Making fiscal policy more stabilising in the next upturn: Challenges and policy options

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June 2011

Recent years have seen a gradual resurgence in the emphasis given to fiscal policy as a tool for achieving macroeconomic stabilisation. For many countries this reflects the limitations of monetary policy (e.g. zero interest bound in the US and Japan; unavailability of country-specific monetary policy in EMU). For other economies it reflects renewed recognition of the impact of fiscal policy on the macro policy 'mix', and therefore on the real exchange rate and macroeconomic imbalances. Everywhere questions are being asked about what role fiscal policy could have played in limiting the build-up of imbalances in the run-up to the global financial crisis. However, making fiscal policy less pro-cyclical is very difficult, in large part because of the political economy challenges of running large surpluses during prolonged economic upturns. This paper draws lessons for New Zealand from the last economic cycle and surveys the options for making fiscal policy 'more stabilising' in future economic upturns. Options considered include: revising the Public Finance Act so as to increase the importance that is placed on avoiding pro-cyclical fiscal policy; more focus on sticking to *ex-ante* spending plans; or a stabilisation fund to safeguard revenue windfalls. The potential role of an independent fiscal council is also touched on.

This paper has been prepared for the macroeconomic policy forum to be hosted by the New Zealand Treasury, in conjunction with the Reserve Bank of New Zealand and Victoria University of Wellington, on 23 and 24 June 2011. The top of the forum is New Zealand's Macroeconomic Imbalances - Causes and Remedies.

This paper has benefited from comments on earlier drafts from Jean-Pierre André, Felicity Barker, Gary Blick, Tim Hampton, John Janssen, Tracy Mears, Bill Moran, Oscar Parkyn, Renee Philip and Christie Smith, as well as participants at the Banca d'Italia Workshop on Fiscal Policy on 31 March – 2 April, 2011 in Perugia, Italy. The views expressed in this paper are those of the author and do not necessarily reflect the views of the New Zealand Treasury. Please send any comments to anne-marie.brook@treasury.govt.nz

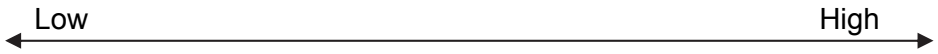
1. Introduction

The macro-stability objective of Fiscal Policy has received a lot of attention within New Zealand in recent years, motivated by concerns that pro-cyclical fiscal stimulus over the 2005- 2008 period may have exacerbated the interest rate and exchange rate cycles, contributing to a widening of New Zealand's external imbalances. This focus is notably different from the international debate on the macro-stability role of fiscal policy, which has tended to focus more on the role that fiscal policy can play in stimulating demand during downturns, particularly in countries facing the zero interest rate bound.

In recent decades, the stabilisation role of fiscal policy in New Zealand has been predominantly focused on passive use of the automatic stabilisers. However, the counter-cyclical impact of the automatic stabilisers is often not sufficient to offset pro-cyclical discretionary fiscal policy. In a small open economy like New Zealand, with a floating exchange rate, pro-cyclical fiscal stimulus is unlikely to have a large impact on aggregate demand (because of leakage into imports and the offsetting impact of tighter monetary policy), but it does have a significant impact on the *mix* of macro-economic conditions. Higher real interest rates, and associated exchange rate appreciation, is unhelpful to an economy already suffering from significant macroeconomic imbalances.

This paper documents the extent to which overall fiscal policy was pro-cyclical over the past cycle, and discusses changes to the fiscal policy framework that could help to either reduce the probability of pro-cyclicality in future, or encourage more counter-cyclical discretionary policy. As indicated in Figure 1, this distinction may be somewhat artificial as policies that aim for "counter-cyclical" fiscal policy are to a large extent the same policies that could be used to aim for more "neutral" fiscal policy, just used to a greater degree.[1] How far we decide to move along this spectrum should depend on the importance attached to a dampening of the interest rate and exchange rate cycles, together with an assessment of any costs that could be incurred in implementing more active fiscal measures. One of the goals of this paper is to present more detail on specific policy options so that such a judgement can be made.

