out in time.

Despite these challenges, setting fiscal strategy with an intergenerational view is important for fiscal sustainability and intergenerational equity. Governments cannot know what choices will best meet the needs of current and future generations. However, governments can attempt to foresee needs of future generations, plan contingencies for unforeseeable needs, and invest in the four capital stocks accordingly – by paying down debt to build public financial capital, or building non-financial capital stocks.

This section discusses:

4.1 The fiscal sustainability outlook – how are New Zealand’s public finances currently placed to support living standards, now and in the future?

4.2 Value judgements that fiscal strategy choices require or imply

4.3 Challenges that governments face in formulating sustainable fiscal strategies

4.4 Fiscal frameworks to support fiscal sustainability and intergenerational equity

4.1 Fiscal sustainability outlook

If we care about our future living standards, and the living standards of future generations, then we should hold governments to account for making sustainable fiscal choices on New Zealanders’ behalves. Fiscal sustainability ensures that the government can continue to borrow, tax and spend to provide goods and services in support of living standards, in the long term. Together, fiscal sustainability and intergenerational equity mean meeting the needs of today, without compromising future New Zealanders’ ability to meet their own needs.

The PFA requires governments to have regard to the likely impact of fiscal strategy decisions on present and future generations. At least every four years, the Treasury publishes a Long-term Fiscal Statement, to help governments, parliament and the public to understand and debate the long-term fiscal implications of policy settings and New Zealand’s fiscal
preparedness to respond to changing trends and future shocks. The 2021 Statement provides an assessment of New Zealand’s fiscal position over the next forty years.\(^{20}\)

**New Zealand’s fiscal position is well-placed to meet the needs of the present.** By international and historical standards, New Zealand has a strong fiscal position. Low levels of net debt (19.5% of GDP at January 2020, prior to the COVID-19 pandemic, and 33.3% of GDP at March 2021) reflect resistance to a deficit bias and the political premium placed on resilience.\(^{21}\) As a small, open economy, New Zealand is particularly vulnerable to global economic shocks and domestic natural disasters. Low debt levels enable us to affordably access debt to support living standards in the face of shocks, as the fiscal response to the COVID-19 shock demonstrates.

**There are challenges on the horizon that jeopardise governments’ ability to meet the needs of future New Zealanders.** The 2021 Statement identifies and discusses some of these challenges including population ageing, and related pressures on health and superannuation expenditure, and climate change. New Zealand’s capacity to deal with future fiscal pressures depends on governments’ and individuals’ ability to make forward-looking decisions that anticipate and adapt to changing trends.

**Looking forward, New Zealand’s fiscal sustainability depends on a number of factors.**\(^{22}\) As discussed in section 3.2, fiscal sustainability depends on the outlooks for:

- **Primary balance** – The costs of managing ongoing stresses like an ageing population are projected to place upward pressure on expenses whilst placing downward pressure on revenue growth. Together, this places downward pressure on the primary balance, increasing nominal debt.

- **Economic growth** – New Zealand’s economy is projected to continue growing. However, unknown shocks, including increasingly frequent and severe weather-related shocks, are likely to hamper the rate of economic growth. The effects of population ageing on economic growth are ambiguous, owing to uncertainty about how the composition of savings and consumption will shift, and uncertainty about the productivity implications of an older workforce (van Rensburg forthcoming).

- **Interest rates** – Since the GFC, there is evidence of a structural decrease in the neutral interest rate, meaning interest rates are projected to be lower for longer (Treasury 2019). This trend has recently accelerated as the COVID-19 pandemic, and central banks’ responses, place further downward pressure on interest rates. All else equal, lower interest rates decrease the effective cost of borrowing.

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\(^{20}\) The 2021 Statement is scheduled to be published in September 2021. The 2021 Statement and supporting background papers will be available at https://www.treasury.govt.nz/publications/strategies-and-plans/long-term-fiscal-position

\(^{21}\) As at May 2021, net debt was forecast to reach 43.6% of GDP in 2024/25. The Treasury’s BEFU 2021 forecasts are available at https://www.treasury.govt.nz/sites/default/files/2021-05/befu21.pdf

Without changes to current expenditure and revenue settings, public debt is at risk of increasing to unsustainable levels. If successive governments do not change New Zealand Superannuation (NZS) entitlement rules, healthcare and other expenditure categories grow at historical trends, and revenue is maintained at historical levels, then spending will exceed revenue on an ongoing basis and debt will increase. The sustainability of higher debt will depend on future interest and growth rates, which are highly uncertain. However, higher debt exposes the balance sheet to more interest rate risk, and may lead to higher interest costs. If realised, these dynamics would lead to higher debt-serving costs, which in turn may lead to even higher debt, yet higher interest costs and so on. The 2021 Statement will provide updated projections of spending pressures, debt-serving costs and debt levels.

It should be emphasised that this is not a prediction of what will happen, but a signal of what should be avoided. In practice, we expect governments will make changes to expenditure and revenue settings to manage emerging fiscal pressures. To support the living standards of both current and future generations, governments must make forward-looking, sustainable and equitable fiscal strategy choices. Where pressures are foreseeable, small changes, made early would eliminate the need for much larger and more disruptive changes later on.

4.2 Making value judgments

Setting a fiscal strategy requires balancing a range of value-laden considerations. An individual’s preferred fiscal strategy will depend on the value judgements they hold. Fiscal strategy decisions require value judgments about:

- Role of government – New Zealanders will hold different ideological preferences about the degree to which a government should intervene in markets and facilitate common resource management, if at all.

- Intra-generational distribution – New Zealanders will have different preferences for the level of redistribution amongst a generation, reflecting different concepts of fairness. Concepts of fairness differ in their emphasis on merit, equality and need. Intra-generational distributional preferences influence the incidence of taxation and government goods and services across a generational cohort.

- Intergenerational distribution – The responsibilities that generations owe to one another for the maintenance of intergenerational assets are not clear. Attitudes towards kaitiakitanga and intergenerational stewardship will influence the rate at which we discount benefits realised further out in time.
Discount rates attempt to formalise the judgements that we apply to adjust for the changing value we attribute to the costs and benefits of policies across time. Different approaches to choosing public sector discount rates reflect varying judgements about the social rate of time preference and the relative weights of current and future living standards. A non-zero discount rate implies a greater weighting of benefits received today than in the future. In part, discounting reflects uncertainty about the effectiveness of long-term investments meeting unknown future needs.

- Risk – Given uncertainty about what future needs will be, there is a risk that governments’ fiscal strategies misjudge the forms and levels of capital that will support future living standards. How governments make decisions under this uncertainty depends on their risk preferences.

4.3 Challenges

A key message of this paper is that fiscal strategy choices require challenging trade-offs between supporting different New Zealanders’ living standards across and within generations. However, even for a specified set of distributional preferences, governments face challenges when designing a fiscal strategy to achieve given distributional objectives. These challenges include:

- Present uncertainty – Governments face uncertainty about current New Zealanders’ needs and preferences, and the effectiveness of different policy options to meet those needs and preferences. In brief, we don’t know for certain how a policy will affect living standards.

Further, governments face uncertainty about the fiscal implications of policies. For example, the effective cost of increasing debt to finance physical investment will depend on the growth and interest rate effects of that investment. In turn, these effects depend on uncertain assumptions about the behavioural and market response to a given investment package.

- Future uncertainty – Similarly, governments face uncertainty about New Zealand’s social and economic future. This uncertainty poses an informational challenge to government investments for future needs and preferences.

23 Resources on discount rates:


Discounting – Whilst we may have qualitative preferences about the treatment of living standards across time, it can be challenging to formally model those preferences, for example through the application of public discount rates, discussed on page 19.

Political economy pressures and institutional design – including regulatory capture and the incentives of short-term electoral cycles, which pose time inconsistency problems. Unlike the above challenges, which reflect uncertainties, political economy challenges are within governments’ control. Institutions can be structured to mitigate these challenges, for example through legislating principles for setting fiscal strategy, delegating powers to an independent central bank, and/or establishing independent fiscal institutions (see for example Wren-Lewis 2011).

