TE TAI ŌHANGA
THE TREASURY

What is prudent debt?

Lecture delivered by Gabriel Makhlouf, Secretary to the Treasury at the Treasury's Economic Forum[1]

14 June 2019

This year marks the 30th anniversary of the introduction of the Public Finance Act (PFA) and the 25th anniversary of the fiscal responsibility provisions that were incorporated into it. The PFA is one of New Zealand's important institutions. It created a platform for the modernisation of New Zealand's public sector financial management system, became one of New Zealand's most significant macroeconomic pillars and was a benchmark for other countries around the world. Next month Victoria University of Wellington will host a conference to mark the 30 years of the PFA. I will not be at that event but I want to acknowledge the architects of those reforms. Designing something that has lasted 30 years with minor changes is a significant achievement. Today's architects have the task of ensuring this particular macroeconomic pillar can last for the next 30 years.

One of today's architects, my colleague Struan Little, set out the Treasury's vision for a public finance system that supports the public service to focus on improving the intergenerational wellbeing of New Zealanders in a speech last year.[2] Fiscal strategy is central to this vision and today I want to take a step back and take a long view of public finance, discussing some of the fundamental questions facing fiscal strategy in New Zealand.

Setting fiscal strategy requires judgements on how we fund spending today, through raising taxes or issuing debt and by implication how we will fund spending tomorrow and how we manage our debts and assets across generations. These are often seen as narrowly-focused debates about financial management. But they are fundamentally about making trade-offs between current wellbeing and the wellbeing of future generations.

1 Thank you to Angus Hawkins, Anna Hamer-Adams, Oscar Parkyn, Renee Philip, Ben Gaukrodger and many others in the Treasury for their contributions to this lecture.

2 Struan Little, 2018. 'Taking a Stewardship Approach to the Public Finance System'.

The principles of responsible fiscal management in the PFA set out the framework that governs New Zealand's approach to fiscal strategy. I want to use this lecture to discuss a central concept in these principles, namely the question of what is a 'prudent' level of debt. [3] This is a question that we have debated in the Treasury over the last 12 months including at a previous Economic Forum. I want to use today's Forum to set out the outcome of that debate.

Unlike many countries, New Zealand does not have legislated numerical fiscal rules, such as a fixed ceiling on debt and deficit. Our framework allows for flexibility and judgement for the government of the day to set its fiscal objectives, so long as they are consistent with the principles of the Act. This is supported by the Act's strong transparency requirements, which require the Government to state its fiscal objectives, and the Treasury to provide independent reporting so that the public can assess whether they are being met.

Since the early 1990s, fiscal policy has been guided by a 'debt anchor': a long-term level of debt to GDP that governments regard as prudent and have chosen to aim for. The level and the exact specification of the debt anchor has changed quite frequently. These changes reflect different economic circumstances and policy preferences and each successive government has set its own fiscal strategy, creating strong political commitment to the overarching framework. Rather than requiring enforcement of legislated numerical fiscal rules, New Zealand's framework relies on creating incentives for governments to conduct responsible fiscal policy. A commitment to a fiscal rule and the principles of the Act has endured. It has led to New Zealand maintaining a level of public debt that is low compared to many OECD counties.[4]

Moreover, the framework has performed well through several business cycles and shocks, with debt remaining within prudent levels each time and returning to a declining path, without requiring large scale cuts to spending. We have tested our judgments – including with an international expert in 2014 – and believe it has worked well. [5]

Having said that, I believe it is important to keep asking ourselves whether the framework remains fit-for-purpose. As I've said before, if we simply focus on preserving institutions, we may in fact be weakening them. We need to continue to challenge ourselves, especially in those areas that we tend to take for granted and which are cornerstones of our overarching economic framework.[6]

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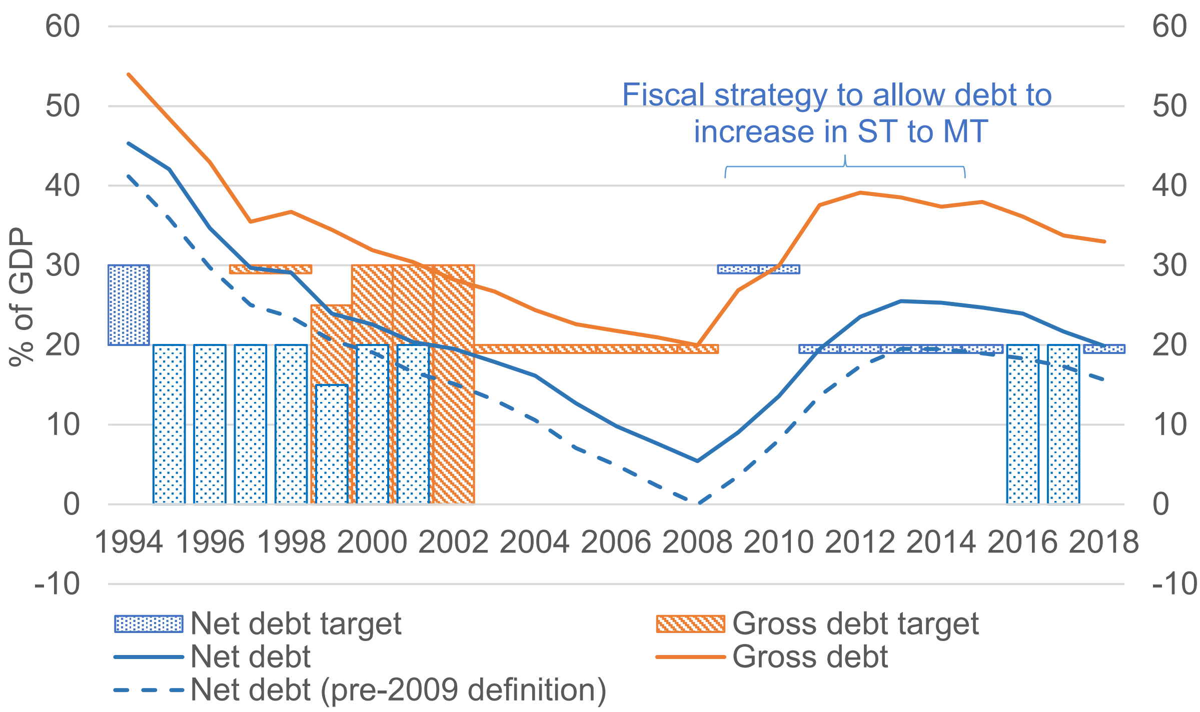
[3] As required by 26G(1)(a) Public Finance Act 1989.