Figure 1. Degree of stabilisation provided by fiscal policy



Tools	Passive use of automatic stabilisers only	Fiscal institutions that help keep discretionary policy less pro-cyclical	Fiscal institutions that encourage more counter-cyclical discretionary policy and/or active use of counter-cyclical tax policies
Outcomes	Likely to mitigate pro-cyclicality but not eliminate it	Could result in more neutral fiscal policy and not exacerbate monetary policy	Could result in counter-cyclical fiscal policy and thus help dampen interest rate cycles

[1] While there are also some more activist tools that could be used, such as temporary tax rate changes, these are not recommended due to substantial efficiency and compliance costs (see discussion in Section 4.6).

Section 2 begins with a review of what the economic literature has to say about the stabilisation role of fiscal policy, and how this has changed over time. It also discusses the reasons why fiscal policy stabilisation may be more important for New Zealand than for most other economies. Section 3 examines fiscal policy outcomes in New Zealand over the past decade and concludes that fiscal policy appears to have behaved in a pro-cyclical fashion in some years. Section 4 looks more closely at the specific policy options for permitting fiscal policy to play a greater role in macro stabilisation. Section 5 concludes.

2. International trends & literature review

After the Keynesian activism of the 1940s to 1960s, the general trend within economics through the 1970s, 1980s and 1990s was to move away from promoting *active* counter-cyclical fiscal policy, and towards greater reliance on the monetary authorities for stabilisation, with spending and tax policy aimed more towards longer-term structural goals (see Blinder (2004) for a brief history of events in the United States). This tendency was supported by theory (a perceived increase in the effectiveness of monetary policy under regimes of central bank independence and inflation targeting) and for practical reasons (related to political economy concerns about lags in the design and implementation of fiscal policy).

Even during this period, economists widely agreed that pro-cyclical fiscal policies should be avoided. But despite an on-going focus on ensuring that automatic stabilisers were permitted to function, relatively little attention was given to whether or not this was sufficient to prevent pro-cyclical fiscal policies overall. In fact, a bias towards pro-cyclicality during economic upturns has been documented in a number of countries (e.g. Balassone *et al* (2007), also see survey in European Commission (2006)). The evidence suggests that this is generally due to expansionary discretionary policy offsetting the workings of the automatic stabilisers during upturns. Balassone *et al* (2007) argue that it is open to debate whether this asymmetry is due to political economy reasons or from genuine mistakes in assessing cyclical conditions.[2] The discussion in Section 3 of this paper suggests that pro-cyclicality in New Zealand is likely to be due to a combination of these factors.

More recently – i.e. over the past decade or so – both macroeconomic theory and policy practice have been moving back towards greater recognition of the stabilisation role of discretionary fiscal policy. This shift has been driven by three factors: first, in some countries, by the revealed limitations of monetary policy imposed by the zero interest bound problem; second, by a debate in Europe about the greater role that fiscal policy could play in stabilising the cycle in euro-zone countries (who no longer have flexible exchange rates); and third, by a refocusing on whether fiscal policy could and should have played a greater role in 'leaning against the wind' to prevent the build up of sectoral or external imbalances over the last cycle.

It is this third issue that is of relevance for New Zealand. In particular, significant concerns have emerged about New Zealand's external imbalances and the over-valued exchange rate (see further discussion on pages 8-9), which has, in turn,

[2] Given the significant fiscal tightening that is taking place in many European countries right now, while output gaps are still negative, pro-cyclical contractions are likely to be documented for the current period. This can be attributed to a failure to pay down sufficient debt during the upturn of the 2000s.

focused renewed attention on the role that fiscal policy has played in contributing to the path of the exchange rate. Compared to other industrialised countries New Zealand's level of public debt is not particularly high, so fiscal sustainability is not considered an immediate challenge (gross public debt in New Zealand is around 35% of GDP vs over 90% for the average OECD position). However, New Zealand's net foreign asset (NFA) position is around -80% of GDP, which is in a similar ballpark to those of Greece, Ireland, Portugal and Spain, and significantly worse than those of most other OECD countries. Moreover, the New Zealand dollar is considered by many (such as the IMF, as discussed in more detail on pages 8-9) to be persistently over-valued, dampening export sector competitiveness. This paper is concerned with the role that fiscal policy has played in contributing to these outcomes. Essentially, the issue is one of monetary and fiscal policy coordination, or bringing about the best "mix" of macroeconomic conditions.[3]

Unfortunately, there are few other economies with similar concerns, which means that much of the international economics literature on the stabilisation role of fiscal policy is not very pertinent to New Zealand's challenges. For example, despite the evidence that fiscal policy tends to be most pro-cyclical during economic upturns rather than during recessions,[4] most discussions about the stabilisation role of fiscal policy, refer exclusively to the role of fiscal policy in providing macroeconomic stimulus during downturns (e.g. Lindh & Ljungman, 2007). Since this is not the focus of this paper, a literature summary is not provided, other than to note that to date there is no clear consensus about the extent to which downside fiscal stimulus should be advocated. For example, see Auerbach & Gale (2009) who argue in favour, versus Taylor (2009) who argues against.