4.4 Fiscal frameworks

Well-developed fiscal frameworks can guide governments to make sustainable fiscal strategy choices. Such frameworks help governments to make short-term decisions with a long-term view, navigate uncertainty, and mitigate political economy pressures. Below, we stylise a three-step approach to formulating fiscal strategy, consistent with requirements set forth in the PFA. The three considerations are:

- **Managing risk and resilience** – Governments face a range of future uncertainties, and must make choices about how to prepare for and respond to risks. One way to prepare for risks is to invest in the capital stocks. The capital stocks are stores of resilience which enable New Zealanders to absorb shocks and adapt to long-term stresses. To prepare for risks, governments need to assess the risks they face, anticipate the capital stocks that will provide the most resilience, and invest in capital stocks accordingly.

- **Long-term objectives for fiscal policy** – Because capital stocks accumulate over time, achieving and maintaining the capital stocks to provide a given level of resilience requires long-term planning. Here, we set out considerations for governments when choosing target levels and compositions of stores of resilience. To build resilience to cope with shocks, we emphasize the value of prudent debt as a store of liquid resilience.

- **Short-term intentions for fiscal policy** – Achieving long-term objectives requires action in the short term. Here, we discuss principles for operationalising long-term objectives by specifying short-term intentions. Short-term intentions ought to balance the imperative for fiscal constraint, necessary to achieve long-term objectives, with the need for fiscal flexibility, to play a stabilising role for living standards.

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Managing risk and resilience

**PFA s26G Principles of responsible fiscal management**

(1) (c) achieving and maintaining levels of total net worth that provide a buffer against factors that may impact adversely on total net worth in the future; and

(d) managing prudently the fiscal risks facing the Government.

**New Zealand faces a range of risks.** Some of these risks are predictable – we know we may face future earthquakes, recessions and disease outbreaks, although we cannot know when these shocks will be realised or how severe they will be. Other risks are unknowable. While we can be certain that economic pressures and opportunities in New Zealand will change, we cannot be sure how or when they will change.25

Distinguishing between shocks and stresses is one way to think about future uncertainties. Shocks and stresses are types of risks to the economy, the balance sheet and New Zealanders’ living standards. Though sometimes overlapping in practice, shocks and stresses are distinct concepts, and call for different policy responses.

- **Shocks** are sudden, disruptive, one-off events, like earthquakes or a sudden economic downturn triggered by global events, like the COVID-19 pandemic.

- **Stresses** are long-term, slower-moving changes, like climate change and population ageing.

**The appropriate fiscal response to a risk event will depend on whether it is a shock or a stress.** When responding to a one-off shock, it may be appropriate to debt-fund a response to ‘absorb’ the shock in the Government’s balance sheet. This buffers individuals’ living standards from negative effects and smooths the costs of the response across time. In response to the shock of the Canterbury earthquakes, for example, the Government rebuilt physical capital and provided emergency services and ongoing support to affected people, and paid for these investments and services by increasing public debt, to be repaid in following years. Responding to one-off shocks in this way is sustainable – it maintains governments’ ability to support future living standards, whilst meeting the immediate needs of current generations.

**Responding to long-term stresses requires structural change.** Increasing debt to buffer New Zealanders from the effects of stresses may support living standards in the short term. However, governments cannot continually ‘absorb’ stresses through borrowing. Without a structural response, debt would become unsustainable, increasing until governments can no longer borrow to fund the goods and services they provide. This is also inequitable, because it meets the needs of current generations in ways that significantly compromise future living standards. Sustainably responding to stresses requires governments to ‘adapt’ to the new state of the world, for example adapting expenditure, tax or regulatory settings.

25 The 2021 Statement will model and discuss the potential impact of shocks on New Zealand’s fiscal position.
In practice, there can be links between shocks and stresses. Often, shocks are symptoms of stresses. For example, although climate change is a long-term stress, it is likely to be correlated with an increasing frequency and severity of climate shocks, like droughts and flash floods. These shocks can look idiosyncratic, but are related. Because it’s easier to ignore slow-moving change, it sometimes takes a large shock to spur us to adapt to an underlying stress. Misdiagnosing stresses as unrelated shocks risks responding in ways that seek to absorb the cumulative shocks rather than adapt to manage the underlying stress.

Achieving fiscal sustainability over the long term will require continued fiscal resilience. Resilience is the ability to adapt to or absorb changes, both to mitigate the negative effects on living standards and to make the most of positive opportunities. Being resilient and sustainable requires responding to shocks (eg, a recession) and stresses (eg, population ageing) in ways that will enable the government to continue providing goods and services in the short term, without jeopardising the government’s ability to absorb future shocks and adapt to future stresses.

A strong government balance sheet is an important, liquid store of resilience. At a macroeconomic level, New Zealand’s fiscal framework emphasises prudent debt levels as a store of resilience. Achieving and maintaining prudent debt levels can be thought of as an investment in the government’s financial capital. Prudent debt levels ensure that, when risks eventuate, the government can afford to debt-finance goods and services to manage the effects of that shock (Romer 2019). Given the unpredictability of future shocks, the liquidity of financial capital – which can readily buy a range of goods and services, targeted to support affected groups – makes it an especially effective form of resilience.

Alongside monetised financial & physical capital, New Zealand’s human, social and natural capital stocks are also stores of resilience. At a microeconomic level, for example, New Zealanders rely on social networks for support and human capital to innovate and be professionally adaptable in times of change.

Building resilience is not costless. For example, more earthquake-resilient buildings are generally more expensive, and ensuring that the community has earthquake response plans takes money, time and energy. Further, the uncertainty that the risk will eventuate makes the pay-off for doing it uncertain. This means governments need to consider which risks to address, and who pays the cost.

Investments in financial resilience generally trade-off the opportunity to invest in other stocks of resilience; forgoing expenditure to maintain prudent debt levels may mean forgone expenditure in education or health and therefore human capital, for example. To build resilience, governments need to assess the risks they face, anticipate the capital stocks that will provide the most resilience, and invest in capital stocks accordingly.

Long-term objectives for fiscal policy

New Zealand’s fiscal framework emphasizes achieving and maintaining “prudent” debt levels, as defined by a given government. While a debt objective alone is not sufficient to achieve all fiscal objectives, it provides an anchor that supports fiscal sustainability and guides shorter-term fiscal strategy choices. Currently, the Government is seeking to stabilise net core Crown debt as a percentage of GDP by the mid-2020s and then reduce it as conditions permit, to provide greater resilience against future shocks.
Alongside the debt objective, the PFA principles of responsible fiscal management require governments to achieve and maintain levels of total net worth to provide a buffer against risks.\(^2\) Net worth presents a broader measure of the Government’s assets and liabilities. The net worth principle complements the debt principle, by highlighting the role of public non-financial capital stocks as stores of resilience.

The ‘prudent debt’ principle does not define ‘prudent’. Prudent debt levels depend on levels of risk exposure, risk appetite and complementary forms of resilience, such as the resilience provided by investments in the non-financial capital stocks. These factors vary with time and require judgements. Therefore, governments’ specific debt objectives have evolved over time, and will likely continue to evolve as circumstances change.

There is no single optimal level of debt (Buckle 2008; Makhlouf 2019). Maintaining fiscal space means forgoing consumption now, so that governments can borrow to support living standards in response to future shocks. Therefore, preferences about the level of debt depend on the relative value attributed to spending now, compared with the option value of spending more, or taxing less, later.

There are a number of frameworks for considering prudent debt levels. The IGBC does not specify a maximum level of debt at any single point in time. However, in practice, there are likely to be limits to how much debt a country can sustain. The academic literature suggests three ways to think about the maximum level of public debt: The debt sustainability approach; the market access approach; and the welfare approach (Makhlouf 2019). Each of these approaches provides a different concept of the upper limit of government debt.

To build or maintain stores of public financial resilience, and to anchor fiscal policy choices, governments often set a numerical debt target or range. The maximum debt target a government should consider can be expressed as the maximum sustainable debt level, reduced by that government’s minimum desired ‘fiscal buffer’ – the amount by which governments can afford to increase debt.