[4] A recent summary of the origins and evolution of the framework is Robert A. Buckle (2018), "A quarter of a century of fiscal responsibility: The origins and evolution of fiscal policy governance and institutional arrangements in New Zealand, 1994 to 2018" Chair in Public Finance Working Paper 13/2018, Victoria University of Wellington, October 2018.

[5] Ter-Minassian, T. (2014) *External Review of the Treasury's Policy Advice*.

[6] Makhlouf, G. (2018) Modernising the Three Pillars of New Zealand's Macroeconomic Framework, Speech delivered 20 February 2018.

Figure 1 – Evolution of long-term debt objectives of New Zealand governments



Source: the Treasury

Long-term debt objectives taken from Budget Policy Statements in the year shown, except for 2009 where the Fiscal Strategy Report is used. Graph does not reflect the change in the long-term debt objective made in the 2017 Fiscal Strategy Report under the previous government

The current Government's fiscal strategy includes a commitment to reduce net core Crown debt to 20 percent of GDP within five years of taking office, and to maintain it at prudent levels thereafter. In its most recent Fiscal Strategy Report, the Government updated its long-term debt anchor to provide more detail about what a prudent level of debt means in the long term. Beyond 2021/22, the Government has indicated that it will maintain net core Crown debt within a range between 15 and 25 percent of GDP. This is entirely the Government's decision, but it was consistent with, and informed by, advice from the Treasury.

I want to use this lecture to lay out how the Treasury has thought about prudent debt and the assumptions and judgments behind our advice. These are rightfully matters for public debate and should not been seen as merely technocratic questions. In doing so I hope to support the transparency envisaged in the PFA, and promote greater understanding of what the requirements of the Act mean in practice, from the Treasury's perspective.

I am going to proceed in five parts. First, I want to briefly discuss the overarching framework we use to think about prudent debt. Second, I will propose what an upper limit for public debt in New Zealand might be. Third, I want to consider how the obligation set out in the Act to manage fiscal risks should inform the prudent level of debt. Fourth, I will discuss how the value of government investment and the wider economic context further guides what is a prudent level of debt. Finally, I will conclude by touching on some issues of measurement and definition of our debt anchor that we believe should remain important components of our framework.

A framework for setting a prudent debt limit

Let us begin by setting a framework for our thinking. The Treasury has typically viewed the roles of fiscal policy, the totality of expenditure, taxation and balance sheet decisions, through three lenses: fiscal sustainability, fiscal stabilisation and fiscal structure.[7] Through these three roles, the fiscal strategy affects the living standards of New Zealanders.

Maintaining fiscal sustainability, and therefore sustainable debt, is necessary to avoid debt crises or sharp changes in tax or spending, and the consequent harm to living standards. Economic stability can be supported by allowing sufficient buffers to enable fiscal policy to support growth in a downturn, reducing the potential damage to financial, physical and human capital following economic or other shocks. But this must also be achieved without jeopardising fiscal sustainability. These considerations must be balanced against the fact that borrowing can enhance living standards, such as through financing high-value public investment that benefits future generations, or enabling tax rates to be smoothed when spending is temporarily high.[8] Finally, the structure of taxation and spending matter greatly for wellbeing, but can be largely separated from judgements about the prudent debt level.

Setting a debt anchor, and allowing some flexibility to fund such investments, is the typical approach to supporting fiscal sustainability. A starting point for setting this anchor is ensuring that the Government meets its 'budget constraint' over time. By this, I mean that expenditure and revenue settings can be maintained without the level of public debt, relative to national income, rising indefinitely.[9] The implication of this is that the public debt-to-GDP ratio should be on a broadly stable trajectory in the long term. However, it does not imply any particular level that debt should be stabilised at. This requires an on-balance judgement – including considerations of resilience, intergenerational equity and investment – to come to a view about what is prudent.

The Treasury's analysis draws insights from the frameworks used in the international literature, particularly reflecting the current thinking in the International Monetary Fund (IMF) and Organisation for Economic Co-operation and Development (OECD). It is of course important that the approach is tailored to New Zealand's circumstances and institutions.

The approach we have taken is to estimate the prudent range for public debt by taking three steps. First, to identify an upper limit of public debt and, second, to estimate a safety margin or buffer that is required below this. The prudent debt ceiling is the result of these two judgements. I will consider the upper limit of public debt next, then come to the question of the buffer in my discussion of risks.

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7 Felicity C Barker & Robert A Buckle & Robert W St Clair, (2008). "Roles of Fiscal Policy in New Zealand," Treasury Working Paper Series 08/02, New Zealand Treasury.

8 A review of the literature on this subject is Antonio Fatás, Atish R. Ghosh, Ugo Panizza, Andrea F Presbitero (2019) "The Motives to Borrow", IMF Working Paper WP/19/101.

9 These conceptual issues, and their relationship to fiscal indicators, are discussed in Robert A. Buckle and Amy A. Cruickshank (2013) "The Requirements for Long-Run Fiscal Sustainability," Treasury Working Paper Series 13/20, New Zealand Treasury.

An upper limit for debt

The academic literature suggests three ways to think about a maximum level of public debt.

First, the debt sustainability approach. This considers the level of debt above which the government would simply be insolvent. That is because the interest expenses on the debt would be so large that the government's primary fiscal balance (that is, revenue less non-interest expenditure) could not be sufficient. Second, the market access perspective. This considers the level of debt such that beyond it, creditors are no longer willing to lend on reasonable terms. Market confidence is lost, and governments cannot roll-over debt. The third approach is to consider the level of public debt beyond which there are likely to be adverse consequences for living standards and economic welfare.