Rather, the focus of this paper is on the upside of the cycle; i.e. how to make fiscal policy less expansionary when economic growth is strong. This focus is motivated not so much by the question of how to improve the sustainability of fiscal policy during upturns so as to be able to afford stimulus during downturns (although this may also be a benefit), but rather by the New Zealand-specific concern about the "mix" of macroeconomic conditions, and thus the influence that fiscal policy has on the level of interest rates and the exchange rate. To the extent that this concern is more important for New Zealand than for other countries, the case for making fiscal policy more stabilising during upturns may also be stronger in New Zealand than elsewhere.

Influencing the "mix" of macroeconomic conditions

Famously, Charlie Bean has used lessons from game theory to describe the nature of the fiscal policy-monetary policy interaction in an economy with a floating exchange rate and an independent inflation-targeting central bank. The basic argument is that since the central bank has the clear mandate of setting monetary policy in order to achieve price stability, the fiscal authority sets fiscal policy knowing that the Bank will then adjust monetary policy to keep inflation within the target range. Thus the fiscal authority is a Stackelberg leader and the Bank is a Stackelberg follower. Under these circumstances, the mix of macroeconomic conditions should be optimal from the

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[3] This paper does not discuss other tools – such as macro-prudential policies – that may also be able to influence the mix of macroeconomic conditions.

[4] Most cases of pro-cyclicality during downturns can be traced back to excessively loose fiscal policy during the previous upturn, which left insufficient fiscal space for offering stimulus during the ensuing downturn. Many OECD countries provide good illustrations of this.

perspective of the fiscal authority, so long as the fiscal authority knows the Bank's assessment of the economic conjuncture and of the short-run output-inflation trade-off (Bean, 2009). In practice it is the government, and not the Treasury that makes fiscal policy decisions, and so it should be considered the government that has the greatest degree of control over the mix of macroeconomic conditions.

This point may not be widely understood by the public, many of whom may consider the Reserve Bank fully responsible for the level of interest rates and not fully appreciate that while it is indeed the Bank who *sets* the official cash rate, it does this in response to inflationary pressures, many of which are directly influenced by government decisions.

The idea of policy "optimality" from the perspective of the government (fiscal authority) has also been highlighted by other economists. For example, Allsopp and Vines (2005) point out that while fiscal policy "does not matter" for the course of inflation and the output gap (the stability of which is the focus of the monetary authority) fiscal policy should be seen as responsible for the general level of interest rates and – in an open economy – the exchange rate. Recent Treasury work exploring the drivers of New Zealand's high real interest rates has reached similar conclusions. i.e. that New Zealand's high real interest rates reflect domestic demand conditions, and in particular New Zealand's low rate of saving relative to investment (Labuschagne and Vowles, 2010). To the extent that the fiscal authority has greater control of policies that affect saving and investment, this implies that it is the fiscal authority, rather than the central bank, who should be seen as most responsible for the general level of interest rates and the exchange rate. Of course there will always be some exogenous influences on interest rates and exchange rates as well. The point here is simply to emphasise the relative impact of domestic policy makers.

By contrast, it is well known that fiscal policy is relatively ineffective at stabilising output over the cycle in small open economies. This is reflected in the fact that estimated fiscal policy multipliers are often indistinguishable from zero in countries that are both open and have a floating exchange rate, whereas they are typically significantly positive (in the order of 1.5) for more closed economies (Ilzetzki *et al* (2010) and Beetsma and Giuliodori (2011)). Claus *et al* (2006) documents fiscal output multipliers for New Zealand that are generally consistent with results from empirical studies for other small open economies with monetary accommodation, and these results are also robust to estimation with more recent data. The much smaller multipliers in open economies with floating exchange rates reflect the interest rate and exchange rates' reaction to the fiscal shock.