Building resilience and avoiding the wellbeing costs of high debt levels are good reasons to target low levels of debt. However, there are also good reasons to have positive levels of debt. For example, if governments inherit debt, that debt is a sunk cost, and reducing debt-to-GDP levels may impose costs through increased taxation or decreased government spending (Ostry 2015). These costs should be considered against the benefits of lower debt and increased resilience.

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\(^{26}\) Section 26J of the PFA also requires governments to report, at least annually, on long-term objectives (for a period of at least the next ten years) for a range of fiscal variables, including total operating expenses, total operating revenues, the level of total debt and the level of total net worth.
There are also reasons to incur new debt. As discussed in section 3, debt is a means to finance intergenerational assets which may otherwise be under-provided, and to achieve intergenerational neutrality of funding. As discussed in annex 2, fluctuations in debt also facilitate macroeconomic stability and tax smoothing, which support living standards.

**The PFA principles can support a living standards approach to fiscal strategy, but still require governments’ own value judgements.** Within New Zealand’s fiscal framework, governments must make value judgements about current and future generations’ living standards and how to manage uncertainty. More information about the generational incidence of fiscal policy would help to implement these judgements. This would enable a more explicit intergenerational approach to managing the balance sheet.

**Short-term intentions for fiscal policy**

Specifying shorter-term fiscal targets can provide a credible plan for building or maintaining a fiscal buffer over time. As a complement to its long-term objectives, section 26K of the PFA requires governments to report, at least annually, its short-term intentions for a range of fiscal variables over the next two years. Governments must also assess the consistency of their short-term intentions with the principles of responsible fiscal management and their long-term objectives.

There is a risk that fiscal rules become overly focused on fiscal constraint. Achieving and maintaining fiscal resilience requires constraint – to avoid financing consumption today, at a cost to future generations. To provide constraint, fiscal rules govern the levels of fiscal variables that governments should target. Common fiscal rules include structural budget balance rules and debt rules which, respectively, set numerical limits on the amount governments may spend in a given year and borrow in aggregate. These rules seek to support fiscal sustainability and counter time-inconsistency problems. In the short term, these rules also bind the level of fiscal variables that governments may target. For example, a strict balanced budget rule means that taxation must fund all expenditure in each year.

However, too narrow a focus on fiscal constraint can be pro-cyclical and counterproductive. For example, as discussed in section 2 and annex 2, austerity policies that seek to decrease deficits or increase surpluses in bad times can undermine living standards in the short term, by exacerbating the downturn. In the long term, such constraint may also hamper growth and living standards, through underinvestment in the capital stocks. By enabling debt to fluctuate, fiscal strategy can contribute to macroeconomic stability in support of living standards now and in the future. However, the stabilising role of fiscal policy needs to be considered with regard to its interaction with monetary policy and sustainability requirements.

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27 The International Monetary Fund maintains a database of countries’ fiscal rules at [https://www.imf.org/external/datamapper/fiscalrules/map/map.htm](https://www.imf.org/external/datamapper/fiscalrules/map/map.htm). By these classifications, New Zealand currently has a budget balance rule and a debt rule.

Balancing constraint with flexibility is a core challenge for short-term fiscal strategy. In effect, short-term fiscal intentions should be flexible enough to look through or counter temporary changes to government revenues and expenses, without jeopardizing long-term sustainability. To this end, in New Zealand, the PFA principles of responsible fiscal management are caveated with an ‘escape clause’. This clause permits governments to depart from the principles of responsible fiscal management temporarily, as long as they state the reason for that departure, and a plan to return to the principles.

It can be hard to distinguish between sustainable and unsustainable reasons to borrow. In real time, it’s hard to judge whether changes to New Zealanders’ needs and governments’ expenses and revenues are temporary or permanent. Therefore, it’s challenging to know whether fiscal policy deficits are cyclical and sustainable, or structural and unsustainable. Estimates of the ‘cyclically-adjusted balance’ (CAB) provide one indicator of whether deficits are structural or cyclical. The CAB estimates what the operating balance would be if the economy were operating at its potential. The CAB is constructed using estimates of the output gap – that is, how far the economy is operating from its potential. While CAB estimates can help to inform the appropriate stance of fiscal policy, they are highly uncertain.

Conclusion

There are many determinants of living standards that governments do not control. Living standards depend on the environmental and international context that New Zealanders occupy but do not fully control. Living standards also depend on decisions made by individuals, businesses, families and the Government. However, governments’ fiscal strategies – choices about how and when governments collect revenues, spend and borrow – are one significant determinant of living standards.

Fiscal strategy affects living standards by influencing the allocation of resources in society. In the short term, choices about fiscal structure – how the Government spends and taxes – affect the distribution of income, goods, services and living standards within generations. Over the medium term, funding consumption from debt finance can buffer living standards from the effects of negative shocks and economic cycles. However, the sustainability of debt finance depends on a plan to service debts over the long term. In the long term, future living standards depend on near-term decisions about how to manage the four capital stocks, which are transferred through generations. Sometimes, near-term decisions support living standards both now and in the future, by preserving the capital stocks. Other times, investing in the capital stocks for future living standards implies trade-offs for current living standards.

To support intergenerational wellbeing, governments should set sustainable and equitable fiscal strategies. Intergenerational equity depends on judgements about who should pay for government spending. There are infinite fiscal strategies that could be considered sustainable. However, depending on which generation benefits from and pays for government spending, fiscal strategies will have different implications for intergenerational equity. Many different fiscal strategies could be considered equitable, depending on value judgements about what responsibilities present generations owe to future generations.
Our current fiscal framework supports a focus on sustainability but does not ensure intergenerational wellbeing. In part, this is because governments face uncertainty about the requirements for fiscal sustainability and equity. Governments cannot be certain what the needs, preferences and means of future generations will be. This results in uncertainty about how to effectively support future living standards. Governments also face ambiguity about their responsibilities to support future generations' living standards, especially where doing so trades off current living standards.

Reflecting these subjectivities, the PFA leaves each government to define what the PFA principles mean to it, providing flexibility over time. This transparency-based framework is supported by a series of reporting requirements, so that governments must articulate, and can be held accountable for, the judgements that underpin their fiscal strategy.

The requirements for fiscal sustainability will change over time, and fiscal frameworks should support governments to navigate these changes. Recent fiscal and economic changes, driven or amplified by COVID-19, and foreseeable pressures like climate change and population ageing raise questions about the suitability of our fiscal framework for the future. If need be, our fiscal framework should evolve to reflect these changes, to support governments to consider those factors that matter for fiscal sustainability and equity. For example, interest rate and growth rate dynamics raise questions about the necessity of running surpluses, on average, to ensure fiscal sustainability.

This paper identifies policy frameworks for setting fiscal strategy with a focus on intergenerational wellbeing. As the 2021 Statement sets out, New Zealand faces a range of foreseeable fiscal stresses, including demographic change and climate change. In addition, New Zealand will also experience shocks that we cannot foresee, like recessions or natural disasters. Governments’ ability to absorb the effects of negative shocks on living standards will depend on making forward-looking choices to adapt to longer-term trends and stresses. Maintaining a strong fiscal position is one way to build New Zealand’s resilience to future changes.

There is more to learn about the intergenerational effects of fiscal strategy choices. Improved measurement of the generational incidence of government revenues and expenses would support judgements about the impact of fiscal strategy on present and future generations. This paper sets out theory, with supporting examples, about how near-term fiscal strategy choices affect living standards across time. In practice, however, it can be difficult to identify the intertemporal effects of policies. Evidence about the intertemporal incidence of policies’ costs and benefits would support governments to realise their objectives for intergenerational equity.
Annex 1: Fiscal Structure

At a given point in time, how might government expenditure and revenue affect living standards at that point in time?

This annex considers how fiscal strategy choices affect living standards:

1.1 Role of government – How can government interventions raise living standards?
1.2 Expenditure – How does government spending affect living standards?
1.3 Taxation – How do taxes affect living standards?
1.4 Size of government – How do spending and tax policies add up?

A1.1 Role of Government – When should governments intervene?

This annex considers how governments may support present living standards given two fiscal strategy levers – the powers to tax and spend. Before continuing, the subsequent discussion about how the government can use its powers to tax and spend begs a question – why do governments have these powers?