The result of debt reaching the levels envisaged by either the debt sustainability or the market access approach, is a debt crisis. From there, governments face three unpalatable choices. They can default on their debt. They can make drastic adjustments to spending and taxation to reduce debt. Or, in states with sovereign monetary policy and debt issued in their own currency, they can stimulate inflation to devalue their debt. The effect of any of these policies would be devastating for living standards. We might like to think fiscal crises are rare in advanced economies, but history shows they do occur and the experience in parts of the euro area in the past two decades should give us pause for thought.[10] Estimates of the absolute upper limit on public debt to maintain solvency are uncertain and there are varying estimates in the literature.[11] The IMF's framework for Debt Sustainability Analysis suggests that the probability of debt distress is heightened if gross debt exceeds 85 percent of GDP.[12]

But for the purposes of our advice, the third approach to estimating the upper limit for public debt – taking a wellbeing perspective – is most appropriate. This level will likely be much lower than the level at which a debt crisis occurs. But a debt crisis is not the only potential consequence of high debt. Higher debt can also impose slow-burning, more gradual, reductions in welfare without the drama of a debt crisis; these are the adverse effects on wellbeing we should be concerned with.

First, higher debt may crowd-out productive private sector investment. The highest value, most wellbeing-enhancing investments in an economy will often not be government projects. Second, increases in public debt may increase the perceived riskiness of investing in an economy, including in the private sector. Both these channels will affect the economy through a higher cost of capital and rising interest rates. The exact effects are highly uncertain. But a rule of thumb, based on a survey of the literature, is that interest rates rise by about three basis points for each percentage point increase in the public debt-to-GDP ratio.[13]

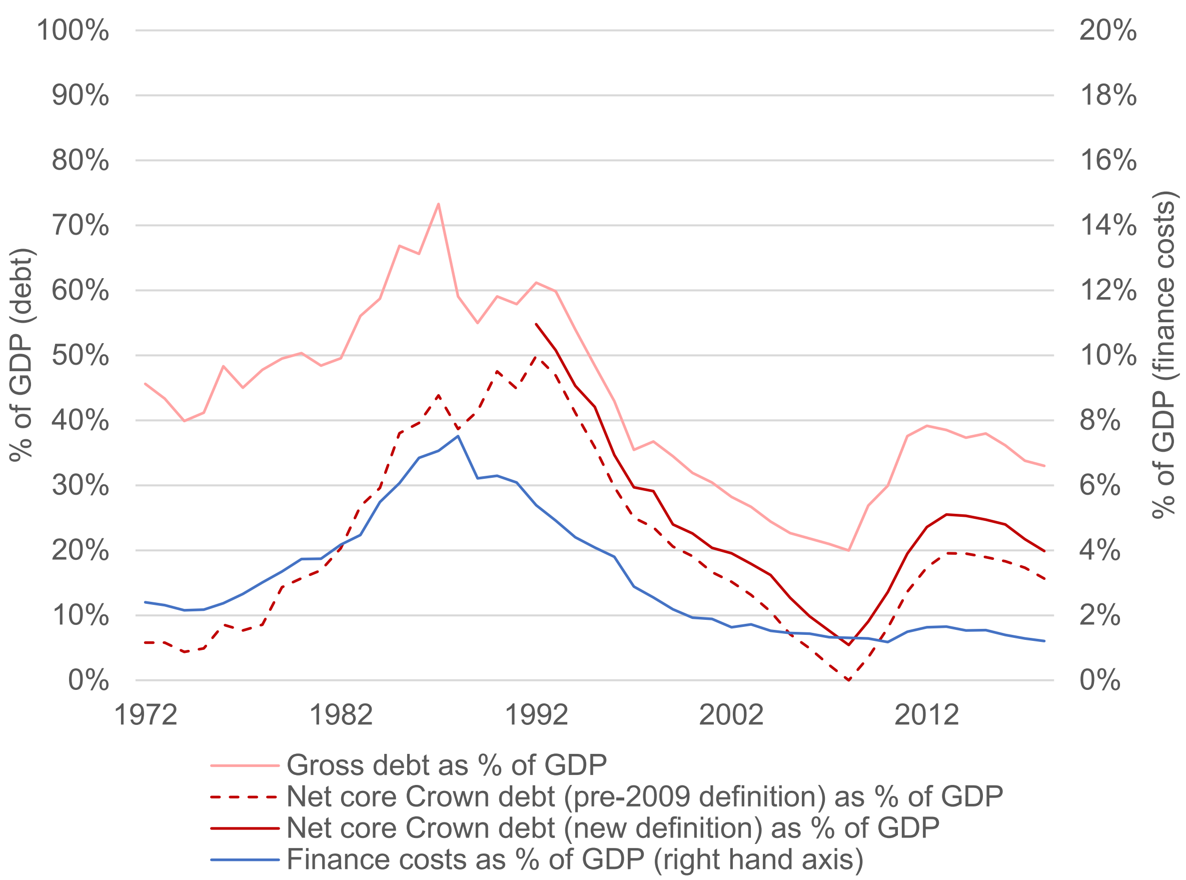
[10] P. Medas, T. Poghosyan, Y. Xu, J. Farah-Yacoub, and K. Gerling (2018) "Fiscal crises," *Journal of International Money and Finance*, Elsevier, vol. 88(C), pages 191-207.

[11] For example: Huixin Bi (2012), "Sovereign default risk premia, fiscal limits, and fiscal policy", European Economic Review, Volume 56, Issue 3, Pages 389-410; Jonathan David Ostry, Atish R. Ghosh & Raphael A. Espinoza (2015). "When Should Public Debt Be Reduced?" IMF Staff Discussion Notes 15/10, International Monetary Fund.

[12] IMF (2013) 'Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries'

[13] Manmohan S. Kumar & Emanuele Baldacci, 2010. "Fiscal Deficits, Public Debt, and Sovereign Bond Yields," IMF Working Papers 10/184, International Monetary Fund; and Łukasz Rachel and Lawrence H. Summers (2019) "On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation". Brookings Paper.

Figure 2 – Public debt and debt servicing costs



Source: the Treasury

March years 1972 to 1989; June years 1990 to 2018
Cash 1972 to 1993; IFRS 1994 to 2004; PBE standards 2005 to 2018

Third, the interest payments on higher debt impose an economic cost on future generations through higher taxation than otherwise. For New Zealand, the government's interest expenses (in nominal terms) reached nearly eight percent of GDP in the late 1980s, before the introduction of the PFA. However, the extent to which we should be concerned about this fiscal cost rests on a few important conditions, which I will discuss in a moment.