From a theoretical perspective, the policy implications of this literature are clear. First, it does not challenge the standard view that the central bank should have the dominant role in stabilisation policy, as long as stabilisation policy is defined relatively narrowly in terms of reducing the variance of output around trend (and indirectly, stabilising inflation).[5] Second, it implies that for a *given* output gap the government (fiscal

[5] Solow (2005) has drawn attention to some circumstances in which fiscal policy may be a *more suitable* policy instrument for stabilisation than monetary policy. His argument rests largely on the idea that real disturbances can move the economy away from its long-run equilibrium growth path for significant periods of time. Because fiscal policy *directly* involves changes in the demand for goods, whereas monetary policy operates more indirectly through changes in inter-temporal relative prices, he argues that fiscal policy may be a more useful tool for stabilisation when disturbances are durable. But under normal circumstances, it is widely agreed that monetary policy is best suited to the job of macro

authority) chooses the *policy mix* between the level of interest rates and the level of taxes and spending. To the extent that interest rate differentials have a significant impact on the exchange rate (Mabin, 2010), this also implies that the fiscal authority has considerable influence over the path of the exchange rate (see section 3 for further discussion of this).

The perspective that fiscal policy can contribute to superior macro-economic outcomes by helping to influence the level of interest rates and the exchange rate often does not feature in the international literature, which is dominated by the experiences of large economies with higher levels of debt, and smaller European economies without fully floating exchange rates. For example, OECD (2010a) acknowledges that the challenges of stabilisation policy are more severe in small, open economies, and that this often requires relatively more support from fiscal policy. However, relatively greater emphasis is given to the potential for fiscal policy to directly stabilise aggregate demand, rather than to stabilise the exchange rate.

One exception is Lane (2010) who – drawing on Blanchard (2007) – focuses on the role that expansionary fiscal policies played in exacerbating the economic cycle during the 2000s. Lane draws attention to the macroeconomic risks of a contraction in tradables output during a period of high domestic expenditure, and argues that fiscal policy should play a more important role (alongside monetary policy) in "leaning against the wind", in order to limit the scale of such external imbalances. This argument is highly relevant to New Zealand, where tight monetary policy during the last upturn exacerbated New Zealand's already high interest rates, pushing up the exchange rate and hurting the tradables sector. Lane points out that such a contraction in tradables output during a period of high domestic expenditure may not be easily reversed once the economy needs to make the transition towards greater net exports (i.e. a hysteresis argument). As a result, he emphasises the importance of using both macro-prudential policy, and fiscal policy, as complements to the stabilisation role of monetary policy.

While there are a number of arguments in the academic literature *against* a greater stabilisation role for fiscal policy, none of these are really applicable to the challenge of making fiscal policy more stabilising during the *upside* of the economic cycle, with the exception of the political economy argument, which is discussed below. For example, it is commonly argued that fiscal policy as a stabilisation tool may be ineffective. The key idea here is that temporary discretionary fiscal actions could be fully, or mostly, offset by private sector agents. This idea has spawned a large body of literature which largely provides support for the effectiveness of fiscal policy (e.g. Blinder (2004), Solow (2005)), despite evidence for partial Ricardian-type offsets. However, none of this literature has much relevance for the topic addressed in this paper, for two reasons. First, because this literature is almost exclusively focused on the impact of fiscal policy stimulus during downturns, largely ignoring the impact of fiscal policy prudence during upturns. Second, and more importantly, it does not attempt to measure the size of the interest rate and exchange rate multipliers, which – from the perspective of a small

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stabilisation. Even under more exceptional circumstances, such as those discussed by Solow, there is nothing under current institutional arrangements to prevent the fiscal authorities – as Stackleberg leader – from taking advantage of their knowledge of the monetary policy reaction function, to bring about a superior mix of policies, than that which might have eventuated if the job of stabilisation was left solely to monetary policy.

open economy – are more important to questions about the appropriate stabilisation role of fiscal policy.[6]

In the academic literature, it is also sometimes argued that fiscal policy *lags* are too long, although again this is a critique applied to the use of expansionary policy during downturns, rather than to the use of contractionary fiscal policy during upturns. What is needed during upturns is normally just the "will power" – or institutions that foster support for such a will – not to spend fiscal windfalls, rather than the introduction of any specific new policies.