Why do governments have the authority to tax New Zealanders and spend that revenue on their behalf? Political scientists might point out that governments can exercise this authority because governments have a unique power to enforce taxation and self-sanction spending programs. In effect, we pay taxes because we have to, irrespective of whether we want to (Slemrod 1990). If we could, would we choose to give governments the powers to tax and spend? Can we be made better off by a dollar taxed and spent by government than by a dollar kept and spent ourselves?29

Governments may be better placed to spend than citizens where:

- **Initiatives require compulsion to be successful.** Collectively, New Zealanders have decided that only the government can compel. Therefore, only the government can legitimately administer programs which require compulsion, such as the justice system.

- **Goods and service are purchased collectively.** This underpins the argument for government purchase of collective goods like roads and the police services. Individually, most New Zealanders value crime prevention and peacekeeping, but may not be able to afford or be compelled to buy policing services and could free-ride on others.

- **There are market failures.** Common market failures include information asymmetries, imperfect competition and externalities, where individuals’ actions have spill-over effects.30

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29 This paper focuses on expenditure and taxation undertaken by central government. However, different countries have varying levels of devolution for expenditure and taxation, and who decides the form and composition of taxation and expenditure matters for the equity, legitimacy and efficiency of fiscal policy.

When governments choose to intervene in markets, they then face questions about how to intervene. Interventions to mitigate market failures require subjective judgements about what the socially optimal amount of an activity or good is, and technical judgements about the intervention that would shift current levels of that activity or good to the socially optimal level. Governments face choices about the instrument of intervention, for example price subsidies or direct provisions, uncertainty about the size and incidence of externalities they seek to redress, and uncertainty about the behavioural responses to intervention.

**Governments can regulate, reprice, pool and redistribute resources to achieve more efficient or equitable outcomes.** Governments often use regulatory levers to mitigate market failures like imperfect competition or information. For example, government bodies like the Commerce Commission monitor and regulate markets to support competition. Equally, where markets create externalities, governments often fund, subsidise or tax goods and activities to encourage a welfare-enhancing level of consumption. By pooling resources through revenue, governments are able to provide valuable goods and services that may otherwise go unfunded, like state highways and the defence force.

By collecting taxes and transferring income, goods and services, governments also redistribute resources within generations. Redistribution supports all New Zealanders to participate meaningfully in society. Redistribution can reduce inequities, reduce inequalities and ensure New Zealanders a minimum level of goods and services. Although redistribution reallocates a given level of material resources, it is not necessarily a zero sum game. Where New Zealanders value the distribution of living standards, redistribution can improve overall living standards – by achieving equity objectives – even if it decreases the income of some New Zealanders.

**However, government interventions can also give rise to new problems.** ‘Government failures’ occur where government interventions shift outcomes in ways that undermine living standards, compared to the market-determined outcome (see Wolf 1979; Le Grand 1991). Government failures often reflect political economy pressures, such as principal agent problems and regulatory capture. In these cases, policymakers’ interests diverge from, and compromise, the public interest.

Public sector management frameworks seek to strengthen accountability between public officials and the public interest. Institutional settings can help to ensure that unelected officials face socially optimal incentives. In the New Zealand context, Crown Entity, State-Owned Enterprise and government agency management are accountable to Parliament for the delivery of functions set out in legislation, and are constrained by resource decisions made by Ministers.

Neither free markets nor government regulation are perfect ways to coordinate individual behaviours. When governments intervene in markets, one relevant benchmark for success is how the outcomes of government intervention compare to a counterfactual of no government intervention (Wolf 1986).
A1.2 Expenditure – How does expenditure affect living standards?

Not all expenditure is the same. Expenditure differs by the level, type, timing and distribution of its costs and benefits. Therefore, the value of any given spending program will differ across New Zealanders.

One significant distinction between different kinds of expenditure is the split between ‘consumption’ and ‘investment’ expenditure. Distinguishing between consumption and investment expenditure is helpful because they have different inter-temporal consequences. Consumption spending is that which uses the four capital stocks. By contrast, investment spending builds the four capital stocks. In general, consumption spending supports current living standards, whereas investment spending supports future flows of wellbeing.

Measuring the capital stocks and understanding their intertemporal benefits is challenging. For example, although we know that individuals’ education and experience is a human capital asset, it’s hard to quantify the value of that stock, or the flows of wellbeing it will yield. Growth in New Zealand’s human capital stock is an ‘investment’ in future living standards; education today will likely pay dividends through increased innovation, productivity and incomes in the future. However, the return on an individuals’ education will depend on their life expectancy, health and career choices, for example. Because some capital stocks are difficult to measure, accounting definitions focus on reporting assets and liabilities that can be measured. From an accounting perspective, consumption expenditure does not purchase an asset and tends to be recurring. By contrast, investment spending purchases an asset and is ‘one-off’.

The LSF takes a broad view of consumption and investment. It is possible that spending considered ‘consumption’ for accounting purposes is considered an investment through the LSF. For example, education spending builds New Zealand’s human capital stock, but this investment is not captured by national accounting standards. Equally, some recurring services prevent the deterioration of capital stocks. Wastewater treatments, for example, protect the natural capital stock.

Where this paper distinguishes between consumption and investment, we refer to the LSF meaning of these terms, rather than their accounting definitions. Where appropriate, this paper generalises consumption and investment as ‘spending’.

Government spending can support living standards in a number of ways. Below, we discuss three core functions of government spending:

- Directly purchasing goods and services to support access to the domains of wellbeing and investment in capital stocks.

- Providing a social security net: To pool risk, redistribute resources; to increase aggregate living standards; and to smooth living standards across individuals’ lifetimes.

- Funding regulatory governance: To facilitate coordination between New Zealanders; to govern the consumption of and investment in capital stocks; and to enable market activity through creating and enforcing property rights.
Most clearly, governments spend to provide goods and services that directly affect wellbeing domains. This spending typically seeks to provide goods with positive externalities, to mitigate market failures. For example, government spending on healthcare is focused on improving health outcomes, and spending on education will directly support attainment of knowledge and skills. Health and education can be considered to have positive spill-overs effects for other New Zealanders. Given finite funds and infinite spending opportunities, governments face trade-offs about where to direct spending.

In New Zealand, and many advanced economies, government spending programs create a ‘social security net’. Many spending programs are targeted to support people who face systemic disadvantage or times of need. For example, the Disability Allowance helps to cover the extra costs of medical help, equipment and transport for people with an ongoing disability or illness. Social security programs generally redistribute income and services within a generation, to support the living standards of a targeted group.

Intra-generational redistribution can improve living standards for several reasons. Assuming diminishing marginal utility of income, goods and services directed towards lower-income and higher-need groups are likely to have a greater positive impact on those groups than they would for higher income or lower-need groups (Easterlin 2005). Redistribution can support higher aggregate living standards by redistributing goods and services where they are most needed and valued.

For similar reasons, governments can also support living standards by smoothing resources available to a given individual across their lifetime. Governments support individuals to invest in themselves despite credit constraints. In childhood, governments support investment in children’s human capital through subsidized healthcare and public education. Similarly, governments offer student loans so that individuals can invest in their own human capital, then repay their loan through the income they derive from their human capital. Governments also buffer uncertainties that individuals face when planning for their unknown future needs. In old age, for example, governments provide pensions to support living costs. Government programs buffer individuals from risks to their living standards about how long they have left to live, their future health status, and the return they will earn on their assets.

The degree to which social expenditures redistribute intra-personally over the life-cycle or inter-personally depends on the type of welfare model. Most social spending consists of intra-personal redistribution in countries with universal welfare-states, whereas inter-personal redistribution of lifetime income is greater in countries with highly-targeted welfare systems (Ståhlberg, 2008). The degree to which redistribution occurs intra-personally, rather than inter-personally, can be considerable. In Denmark, 75% of redistribution from taxes and transfers is estimated to be within a person’s lifetime and 25% between individuals (Bovenberg 2012). In Australia, with a much more targeted welfare system, around 40% of redistribution is estimated to be intra-personal and 60% inter-personal (Ståhlberg, 2008). There are no analogous estimates available for New Zealand, although fiscal incidence studies point to a strong life-cycle element to government expenditures (Aziz 2016).