Fourth, and finally, at high levels of public debt, there is evidence that the effectiveness of fiscal stimulus in response to an economic shock diminishes, as households begin to save more of the increase in their incomes from any stimulus, diminishing the effectiveness of fiscal stabilisation.

OECD surveys of the empirical literature suggest that a gross public debt threshold range of 70 to 90 percent of GDP for some high-income countries and 50 to 70 percent of GDP for euro area countries. As these estimates are in gross debt terms, we need to deduct about 10 percentage points to compare with New Zealand's net core Crown debt indicator.[14] The available evidence suggests that that it is likely that the costs of higher debt would exceed the benefits at around this level due to the risk of reduced economic growth, debt distress and the reduced scope for macro-stabilisation.

[14] Fall, F., Bloch, D., Fournier, J. & Hoeller, P. (2015) 'Prudent Debt Targets and Fiscal Frameworks' *OECD Economic Policy Papers*. No. 15.

In advising on debt limits, the Treasury has focused on the broader risks debt poses to growth and to the living standards of New Zealanders, rather than solely on the risk of a debt crisis. Debt could potentially rise very high before a debt crisis occurred. But we should set the upper limit for public debt at the level where the material reductions in the welfare of New Zealanders, through the channels I have discussed, exceed the benefits of taking on more debt. I will come to the benefits question, and the importance of high-value spending, later in this lecture. But based on our reading of the evidence, the Treasury has arrived at the view that an upper limit for net core Crown debt in New Zealand should be around 50 to 60 percent of GDP.

Put simply, above this the marginal cost of debt is likely to exceed the marginal benefit. Our estimates are, of course, uncertain. In the face of this uncertainty, we have taken a conservative approach, reflecting New Zealand's small size and vulnerability to external shocks and natural disasters.

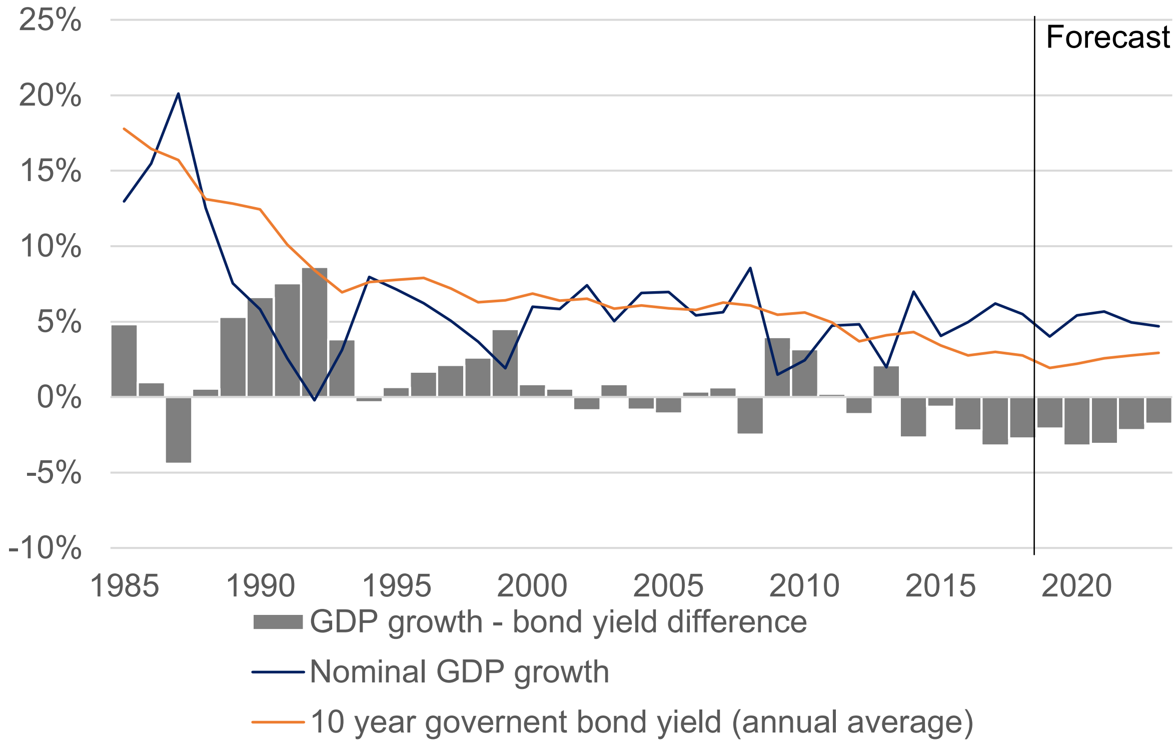
Treating this level of debt as an upper limit is consistent with the evidence that I have discussed. But this is a lower level of debt than is currently borne by many advanced economies, and merits some discussion. In particular, some might challenge this judgement by arguing that the economics profession has recently been more sanguine about higher debt. Most prominently, this was discussed by Olivier Blanchard in his Presidential address to the American Economic Association earlier this year, where he presented the case that the costs of debt are not as high as has typically been assumed.[15]

The starting point of his argument, and in some ways its most compelling aspect, is that the current world of persistently low interest rates, which are below the growth rate of the economy, is not an unusual case historically and is likely to continue. The implication of this is that a one-off increase in public debt may have no fiscal cost. The argument goes that, if the cost of long-term government borrowing is below the nominal growth rate, a constant or falling debt-to-GDP ratio can be maintained with a balanced primary budget, without ever needing to raise future taxes. The government can increase its debt, and pay the increased interest liability from future growth, simply by rolling forward debt as it comes to maturity. In this situation, one of the arguments against higher debt is removed, and we may be more relaxed about one-off increases in public debt.

The case for this rests on the rates on government borrowing being below nominal growth rates and, crucially, believing that this state of affairs is likely to continue in future. In fact, this situation currently holds in New Zealand, with the 10-year government bond yield at under two percent, and nominal GDP growing at around four percent. The same is true for much of the developed world and, as Blanchard demonstrates, is neither historically unusual in the case of the United States, nor projected to change in the near future.

[15] Blanchard, O. (2019) 'Public Debt and Low Interest Rates', AEA Presidential Lecture.