In the policy world, however, there are strong political economy constraints that work against the fiscal authority consistently choosing the optimal policy mix from the perspective of maintaining macroeconomic stability. While governments are normally happy to provide counter-cyclical fiscal stimulus during downturns, the political difficulty of sustaining large ongoing actual and structural budget surpluses tends inevitably to lead to pro-cyclical fiscal expansion during boom years (Alesina, 2000). The normally small impact of the automatic stabilisers can thus easily be swamped by such pro-cyclical discretionary actions.

In other words, while it is now widely accepted that the job of central bankers is to take the monetary punchbowl away just as the party is getting underway, political processes in democratic countries don't readily support holding back the fiscal punchbowl that is typically wheeled out by the fiscal authorities just as the party gets into full swing. This constraint is not new as this quote from Condliffe (1959) illustrates:

> *"In a period of rising export prices such as NZ enjoyed after the war, it would have been sound policy to add fiscal restraint to monetary pressures designed to reduce domestic inflation. This would have involved both a reduction in current expenditures and a slowing of capital investment, so that budget surpluses might be applied to a reduction of debt. Such policies are not popular and may be regarded as politically impossible; but the risks involved in not following them are substantial".*

Any serious attempt to make fiscal policy less pro-cyclical needs to directly address these political economy considerations, with particular attention paid to ways of injecting more discipline during the upside of the economic cycle. Price *et al* (2008) provide a good discussion of the strategies available for maintaining favourable fiscal positions during economic upturns. In addition, there are the examples of a few economies that have already made some progress in this direction, such as Chile, which has adopted fiscal institutions explicitly designed to encourage public saving in good times.

Nevertheless, it is likely that much more sophisticated fiscal analysis will also be needed in future, if the stabilisation role of discretionary fiscal policy is to be exercised with the degree of sophistication of monetary policy (Leeper, 2010). The fact that most OECD countries are currently focussed primarily on returning fiscal deficits to balance or surplus should not distract attention from the importance of putting in place fiscal

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[6] Other critiques of using fiscal policy for stabilisation purposes also fail to consider the open economy dimensions. For example, Lucas (2003) argues that the welfare benefits from using fiscal policy to stabilise consumption are negligible, but does not consider the impact on exchange rate cycles in small open economies.

institutions that can also facilitate better macro-economic outcomes during the next economic upturn.

3. Fiscal policy in New Zealand over the past economic cycle

3.1 The link between fiscal policy and macroeconomic imbalances

With the benefit of hindsight, it is widely argued that fiscal policy was insufficiently supportive of low interest rates and tradable sector activity over the 2005-2008 period.[7] Because monetary policy was the primary tool for cooling the booming economy, higher interest rates ensued and the exchange rate was pushed up to unsustainably high levels, adversely affecting the tradable sector and exacerbating external vulnerabilities.

The positive correlation between the exchange rate and interest rate differentials is illustrated in Figure 2. While this figure illustrates only one cross-rate, a similar relationship can be observed if the trade weighted exchange rate index (TWI) and G3 interest rates are used instead (Mabin, 2010).

Clearly, interest rate differentials are not the only driver of the exchange rate. But they are one of the most important drivers. As discussed by Mabin (2010), different explanatory factors can play more or less of a role at different times such that the precise relationship is not stable over time. However, in both theoretical and empirical models of the exchange rate, the interest rate differential consistently ranks as one of the most important drivers, including in the New Zealand case. For example, Cassino & Wallis (2010), using a regime switching model of the New Zealand dollar, find that currency traders focus on relative interest rate differentials around 50 percent of the time on average, making interest rates, via the carry trade, the most important driver of exchange rate movements (the other two drivers are commodity prices and risk appetite). However, the attractiveness of the carry trade breaks down when market conditions are stressed, which helps to explain the weaker relationship between the interest rate differential and the exchange rate in more recent years.