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The choice of welfare funding model has implications for intergenerational equity and social capital. Where redistribution occurs across generations, welfare models reflect an intergenerational contract. For example, pay-as-you-go pension schemes rely on an intergenerational contract, whereby working age generations pay for retirees’ pensions, in the expectation younger generations will do the same for them (Evans and Quigley 2013). Because these contracts rely on an obligation to care for New Zealanders across generations, social capital sustains many welfare funding models.

**Second, a social security net might be valued for equity reasons.** Government social security settings protect against some of the randomness of where, when and to whom we are born, which are significant determinants of our health, social and economic outcomes. New Zealanders will have different preferences about how much governments intervene to protect against this randomness, to ensure equality of opportunity for New Zealanders. Whether, and the degree to which, goods and services – like healthcare, adequate food and housing, and education – are viewed as rights will also differ among New Zealanders. Governments can redistribute resources to ensure that New Zealanders have sufficient access to the domains of wellbeing to participate meaningfully in society.

**Third, if New Zealanders are risk averse, they will be willing to pay a premium for social insurance to insure their living standards in future periods.** Given the randomness of health, employment and safety outcomes, risk averse people value being able to insure themselves against sickness, unemployment and crime. Risk averse people get some value from the existence of social security services even in periods where they don’t use them, because it guarantees a minimum level of future living standards and reduces risk. Unsurprisingly, individuals’ expectations of their future living standards matter for their current living standards.

**There are choices about how we pool risk across New Zealanders.** Risks can be borne by: citizens themselves; social insurance schemes, such as the Accident Compensation Corporation; private insurance markets; families; and governments. The appropriate distribution of a given risk will depend on the nature of that risk. Governments tend to intervene to insure against risks where there are missing private markets, or where the provision of a good or service is seen as a right. For both these reasons, for example, it is relatively commonplace for governments to provide health insurance to citizens through a taxpayer-funded public health service. Ex ante choices about the distribution of risk across different entities reduces the uncertainty faced by households, firms and the government. This certainty supports investments in a range of capital stocks, supporting living standards.

**Lastly, governments also spend to uphold and deliver institutions that are public goods.** Regulations, the rule of law and enforcement of property rights govern how individuals, businesses and government systems interact with each other, and how these different actors use the capital stocks. In this way, institutional settings support the functioning of society and markets. The Resource Management Act 1991, for example, governs the use of natural capital, including land and water. The Intellectual Property Office of New Zealand administers and enforces regulation about how we can protect and use human capital assets, like knowledge and reputations. Strong frameworks for setting out and enforcing rules for common resources provides New Zealanders with certainty to make confident and informed investment decisions, and with recourse if others infringe on their rights.
A1.3 Taxation – How do taxes affect living standards?

Raising revenue is not the only role of the tax system. The tax system makes an important contribution to living standards through four key functions, discussed below:

- A source of revenue – taxes provide revenue for governments to fund the public services that underpin our living standards.
- A means of redistribution – taxes redistribute resources to achieve greater income equality or other social goals.
- A policy instrument – taxes can be used as an instrument to achieve specific policy goals by influencing behaviour.
- A macroeconomic stabiliser – tax revenues automatically increase in upturns, and decrease in downturns, buffering the effects of business cycles.

There is a shadow side to each spending initiative – the benefits of funding goods, services, transfers and regulatory structures must be weighed against the costs of financing them. The costs of funding expenditure are often broader than the amount of revenue raised. Raising revenue can impose other associated costs through changing relative prices, incentives and behaviours. To support living standards, the benefits of spending initiatives should outweigh the financial cost of funding that initiative, and any additional costs from the distortions caused by raising those funds.

The tax and transfer system redistributes income, goods and services to achieve distributional objectives. New Zealanders and governments are likely to have preferences about both the vertical and horizontal equity of the tax mix. The PFA requires governments to set out long-term objectives for revenues, and to consider both the efficiency and fairness of their revenue strategy.

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(1) (e) when formulating revenue strategy, having regard to efficiency and fairness, including the predictability and stability of tax rates

Revenue strategies in New Zealand, like most of our OECD peers, generally seek to maintain a progressive tax system. This means those of the same means bear the same tax burden, and those of lesser means face lower effective tax rates. These distributional preferences are operationalised, for example, through higher taxes on luxury goods and increasing marginal income tax rates. Often, however, efficiency and fairness considerations

32 Section 2 of annex 2 discusses the role of taxation as a macroeconomic stabilisation tool.
34 Vertical equity refers to how the tax burden varies across taxpayers of different means. Horizontal equity refers to how the tax burden varies across taxpayers of identical means.
can be in tension (Mirrlees 1971). For example, progressive income taxes may be inefficient where they create disincentives to work. Tensions between efficiency objectives and fairness objectives means that taxes may be positive for living standards, even where they are negative for output growth (see for example Grimes et al 2016).

**Tax settings can be used to change individuals’ incentives and behaviours to achieve policy outcomes.** The tax system has pervasive behavioural impacts across the economy. It affects incentives to work, save, consume and invest. Through these channels, the tax system affects productivity, incomes, economic growth and living standards.

Where there are market failures, taxes can reprice goods and services to achieve a more socially efficient level of consumption or production. For example, ‘sin’ taxes on tobacco, alcohol and gambling are motivated by a perceived externality – these ‘sin’ goods impose social and health costs on other New Zealanders. A potential justification for such taxes is to reprice ‘sin’ goods to reflect their social cost, and discourage their consumption. Conversely, research and development tax credits explicitly seek to encourage more research and development activity. Research and development can be considered a public good because the knowledge generated is non-rival, potentially leading to ‘free-riding’ incentives and market failure.

Any given tax policy will have numerous impacts on individuals’ incentives, behaviours, income and consumption. Some of these impacts will be intended, and help to achieve the aim of that policy – to raise revenue, redistribute or change behaviours. Other effects of the tax policy will be unintended. These unintended consequences are by-products of the policy intent, and often carry costs. Tax policy decisions weigh the benefits of a tax intervention against the costs of its unintended consequences. This decision making asks: Is achieving the policy objective worth the costs of any unintended consequences?

**The costs of a tax policy are commonly measured through its deadweight loss.** The ‘deadweight loss’ of a tax is its efficiency cost – the degree to which government intervention reduces welfare. If unregulated markets lead to an optimal allocation of a good or service, then taxes will impose a net cost, and likely exhibit increasing marginal costs. In these cases, the most efficient tax mix is that which achieves the fewest distortions in relative price, and therefore the fewest distortions in behaviours. Conversely, if unregulated markets do not lead to optimal allocations, taxes can reprice goods and services to mitigate externalities. This reasoning underpins taxation interventions where changing prices and behaviours is the objective, not an unintended consequence.

**Policymakers should consider long-term and non-monetised costs of taxation.** Simple estimates of deadweight losses imposed by taxation may focus on the short-run economic consequences of tax changes on output and employment. However, behavioural responses to tax affect more than just the commodity or activity taxed. The long-term behavioural responses to tax should be considered, including effects on the capital stocks, economic growth, and living standards (see for example Feldstein 2008).

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A “tax-systems” approach takes a broad view of the costs of taxation. Tax-systems approaches also consider practical considerations, like the feasibility of available tax instruments and the compliance and administration costs they impose (Slemrod 1990). Compared to optimal tax theory, the tax-systems literature explicitly considers the resource cost of operating the tax system – the administrative cost borne by the government and the compliance cost borne by taxpayers. These resource costs can be large both in absolute terms and relative to the efficiency costs of tax distortions.

Simplicity and perceived fairness lower the costs of raising revenue. Simplicity in the tax system makes it easier to understand. In turn, understanding the tax system is requisite to seeing it as legitimate, and better places New Zealanders to comply with their tax obligations. Fairness in the tax system encourages voluntary compliance and trust in public institutions, which decreases the administrative cost of rising taxes. Therefore, the costs of raising revenues decrease as trust in the tax system increases (Slemrod 1998). Through its contribution to fairness objectives, the tax system both relies on and can build social capital.