Figure 3 – Interest-growth rate differential



Sources: Stats NZ, RBNZ, the Treasury

But debt will need to be rolled-over in the future. We cannot be certain that future growth will exceed future sovereign bond yields. This is the case in New Zealand too, where the structural behaviour of New Zealand's growth and interest rates is not fully understood. This should continue to be studied and the Treasury will continue to review and update its thinking as new evidence emerges. But in the last three decades, the New Zealand 10-year government bond yield has, more often than not, exceeded nominal growth rates. In addition, New Zealand's macroeconomic vulnerabilities could affect the cost of borrowing in the future to a greater degree than at present. These macro risks include high household and farm debt and a reliance on external financing that increase our exposure to an external financial shock.[16] These risks increase the uncertainty in both the short term outlook and in the long run, which should make us pause before treating today's low interest rates as a justification for more borrowing.

I should also note that, contrary to some suggestions, the Treasury has adapted its advice to the current low interest environment. Before the Global Financial Crisis (GFC), net debt fell as low as 5 percent of GDP. Our advice in the current environment supports a materially higher level of public debt than was operated then. And low interest rates pose risks as well as fiscal benefits; I will come to the risks of lower interest rates in a moment.

The discussion of low interest rates is only part of Blanchard's case, and he proceeds to offer a series of other arguments and evidence, which I will not discuss in full today. The point I wish to emphasise is that, as with much of the wider economics discourse, recent debates over fiscal policy largely focus on the United States. The evidence and conclusions do not easily apply to New Zealand. We are a small economy with a peripheral role in global finance, a real

16 These imbalances are discussed in Andre, J. (2011) 'Economic Imbalances: New Zealand's Structural Challenge', New Zealand Treasury Working Paper.

economy near full capacity, and with a policy interest rate above the effective lower bound. The consequences of this are a unique set of challenges and vulnerabilities.

The Treasury's advice and analysis is, of course, focused on this unique situation. In our view, there are sufficient reasons to be concerned about high public debt, and lead us to settle on an upper limit for net debt of 50 to 60 percent of GDP.

Risks

But this level is an upper limit beyond which we would not advise allowing debt to rise; it is not the same as a prudent level of debt. We must also consider resilience in the face of uncertainty, and the role fiscal policy has in stabilisation, and in managing and mitigating risks. This brings me to my second topic of discussion: the fiscal risks we face, and how they affect our judgement of prudent debt.

The 'best practice' approach recommended by the IMF and OECD suggests allowing a buffer, in addition to an upper limit, to facilitate responses to future shocks.[17] Following this approach, we should be prepared for debt to rise suddenly in the event of a natural disaster or recession, without exceeding the 50 to 60 percent of GDP I have already mentioned. How large this buffer should be is highly uncertain, and reflects both the level of risk society is willing to face and the probability of being affected by a major shock. I will discuss the many uncertainties and judgements over risk in a moment. However, in the Treasury's view, this debt buffer should be at least 20 percent of GDP. This reflects several pieces of analysis.

Looking at the past, we can observe that, following post-war recessions, public debt in New Zealand has risen by an average of 10 percent of GDP in the five years after the recession. The rise in debt following the GFC and the Canterbury earthquakes was greater, leading to net debt increasing by 20 percent of GDP. This is similar to the average increase in public debt of 18 percent of GDP experienced by other advanced economies five years on from the last crisis. This has informed our advice, both to this Government and its predecessor, that 20 percent of GDP reflects a reasonable minimum buffer based on historical experience with past shocks.[18] Although, I should note at this point that the balance sheet impacts of the most recent shocks are not all captured in in the net debt-to-GDP ratio: the Natural Disaster Fund was drawn on; contributions to the Super Fund suspended; and tighter limits were placed on government spending. Though these actions may have helped us limit the impact on net core Crown debt, they have also stored up some costs for the future, which should be accounted for when we assess the impact of shocks.

Looking to the future, and some of the potential risks we face, we can draw on the 2018 Investment Statement, *He Puna Hao Pātiki.*[19] For this, the Treasury modelled the impacts of three different shocks on the Crown balance sheet: a foot and mouth outbreak, an international economic downturn and a major earthquake in the Wellington region. Under these scenarios, net Crown debt rose by between 5 and 15 percent of GDP in the absence of a fiscal policy response.

Follow-up analysis, including assuming a more active fiscal policy response to a major economic shock, suggests an increase in net debt of around 20 percent of GDP may be necessary.

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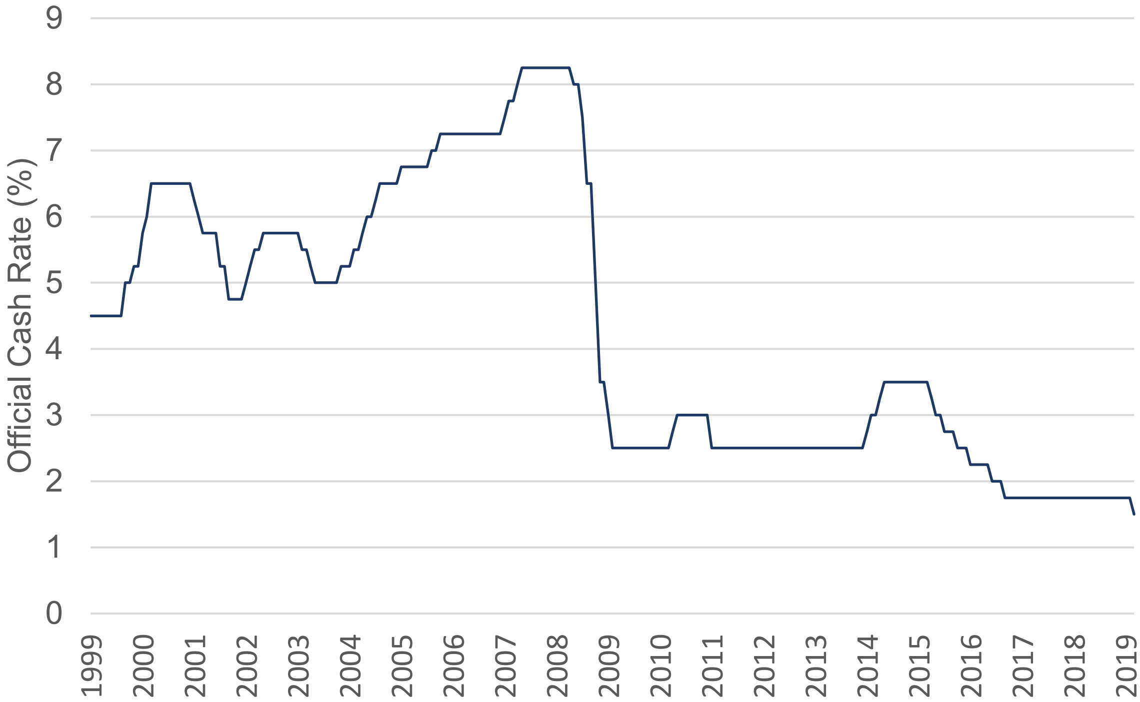
[17] IMF (2018), 'How to Calibrate Fiscal Rules: A Primer', Fiscal Affairs Department; Fall, F., Bloch, D., Fournier, J. & Hoeller, P. (2015) 'Prudent Debt Targets and Fiscal Frameworks' *OECD Economic Policy Papers*. No. 15.
[18] The Treasury (2017), 'Treasury Report: Risks to the Outlook for Net Debt', Budget 2017 Proactive Release
[19] The Treasury (2018), *He Puna Hao Pātiki: 2018 Investment Statement*