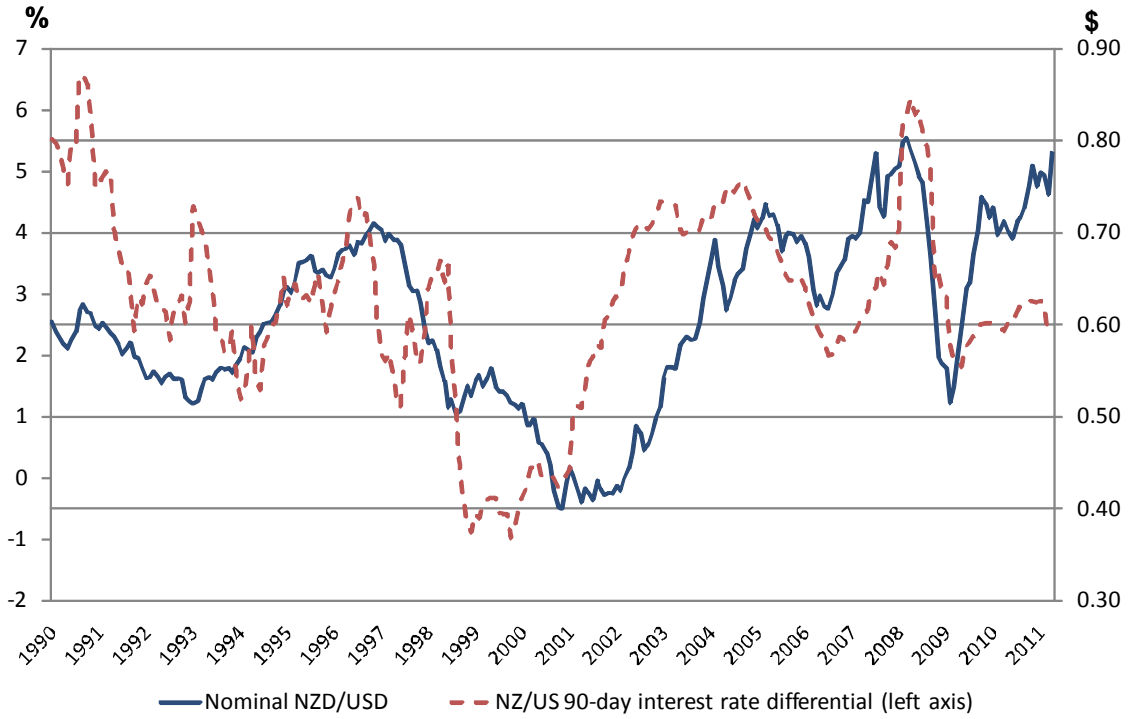
Since the equilibrium exchange rate cannot be observed, there will always be significant uncertainty about estimates of exchange rate valuation. Nevertheless, a number of different analytical frameworks all support the idea that the New Zealand exchange rate has been persistently overvalued for a significant period of time. IMF staff have captured the uncertainty by providing a range of estimates; for example, their assessment in March 2010 was that the NZD was 10 – 25% over-valued on a trade-weighted basis (IMF, 2010a). Given that the TWI is currently at a broadly similar level to March 2010 these estimates should still be broadly representative. The Treasury view of over-valuation is probably closer to the upper end of this range, given concerns about the macro-economic vulnerabilities that will persist if the NFA ratio is not stabilised.[8] Thus, while it is apparent from Figure 2 that the nominal exchange rate has been above its average level since around 2004, the true extent of over-valuation is

[7] For example, this point was made by a number of participants in the Workshop "The business cycle, housing, and the role of policy", hosted by the Treasury and the Reserve Bank in Wellington in December 2007.

[8] The upper end of the 10 – 25% range is derived from a model that focuses on stabilising the net foreign asset (NFA) position (Edison & Vitek, 2009).

likely to be significantly greater than indicated by that chart, since even at its average historical level New Zealand would be likely to still be running an unsustainably large current account deficit. Moreover, it seems reasonable to assume that there is a causal relationship between the fact that the real exchange rate over the second half of the 2000s was at its highest five-year average since the 1960s and the slowdown in export and tradable value-added growth over that period (not shown).