Among OECD countries since the mid twentieth century, top marginal tax rates have declined, marginal income tax rates have flattened, and commodity taxes are more uniform (Mankiw et al 2009). Compared to OECD peers, New Zealand’s system combines generally lower marginal tax rates with generally broader coverage of taxes across income, goods and services, and businesses, to yield total tax revenue comparable to other OECD countries (Inland Revenue 2017). However, the tax system will continue to face challenges to adapt to a changing economy and social preferences. Successive governments have used periodic reviews led by external experts to make recommendations on the tax system.37

A1.4 Size of government – How do spending and tax policies add up?

Summed together, the mix of spending and tax policies have general equilibrium effects on the economy and on living standards. The two preceding sub-sections have discussed how government expenditure and taxation choices affect individuals’ living standards at an individual policy level. However, considering the effects of individual policies in isolation paints an incomplete picture of their effects on living standards. Questions about the optimal ‘size of government’ concern the aggregate effects of fiscal strategy – how does the sum of tax and spending policies, as a proportion of the total economy, affect living standards? 38

The PFA does not set limits to the size of government in New Zealand. Whilst the PFA requires governments to set out short-term intentions and long-term objectives for revenues and expenses, it leaves it to the government to choose how much to spend and tax. Governments may choose to explicitly set their own objectives about the size of government as part of their fiscal strategy. For example, the current Government aims to ensure operating expenses support a responsible and proportionate role for the Government in maintaining a productive, sustainable and inclusive economy, consistent with its debt and operating balance objectives.

Setting out objectives for revenues and expenses requires governments to consider their objectives about public service provision and size of government, and to make these objectives transparent. At the same time, the flexibility of the PFA requirements acknowledges that choices about the size of government reflect value judgements.

Economic and social constraints pose upper and lower bounds for the size of government. Given a balanced budget constraint, the size of government is constrained by the level of tax revenue that the government can raise. Government spending cannot exceed the total size of the economy – the taxable base. However, the maximum level of government spending will likely face other economic or political constraints. The ‘Laffer Curve’ theorises a maximum level of revenue the government can raise before tax settings dis-incentivise labour and production to the point of decreasing the overall tax take (Wanniski 1978). In this way, the behavioural distortions arising from tax set an upper bound on the size of government. Equally, social and cultural preferences are likely to bind government spending, as citizens demand a basic minimum level of government provision for certain public goods, and a maximum level of government intervention.

New Zealanders’ heterogeneous needs and preferences mean there is no clear ‘optimal’ size of government. Preferences for size of government vary with individuals’ net benefit from government spending and taxation, and with ideological preferences for redistribution. This is because the size of government sets an upper limit on the level of goods and services governments can provide and the degree of redistribution governments can undertake. More redistribution requires larger public expenditure and, empirically, larger governments tend to redistribute more (Fournier 2016).

38 For the purposes of this paper, we define the size of government in terms of government spending and taxation as a proportion of the total economy, and not in terms of the breadth of regulation.
There is no definitive relationship between the size of government and living standards. The effect of the size of government on living standards depends on the type and timing of government spending, as well as social and cultural preferences about the size of government (Bjornskov et al 2007). Existing literature focuses mostly on the effect of size of government on GDP, and is inconclusive (see for example Cook 2011; Cournède 2018). There is some evidence that countries with large social transfers appear to trade off average output considerations in favour of more favourable outcomes for poorer households (Fournier 2016). Ultimately, however, the impact of expenditure levels on economic growth depends on the type and quality of expenditure and the mix of taxes used to finance it (Cook 2011).

In New Zealand, the annual Budget process seeks to ensure that government spending supports living standards. Recently, a wellbeing budget approach has been developed to help ensure resource allocation decisions align with governments’ priorities.39

OECD governments have expanded in size toward the start of this century, then stabilised in size since the GFC. The increase in government size was mostly driven by increases in health and pension spending. Increases to health and pension expenditure reflect population ageing and the rising price of healthcare relative to other goods and services – trends which are projected to continue (Cournède 2018; van Rensburg forthcoming). These economic pressures have been felt across the OECD. Much of this increase took place before the GFC.

39 For more on applying the LSF to Budget decisions, see https://treasury.govt.nz/publications/speech/what-treasurys-living-standards-framework-means-public-sector
Annex 2: Macroeconomic Stability

This annex addresses how the ability to borrow affects living standards over the medium term, for example over a generation or a business cycle. Specifically, this annex considers how debt finance can be used to balance revenue and expenditure flows over the medium term – allowing debt to fluctuate around a given level, but not to increase indefinitely.

This annex discusses:

i the intertemporal government budget constraint

ii debt-financing consumption expenditure

iii the macroeconomic policy mix.

A2.1 The Intertemporal Government Budget Constraint

In the preceding annex, we considered how governments may support living standards given only two fiscal levers: tax and spending. This restriction implies governments face a balanced budget constraint in every period. In practice, governments can borrow to finance shortfalls between expenditure and revenue in a given period.

The ability to issue debt relaxes the Government’s budget constraint in a single time period. Funding goods and services through debt defers the principal payment of those goods and services. In exchange for finance now, governments promise to repay creditors the principal sum borrowed at a specified future date. In addition to the principal sum borrowed, governments will pay interest. Allowing goods and services to be paid for in future periods relaxes the government’s budget constraint, compared to funding all expenses from taxation in each period. Allowing for debt issuance, the government faces a flow budget constraint which can be expressed:

\[
\frac{B_n}{Y_n} = \frac{G_n}{Y_n} - \frac{T_n}{Y_n} + \frac{1+\gamma_n}{1+\gamma_{n-1}} \frac{B_{n-1}}{Y_{n-1}}
\]

Where \(B_n\) is the level of nominal government debt at the end of year \(n\), output grows at rate \(g\), \(G\) is the sum of government primary expenditure, \(T\) is tax revenue, \(Y\) is the total economy and \(r\) is the interest rate on outstanding government debt. Unless there is a limit on the government debt-to-GDP ratio, this expression does not impose any restrictions, from a sustainability perspective, on fiscal policy or the level of debt (Buckle 2008).

The government faces an IGBC. The IGBC prescribes that the net present value of all future primary balances must be equal to the initial stock of public debt over an infinite timeframe. In effect, governments must, at some point, repay their debts. The IGBC is a core criterion for fiscal sustainability. However, the infinite-horizon IGBC does not specify a maximum level of debt governments can sustain in any one period, so long as it can be repaid in future periods.

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40 Section 3 discussed the living standards effects of debt-financing investment expenditure.

In practice, there is likely to be a limit to the debt a country can or should sustain at any point in time, as high levels of debt impose increasing fiscal and wellbeing costs (Makhlouf 2019). Often, governments self-impose targets for debt-to-GDP ratios at a point in the future (Buckle 2008).

Assuming the government commits to achieving a target level of debt in year N, with an economy beginning in year n=0, the finite-horizon IGBC can be expressed:

\[
\frac{B_{-1}}{Y_{-1}} - \rho_N \frac{B_N}{Y_N} = \sum_{n=0}^{N} \rho_N \left( \frac{T_n}{Y_n} - \frac{G_n}{Y_n} \right)
\]

Where \( \rho_n = \frac{1+g_n}{1+r_n} \cdot \rho_{n-1} \) and \( \rho_{-1} = 1 \)

Given a binding debt target in year N, the finite-horizon IGBC states that the present discounted value of future primary balances to year N must be equal to the difference between the initial debt and the present discounted value of terminal debt in year N. There are many different fiscal strategies that can satisfy this constraint, with different implications for intergenerational equity. Section 3 discussed implications of the IGBC for debt sustainability and intergenerational equity. For the discussion in this annex, what matters is that governments have flexibility about when they pay for goods and services they provide.
A2.2 Debt-financing Consumption Expenditure

There are good reasons to run surpluses and deficits at different stages of the business cycle. Reflecting this, the PFA principles require governments to balance operating expenses and revenues “over a reasonable period of time”.