This buffer for fiscal policy to respond to a shock is especially relevant in the current context of low interest rates. Although low interest rates reduce the cost of borrowing, they also constrain the ability of monetary policy to respond to a shock. During the last global economic shock, the Reserve Bank reduced the Official Cash Rate by 575 basis points. With the OCR currently at 1.5 percent, monetary policy does not have space for a similar adjustment without entering the territory of unconventional monetary policy. And currency depreciation, the other usual mechanism for short-term macroeconomic stabilisation, will probably not be sufficiently stimulatory in a synchronised global downturn.

Figure 4 – OCR 1999 to present



Source: RBNZ

Therefore, today's low interest rate environment, though it may lower the cost of debt, also means that fiscal policy should be prepared to play an active role in stabilisation in a future severe shock. Other advanced economies which entered the GFC with higher levels of debt than New Zealand faced an experience we would not wish to repeat: brief fiscal stimulus, followed by a long period of – in many cases economically costly – fiscal consolidation while interest rates were at the lower bound. A prudent strategy would be to allow a sufficient fiscal buffer for public debt to increase following a future shock, including space for discretionary fiscal stimulus if needed, without increasing debt above the 50 to 60 percent range I discussed a moment ago. Although, even with a buffer such as this, a period of fiscal consolidation may still be required at some point, as we experienced following the GFC. This will be particularly true if the shock leads to a permanent reduction in output and tax revenue.

The New Zealand evidence of a buffer of at least 20 percent of GDP is largely consistent with the modelling of other institutions. Modelling by the IMF and the OECD suggested a buffer of around 15 percent of GDP was necessary to maintain debt under a fixed ceiling under macroeconomic uncertainty. This range of estimates leads us to a view that a net debt buffer of at least 20 percent of GDP below our upper net core Crown debt limit of 50 to 60 percent of GDP is reasonable based on the current state of the evidence. At this level, we expect that we could manage one large shock, or two smaller ones. And of course, two shocks, close together, remains a real risk. There is no reason to assume that the natural disasters we are at risk from in New Zealand will not follow in quick succession to economic shocks more familiar to the rest of the world. And I would emphasise here, again, that the fiscal costs of a shock are not all included in the measure of net core Crown debt. The 20 percent we suggest here is a minimum, and higher buffers will provide greater resilience to the wider fiscal impacts.

Both the figures we have discussed – the safe limit of debt and the buffer required to respond to a shock – are highly uncertain. Taken together, they suggest a prudent net debt limit of around 30 percent of GDP – a 50 percent upper limit with at least a 20 percent buffer. But this 30 percent is only an indicative limit to what a level of prudent debt might be, and an uncertain one at that. The level of prudent debt also requires further judgements over the level of risk we as a society are willing to face, and a view on what degree of resilience, and therefore lower debt, is warranted in the current economic environment. These are largely questions for Ministers to answer. But officials in the Treasury have a role to provide free and frank advice on what the risks are to inform those judgements.

One route the Treasury has traditionally used to consider these risks is through its reporting in its twice-yearly Economic and Fiscal Updates (EFUs) and the other is in its four-yearly Long-Term Fiscal Statement (LTFS).

Governments face a large number of fiscal risks. That is why in every EFU, the PFA requires us to publish a list of specific fiscal risks.[20] And while we cannot quantify these, from a portfolio perspective we know that some of them will eventuate and that the amounts may be material. That means the Government of the day needs to make a judgement of how much more of a buffer will be required. And over and above this are some bigger risks that we know will have marked fiscal impacts, particularly over the longer-term.

In the words of the PFA, the LTFS must contain the Treasury's "best professional judgments about the risks and the outlook".[21] The LTFS does not advise what to do about these risks but it does offer a factual analysis of what they are to support our policy advice, and the decisions of Ministers. The analysis to support the next LTFS is already underway, and it will be published next year. I don't know everything that it will include – much analysis still needs to be done – but there are two prominent challenges that are certain to feature. Those are our ageing population and climate change.

Both of these will have an impact on the Crown's balance sheet, and maintaining the living standards of New Zealanders is likely to require that they are mitigated with some response from Government. The fiscal costs of an ageing population have been discussed extensively in prior iterations of the LTFS.[22] The fact of it is certain, and included in our thinking, but the exact nature of the costs remains uncertain. The rising healthcare and superannuation costs for future generations present difficult choices: whether those obligations should be met by current or future taxpayers, and whether the level of entitlements today's retirees enjoy should continue for future generations. I don't raise these questions to propose a solution but only to emphasise that we should remain cognisant of these future challenges in our judgements today.

The future fiscal impacts of climate change are less discussed and more uncertain. Climate change could threaten the living standards of New Zealanders through many channels. An increase in extreme weather events and rising sea levels may require the strengthening and

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[20] s26Q(3)(b) Public Finance Act 1989.
[21] s26N(2)(b)(i) Public Finance Act 1989.
[22] The Treasury (2016), *He Tirohanga Mokopuna: 2016 Statement on the Long-Term Fiscal Position*

frequent rebuilding of our physical infrastructure. A changing climate may degrade the natural capital our primary industries rely on. The transition to a low carbon economy will require new skills and industries to develop, and some places and sectors will feel the strain in that transition. We may face new migration pressures, as sea level rises affect our neighbours in the South Pacific.