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(1) (b) once prudent levels of total debt have been achieved, maintaining those levels by ensuring that, on average, over a reasonable period of time, total operating expenses do not exceed total operating revenues

There is a stronger case for debt-financing temporary expenditure than permanent expenditure. Debt-financing permanent consumption risks intergenerational inequity and fiscal unsustainability in ways that temporary debt finance does not.

A2.2.1 Permanent Borrowing

Structural increases to expenditure change the trend of debt. All else equal, permanent increases to expenditure can create or deepen a primary deficit. In these cases, expenditure increases will require persistent issuances of new debt to meet the shortfall between expenditure and revenue. Cumulatively, new debt issuances lead to a sustained increase in the level of debt over time.

Governments face incentives to debt finance recurring expenditure that supports short-term living standards. These incentives may reflect informational problems, electoral competition, common-pool problems, time inconsistency problems, and/or an opportunistic attitude to future generations (Calmfors 2011). Financing consumption from debt, rather than taxation, would allow present generations to reap the benefits of government expenditure, without bearing the costs. Resulting deficit biases are likely to support short-term living standards at a cost to future generations. Unlike many of its OECD peers, New Zealand has not experienced a persistent deficit bias in recent decades (Wyplosz 2013).

Debt-financing recurring expenditure is fiscally unsustainable. As the IGBC sets out, debt-to-GDP cannot be increased in perpetuity. Therefore, sustained borrowing for everyday expenditure will require future governments to either cut expenses and/or increase taxes to pay down debt, or lose the ability to fund goods and services. Both these responses may have severe implications for future living standards. To guard against such outcomes, the PFA principles require that operating expenses and revenues balance over a reasonable period of time. In effect, this principle prohibits permanent debt financing of government goods and services.

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43 Section 3 of this paper considered the role of debt as an investment mechanism.

44 The debt-to-GDP ratio will rise if the primary balance is below its debt-stabilising level.
A.2.2.2 Temporary Borrowing

Cyclical or one-off increases to debt can be incurred to support living standards in economic downturns or following negative shocks, and can then be repaid in more stable times. Unlike permanent debt finance, cyclical and temporary increases to debt make the level of debt fluctuate around its trend level, but do not change the underlying trend of debt.

**Fiscal strategy can support living standards when shocks and cycles affect the entire economy.** In annex 1, we discussed how governments can use the tax and transfer system to buffer individuals from risks at a microeconomic level. However, risks to individuals’ living standards are not independent. All New Zealanders are exposed to common risks, which means shocks across New Zealanders are likely to be highly correlated. Therefore, although some risks individuals face are idiosyncratic and can be managed with a relatively stable level of government spending, other risks are systemic and cannot. Temporary government borrowing can absorb the effects of systemic shocks and economic cycles on living standards.

**From a microeconomic perspective, it makes sense to adjust spending levels as the value of spending changes, but to hold tax rates constant.** Increasing spending in a cyclical downturn or negative shock is a corollary of the government’s role buffering individuals’ risks. When negative risks are realised, the value of spending may increase. For example, the demand for state-provided mental and physical healthcare is likely to increase following a disaster event. Similarly, during an economic downturn the value of, and demand for, supplementary income is likely to increase as unemployment rises. At these times the marginal benefit of spending may be temporarily higher.

However, fluctuating tax rates to fund changing levels of spending would be inefficient: Because the deadweight costs of taxation increase exponentially, stable tax rates are more efficient than variable tax rates, even if they have the same average level (Barro 1979). The PFA reflects tax smoothing theory, by requiring governments to consider the predictability and stability of tax rates. Rather than fluctuating tax rates, debt finance can bridge the gap between the value and capacity to spend (given constant tax rates), by smoothing the cost of goods and services across time.

**Countercyclical fiscal policy also supports living standards at a macroeconomic level (Wolfers 2003).** Debt finance facilitates countercyclical spending, by bridging the mismatch between the need and ability to spend. In downturns, countercyclical fiscal policy entails spending more and taxing less, to support aggregate demand and growth. In upturns, countercyclical fiscal policy will moderate spending, to avoid economic ‘overheating’ and to repay debts incurred during downturns. Together, these counterparts of countercyclical fiscal policy smooth out the business cycle (Dunstan 2007). Macroeconomic stability – predictability in variables including real output growth, inflation, and the current account deficit – supports resource allocation choices, investment, and growth (Buckle 2008).

In turn, countercyclical fiscal policy insulates New Zealanders’ living standards from the negative effects of economic volatility. Macroeconomic stability supports New Zealanders’ income, which buys other things that support living standards, like housing, health and education. Beyond the realised value of macroeconomic stability – through maintaining access to the domains of wellbeing – New Zealanders are also likely to value their reduced exposure to economic risk.
Countercyclical fiscal policy also has distributional implications. Volatility induced by economic cycles affects New Zealanders differently. In many ways, marginal or lower-income people are more likely to burden the negative effects of economic downturns. High levels of inflation – a symptom of economic upturns – tends to place a disproportionate burden on lower income brackets. Related, in New Zealand, the increase in unemployment during the GFC was disproportionately driven by increases in the number of unemployed women, increases in the number of unemployed youth, and falls in the number of people working part-time (Statistics New Zealand). Past economic recessions in New Zealand have also been associated with increasing rates of suicide among young men (Howden-Chapman 2005).

Equally, place-based shocks, like earthquakes, floods and droughts will affect some regions and sectors more than others. For example, the agricultural sector and residents in low-lying or earthquake-prone regions are particularly vulnerable to natural shocks. Government responses can be targeted to protect against unwanted distributional consequences from economic cycles or shocks.
A2.3 The Macroeconomic Policy Mix

Governments have a range of tools to support macroeconomic stability. These tools vary in their strengths and limitations. Alongside fiscal policy, monetary policy is an important mechanism for supporting macroeconomic stability. In New Zealand, the Reserve Bank’s Monetary Policy Committee has operational independence to formulate monetary policy. To ensure macroeconomic stabilisation is considered when setting fiscal strategy, the PFA principles require governments to consider the interaction between fiscal policy and monetary policy.

Prior to the GFC, monetary policy was assigned primary responsibility for maintaining macroeconomic stability, whilst fiscal policy played a supporting role. This division of roles, termed the ‘new consensus assignment’, reflected judgements about the economic and political limitations to designing and implementing effective fiscal stabilisers.45

Broadly, fiscal policies which insulate New Zealanders from volatility can be categorised as ‘automatic’ or ‘discretionary’ stabilisers. Automatic stabilisers are designed to offset economic fluctuations through their normal operation, without requiring additional decisions by governments as economic conditions change. For example, unemployment support payments increase and tax revenues decrease automatically during economic downturns, when more New Zealanders are unemployed and incomes are lower. By contrast, discretionary stabilisers take effect when governments make active decisions to change tax or spending levels. For example, following the GFC many governments decided to decrease income tax rates or provide residents with direct payments to boost spending (International Institute for Labour Studies 2011).

Several economic and institutional factors may inhibit the effectiveness of discretionary fiscal policy. First, the application and impact of discretionary fiscal policy is likely to lag the shock to which it responds. This reflects the time taken for policymakers to design and agree on an appropriate response. Second, even if fiscal policies were deployed in a timely manner, their effectiveness may be hampered by expectations of offsetting future fiscal policy, or by crowding out private spending. Third, in small open economies like New Zealand the stimulatory effect of government spending is likely to be relatively lower, owing to ‘leakages’ of demand to imports.

45 Despite its name, there was some disagreement over the ‘new consensus assignment’ prior to the GFC. See for example: Blinder, A. (2004). The Case against the Case against Discretionary Fiscal Policy CEPS Working Paper, (100), available at https://www.princeton.edu/~ceps/workingpapers/100blinder.pdf
One measure of the economic impact of fiscal stimuli is the fiscal multiplier – the percentage point change in GDP in response to an increase in government expenditure or decrease in revenue of 1 percent of GDP. The IMF (2014) presents a simple “bucket approach” to estimating fiscal multipliers, based on country-specific characteristics theorised to affect fiscal multipliers (Batini 2014). On these measures, New Zealand does not share many characteristics that would lead to a large multiplier a priori. New Zealand is a relatively open economy with a flexible labour market, prone to leakages and responsive price adjustments that may partially offset fiscal stimulus. Hamer-Adams and Wong (2018) find that historic fiscal multipliers in New Zealand are comparable to other developed countries, but note that the economic effects of different fiscal policies vary significantly.