Perhaps all these costs can be met by future generations when they arise. Perhaps future governments can support the living standards of New Zealanders through this transition with higher taxes, or higher debt for the generation after them. Or, perhaps current taxpayers should bear some of the burden of these future costs.

These are difficult judgements. They concern the distribution of resources between generations and across society, as well as judgements about how much we should insure against these unknown future costs.

I suggested earlier that a net debt buffer of at least 20 percent of GDP is required to respond to a range of shocks. A government particularly concerned about future uncertainties and risks may wish to maintain a larger buffer as an insurance against these costs; that would lead to setting a threshold for debt below the 30 percent I mentioned earlier. Depending on the relative weight one places on the wellbeing of current or future generations, maintaining lower debt today may be a worthwhile choice to ease the impact of climate and demographic change on future generations of New Zealanders.

These are normative, political judgements which the Treasury can only advise on. I raise them here because they demonstrate that determining what is a ‘prudent level’ of debt is not a purely technical exercise. It is a judgement, and different governments will, entirely justifiably, make different judgements at different times and in different economic circumstances.

Value of investments

I turn now to the fourth aspect of prudent debt I want to discuss – and an equally significant component – the importance of considering the value of the investments we make, in the context of the economic conditions.

It is one thing to suggest increasing net debt in the abstract. It is another to consider that proposition knowing what that debt will fund. As I said, increasing debt imposes real costs on New Zealanders, not only in the taxes required to make payments made on that debt, but in greater risks and reduced resilience to future shocks. That cost must be worth the gain in wellbeing that comes from whatever the debt funds. Ensuring spending is worthwhile and achieves value for money is a critical criteria for us as public servants. It also matters to the credit rating agencies and investors who affect the interest rates New Zealand can borrow at. Spending with credibility isn’t just good policy: it affects what we pay for our debt.

A useful principle to start from is that debt should only be used to fund investments, not the day-to-day costs of government. This has sometimes been known as the ‘Golden Rule’, and a version of it exists in the PFA which requires that, on average, over a reasonable period of time, operating expenses do not exceed operating revenue.[23] This promotes equity between generations. In general, the benefits of day-to-day spending are felt by the current generation of New Zealanders, and it is fair that they should bear the costs. Running operating deficits, aside from representing a transfer from future generations to today, would also likely imply that spending was not sustainable. Increasing debt to fund permanently higher expenses is unlikely

[23] s26G(1)(b) Public Finance Act 1989

to ever represent a prudent choice. Investments, on the other hand, are for the long-term; they will benefit future generations, and so future generations should bear some of the cost.

For the most part, that limits prudent, debt-financed spending to investments. And there is certainly an in-principle case for higher investment in New Zealand. The risks I discussed earlier – particularly climate change – will likely need to be managed through major investments. And as we discussed in *He Puna Hao Pātiki,* many of our social assets – social housing, and the healthcare and education estates – are aged and reaching the end of their useful life. In some places there is a critical under-provision of these essential social assets. High-quality infrastructure investment is needed to support urban growth and the supply of housing. Further investments in this physical capital can support the wellbeing of New Zealanders, and aid the development of our human and social capital.

This need for greater infrastructure investment is recognised in the Government's fiscal strategy. The Treasury's fiscal forecasts show a material increase in Crown capital spending expected over the forecast period. And the Government's fiscal projections – for the ten years beyond the forecast period – indicate there is headroom for future capital allowances to be higher than at present while keeping net debt centred within the range of 15 to 25 percent of GDP.

But there are also considerations that should give us pause before suggesting the Government should significantly lift the debt target today to fund an even greater scale of capital investment. The pace, sequencing and scale of investment is important for ensuring that increased high-quality investment can be delivered. Recent institutional reforms will help to build a pipeline of infrastructure investment: the newly introduced multi-year capital allowance supports longer-term budgeting; and the creation of the New Zealand Infrastructure Commission – Te Waihanga is intended to help with the long-term coordination and planning of infrastructure.

Beyond long-term planning, we should also be concerned with the more immediate challenge of capacity in the economy, particularly in the construction sector. The PFA requires the Government to have regard to the interaction between fiscal policy and monetary policy.[24] Increasing investment in sectors which are already reaching capacity, such as construction, risks fuelling cost escalation or project delays, and crowding out other valuable activity.[25] While we may wish to fund investments today, these capacity constraints create real risk that further spending merely reallocates economic resources from the private to the public sector, without growing New Zealand's capital any faster than before. In different circumstances – were there spare capacity in the economy, or if monetary policy were constrained in its response to fiscal stimulus – the Treasury might advise a more expansionary fiscal stance. But in today's economic climate, we would be sceptical of the claim that dramatically higher debt would lead directly to higher productive investment without significant crowding out. The broader economic context matters for whether debt will actually result in higher investment.

The second consideration is whether we are forgoing higher value investments in the future by spending money now. Net core Crown debt is currently about 20 percent of GDP. Conditional on the judgements one makes about future risks and the transfers between generations, that suggests net debt could be somewhat higher – while still leaving a buffer below our upper limit – but fiscal space is not unlimited.

That raises the question of whether that headroom is best used to fund investments today, when capacity is limited and the best responses to future challenges are still unknown. Or

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[24] s26G(1)(f) Public Finance Act 1989
[25] This risk is acknowledge in the latest Monetary Policy Statement. See RBNZ (2019), [May 2019 Monetary Policy Statement]

whether the near future will present higher value investments, and economic conditions more conducive to expansive government investment, with the capacity constraints I just mentioned being less binding.

Blanchard also discusses the importance of considering the overall welfare impacts – not just the fiscal costs – of higher debt, observing that higher public debt will crowd out capital if the economy is fully employed. The welfare costs of debt accumulation will not necessarily be low even if the risk-free interest rate is low. Whether investments are an effective and efficient use of Crown revenue will always require rigorous analysis, as well as value judgements, just as assessments of future risks will, albeit ones where economic evidence may play a larger role.