Discretionary fiscal policies can also suffer from political economy pressures. Elected fiscal decision makers face a time inconsistency problem. Short-term electoral incentives are likely to reward fiscal stimuli that boost aggregate demand in the short run, even where those policies inhibit growth, stability and living standards in the long run (see for example Kydland 1977). Over time, persistent short-term incentives to stimulate demand can manifest in a deficit bias, which jeopardises fiscal sustainability and intergenerational equity.

**Automatic fiscal stabilisers face fewer political economy pressures, compared to discretionary fiscal policy.** Because automatic stabilisers are set in advance of shocks and downturns, they do not face large time lags, nor are they subject to ongoing revision to achieve other political or electoral objectives, at least not to the same extent as discretionary fiscal policy changes.

The automatic nature of automatic stabilisers means they are timely and limits the ability of decision makers to tailor them to react to particular circumstances. In New Zealand, automatic fiscal stabilisers absorb 51% of a shock to market income, around the average for OECD countries (Price 2015). There is an open question as to whether automatic stabilisers should play a greater role in supporting macro stability (see for example Brook 2011; Blanchard 2019).

**Monetary policy has several advantages compared with fiscal policy.** Compared to fiscal policy, monetary policy is relatively easy to reverse. Unlike discretionary fiscal policy, monetary policy is not subject to electoral pressures and time inconsistency dilemmas (where formulated by an independent central bank). Nor is the operation of monetary policy subject to democratic decision-making and legislative processes, and subsequent time lags, where governments delegate this function to central banks. For the most part, this technocratic approach to monetary policy formulation has been justified on the grounds that monetary policy has fewer distributional implications compared to fiscal policy.

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46 These characteristics include: trade openness, labour market rigidity; the debt level; size of automatic stabilisers; and types of fiscal instruments used.

However, monetary policy is a blunt policy tool. Monetary policy tends to have fewer pronounced distributional impacts, compared to fiscal policy, because it less directly targets individuals affected by economic shocks and downturns.\(^{48}\) Instead, monetary policy bluntly shifts the investment and saving incentives of all New Zealanders and foreign investors. Given that shocks and downturns affect individuals heterogeneously, as discussed above, there are likely to be instances where more democratically considered and targeted responses to shocks are preferable. The effectiveness of monetary policy can also be constrained by the effective lower bound – the policy interest rate at which conventional monetary policy transmission channels reach their limit.

Fiscal policy should have regard to the broader economic effects of monetary policy (Brook 2011). Through changing the policy interest rate, monetary policy directly affects interest rates and the exchange rate in the broader economy. These changes will affect the structure of the economy and have implications for other policy objectives, such as financial stability and productivity. For example, a decreased policy interest rate will, all else equal, decrease interest rates and depreciate the exchange rate in the economy. These changes may benefit borrowers and exporters, at a cost to creditors and importers. Over the long term, these dynamics can influence distributional outcomes and living standards.

The government’s fiscal stance influences the central bank’s choice of monetary policy. Knowing this, governments should consider how the central bank might respond to a given fiscal stance, and consider the distributional and economic consequences of the resulting macroeconomic policy mix. To this end, the PFA principles require the government to consider the interaction of monetary and fiscal policy.

Views on the appropriate mix of monetary and fiscal policy have shifted since the GFC. Challenges to the New Consensus Assignment have emerged, driven by: The slow and painful recovery from the GFC and related sovereign debt crises in Europe; the emergence of new inflation and interest rate dynamics; relatively less conventional monetary space; relatively more fiscal space than previously estimated; and the unavailability of country-specific monetary policy in the European Monetary Union (see for example Furman 2016, Ramey 2019).

The effectiveness of fiscal stimulus has been reviewed in light of the GFC and the COVID-19 shock. When faced with economic crisis, governments face a choice of fiscal paths, between fiscal stimulus to encourage economic growth and boost the capacity to service debt, or fiscal austerity to limit the increases in nominal debt. Since the GFC, a body of literature has emerged focusing on the longer-term effects of countercyclical fiscal stimulus, compared with austerity, on growth and living standards. Since the onset of the COVID-19 pandemic, countries have widely adopted significant fiscal stimulus and have been able to use fiscal policy in a more targeted way than would have been possible with monetary policy, such as through the Wage Subsidy Scheme. This experience is leading many governments and commentators to reconsider the optimal mix of policy tools to smooth business cycles and protect trend growth.

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\(^{48}\) However, the distributional effects of monetary policy are being increasingly recognised in the context of ‘low for longer’ interest rates. For an overview of the monetary policy transmission mechanisms, see the “Reserve Bank Monetary Policy Handbook”, available at https://www.rbnz.govt.nz/monetary-policy/about-monetary-policy/monetary-policy-handbook
Recent literature considers fiscal policy effectiveness beyond its short-term contribution to GDP and ability to stabilise debt levels. This literature emphasises that the burden of austerity is neither evenly spread nor purely financial. Stuckler et al (2017), for example, find that post-crisis austerity in Europe had a negative effect on health, transmitted both indirectly through the effect of increasing unemployment and poverty on health outcomes, and directly through funding cuts and restrictions to healthcare services. By negatively affecting wellbeing domains and aggravating financial stress, contractionary fiscal policy may also deteriorate social capital. Compared to austerity, fiscal stimulus following negative shocks may better support living standards.

However, the effectiveness of austerity or stimulus policies are context and policy-specific (Alesina et al. 2019). Significant fiscal stimulus is only affordable where governments exercise fiscal constraint in 'normal times', to build fiscal space. Further, governments may face pressure to consolidate their debts, in order to ensure their fiscal strategy is seen to be sustainable. Maintaining (and being seen to maintain) fiscal sustainability is important for ensuring continued access to debt markets.

**The relative effectiveness of fiscal and monetary policy depends on the economic context in which it is applied.** Relative to pre-crisis settings, fiscal policy is likely to be more necessary and more effective in the current low interest rate environment. In New Zealand, interest rate cuts of 300 to 600 basis points have been required in previous economic downturns. However, cuts of this size are not possible at already low interest rates. In response to the COVID-19 shock, the Reserve Bank lowered its policy interest rate from 1.0 to 0.25 percent and began implementing alternative monetary policy tools. With less conventional monetary space to stabilise the economy, responsibility for macro stability shifts towards fiscal policy and alternative monetary policies. Whilst decreasing interest rates have constrained monetary policy space, they have also increased fiscal space; declining interest rates on government bonds have lowered the cost of issuing new debt issuance.

**Academic economists and policymakers are now reconsidering the role of fiscal policy.** For example, Furman (2016) characterises the ‘New View’ of fiscal policy by five principles, although this focuses on larger, advanced economies such as the United States:

i Fiscal policy is often an effective complement to countercyclical monetary policy.
ii Discretionary fiscal stimulus can be very effective and may even ‘crowd in’ private investment through complementing, rather than substituting, private sector activity.
iii Fiscal space is larger than previously thought, because the cost of servicing debt may be lower and fiscal stimulus may support growth, resulting in denominator effects that reduce debt as a proportion of GDP.
iv More sustained stimulus, especially if targeted at investments that expand aggregate supply, may be desirable.
v There may be greater benefits to coordinating fiscal policy internationally.

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49 For a review of this literature, see Furman 2016; for a review of fiscal multiplier estimates, see also Ramey 2019.
Lessons from the GFC and emerging evidence from the COVID-19 shock emphasize the interrelationship between fiscal stability and sustainability. Fiscal policymaking in the face of shocks requires a short-term choice between stimulus, austerity and neutrality. However, across time, countercyclical stimulus in the short-term can support long-term consolidation. Through preserving the capital stocks, stabilising fiscal policy can support long-term living standards and economic growth, which decreases the debt burden as a percent of GDP.

Section 4 outlined some policy principles that governments might employ to help ensure long-term sustainability, whilst maintaining flexibility to stabilise economic cycles and respond to one-off shocks.
References