This highlights that the fundamental challenge is one of scarcity. It is a basic point, but one worth reiterating. Increases in debt cannot be used to fund new spending without trade-offs in the rest of the economy. I emphasise this, in part, because of another strain of thinking gaining increasing prominence in the United States: Modern Monetary Theory.

The central proposition of its advocates is that a state that can print its own money cannot go bankrupt and therefore debt should not be a constraint on public spending. The first part of that statement is, in a technical sense, true. But the second part is missing an important part of the story: productive investment requires the ‘real resources’ of the economy, workers, machines, land. Money creation or new government bond issues do not automatically create real resources. When the economy is near capacity, as New Zealand’s is today, more of these resources being used by government means less being used by the private sector in the short term, and more inflationary pressure across the whole economy. If infrastructure investment is of high quality, it may increase the supply potential of the economy and increase overall productivity but only in the longer term. There is no free lunch: we will always face trade-offs.

So where does that leave us? What is a prudent level of debt? As a starting point, the Treasury’s view is that an upper limit on net core Crown debt should be 50 to 60 percent of GDP, and that in addition to that, a buffer of at least 20 percent of GDP should provide a safety margin below that. Taken together, that would suggest a prudent debt limit of around 30 percent of GDP, but a government must also make the judgement over how far it wishes to self-insure and prepare for future fiscal risks today. And further, whether raising new debt today, rather than tomorrow, is an efficient and effective use of the Crown’s balance sheet. All these considerations may well lead to setting the debt anchor at a lower level. And they formed an important part of the Treasury’s advice that supported the Minister of Finance’s announcement of a net core Crown debt range of 15 to 25 percent of GDP.

I hope I have demonstrated that what the Treasury views as ‘prudent debt’ is not a fixed number. Ultimately it requires political judgements, is fundamentally uncertain and likely to vary over time. A range of levels of net debt could be quite fairly justified as prudent though we would argue there is an upper limit for New Zealand that would be lower than that of many other developed economies.

This brings me to a few final, rather practical points, about how we should think about prudent debt.

First, how we specify the debt anchor. As the uncertainty I have discussed at length demonstrates, whatever the level chosen, there is no reason to focus on a single figure for debt. Equally, in normal times, point targets with fixed time limits or deadlines can create perverse incentives.[26] We should be comfortable with allowing some flexibility for debt to vary within a range over a longer time horizon. The debt-to-GDP ratio will naturally fluctuate with volatility in the economic data, movements of the economic cycle, and the uncertainties of forecasts. Committing to a fixed point target, or a fixed date, potentially leads policy decisions to be driven by such fluctuations in the economy, rather than by the costs, benefits and the appropriate timing of investment. Consistency in what we view as the range of prudent debt levels supports economic stability, and gives governments the flexibility to vary their judgements as the future risks and value of current investments varies.

Second, I want to touch on how we define debt. I have focussed on the risks of debt rising too high. However, it is worth considering the converse case, the dangers of debt being too low. Particularly for a small country like New Zealand, there is a risk a very low level of debt restricts liquidity in the market for government bonds. A continuous and reliable supply of government bonds in the market supports the confidence of investors in New Zealand government debt and maintains the freedom for future governments to raise new funds when needed.

For these reasons, the Treasury has advised maintaining government bonds on issue at not less than 20 percent of GDP over time. This will, in general, translate to keeping gross debt higher than 20 percent of GDP. It may be that the net level of Crown debt falls below 20 percent of GDP through the accumulations of liquid financial assets. But maintaining a minimum level of bonds on issue ensures ongoing government access to debt funding and supports liquidity in the market for New Zealand government debt.

This is one of the reasons net debt has typically been a more relevant and meaningful measure for fiscal policy. The other was made effectively in the IMF's Fiscal Monitor last year.[27]

The IMF emphasised the importance of fiscal management looking at the entire balance sheet, both debts and assets. New Zealand was highlighted as a world leader with our approach to measuring both net debt and overall net worth, and I quote, "asking how public wealth can be better used to meet society's economic and social goals".[28] We should continue to take this broad view, and including both assets and liabilities, when we think about public debt.

The specific measure we have used for this in recent years has been net core Crown debt. That is, borrowings less liquid financial assets, excluding the New Zealand Super Fund, and excluding Crown entities. But the changing roles of Crown entities underline the importance of considering the wider Crown balance sheet rather than restricting attention to an analysis of 'core Crown' debt. The borrowing of Crown entities, though distinct from the issue of government bonds, still affects the credit worthiness of the Crown as a whole. In our latest forecasts, the share of total borrowing undertaken by Crown entities is expected to rise over the forecast period. And, in any crisis or shock, those debts will matter. How we measure our debt matters, and this question, though it may seem arcane, is an important one for determining prudent debt.

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[26] In periods of fiscal consolidation, fixed date targets may be appropriate to communicate a time-varying target and promote accountability.

[27] IMF (2018), *Fiscal Monitor Reports: Managing Public Wealth*

[28] IMF (2018)

Conclusion

I would like to conclude today by making a final observation about the Public Finance Act.

I began this lecture by mentioning a speech delivered by Struan Little late last year on changes to the public finance system. The areas of activity he highlighted – budget design, flexibility around appropriations, strategic planning and reporting, and aiming for long term investment outcomes – are all ongoing. They will result in substantial change to the public finance system over the coming years, reforming how we in the public sector write business cases and regulatory impact statements, among other things.

But just as important as those more practical changes, is making sure that a concept central to my comments today and all the Treasury's advice appears in any reforms to the PFA. That concept is wellbeing.

As I said at the beginning of this lecture, questions of fiscal strategy are intrinsically linked to wellbeing. They affect the distribution of resources across time, people and places; the quality and nature of services we can access; and virtually every dimension of New Zealanders' living standards. These are broader than thinking purely about the effects on the Crown balance sheet or GDP, as some beyond the Terrace think we limit ourselves to.

The Treasury has always considered these broader factors in its advice but there is value in making their consideration explicit. Questions of fiscal management and fiscal strategy have always been ones of wellbeing and enshrining that perspective in legislation will ensure it endures in our future advice. I support their inclusion in a modernised PFA and strengthening an important macroeconomic pillar to ensure it remains fit-for-purpose for the next 30 years.