Figure 2: NZD/USD cross-rate and short-term interest rate differentials



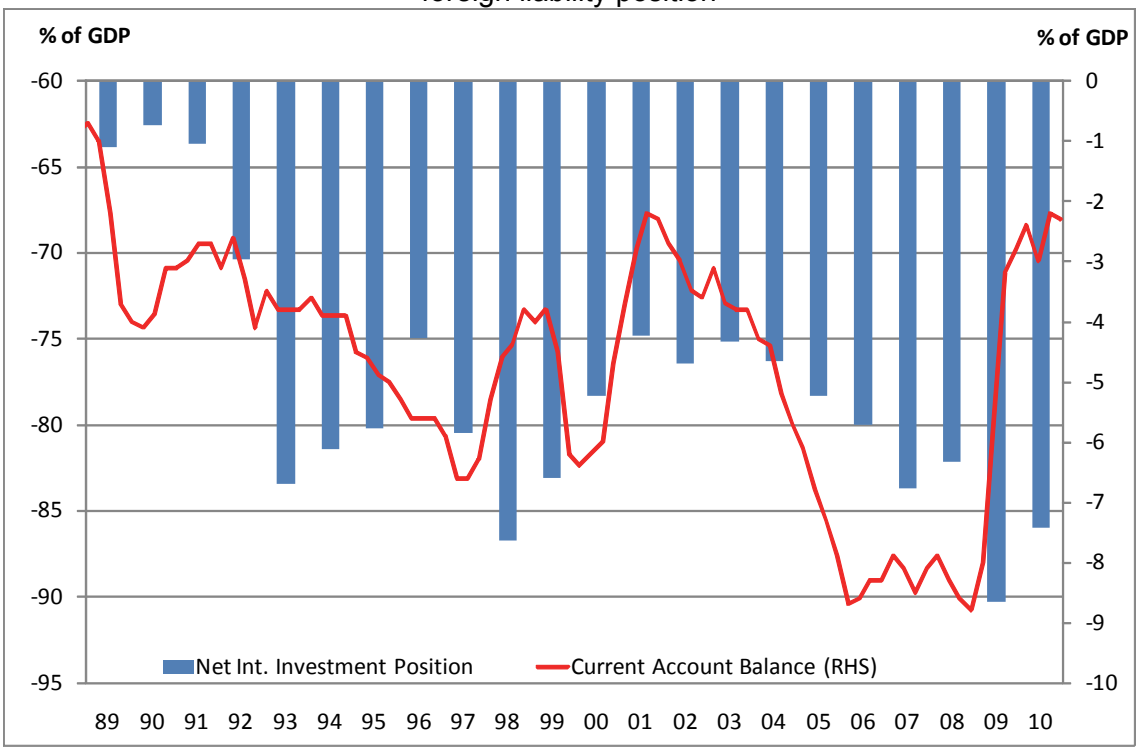
Source: Reserve Bank of New Zealand, Datastream. Data is monthly from January 1991 to October 2010.

Not only does it seem that expansionary fiscal policy in New Zealand over 2005-2008 contributed to higher interest rates and the overvalued exchange rate, but there is also an important link to the current account deficit and external imbalances. This link is partly through the real exchange rate channel, as discussed above, but also more directly via the direct impact on demand. Abbas *et al* (2010) summarise the evidence from econometric studies on the relationship between fiscal policy and the current account, and find that the association between fiscal policy and the current account is particularly strong when the output gap is positive. A likely interpretation of this result is that when output is above its potential, a fiscal expansion is more likely to result in additional imports rather than be met by increased production of domestic goods and services, which is more likely in an economic downturn. The additional imports would result either because the government imports goods itself, or because it consumes resources that other domestic agents would have consumed themselves, prompting them to import more. Abbas *et al* (2010) also find that the relationship between fiscal policy and the current account is significantly stronger in economies that are more open to international trade. Again, this can be explained by the leakage from fiscal expansion into higher imports.

Given the background of an overvalued real exchange rate, and expansionary fiscal policy at a time of positive output gaps, the widening in New Zealand's persistent current account deficits in the mid-2000s (Figure 3) should not be considered

surprising. In turn, this has contributed to New Zealand's growing net foreign liability position and is exacerbating New Zealand's macroeconomic vulnerabilities, as discussed in André (2011).

Figure 3: New Zealand has had persistent current account deficits and a growing net foreign liability position



Source: Statistics New Zealand

Returning to a discussion of the factors that underpinned exchange rate appreciation through the 2000s, high New Zealand interest rates through that period are attributed to a combination of both high average real interest rates and strong domestic inflationary pressures. New Zealand's high average real interest rates largely reflect New Zealand's low rate of saving relative to investment (Labuschagne and Vowles, 2010). However, this has probably been more or less stable (at a high level) for a reasonable period of time. So, while high average real interest rates might help to explain the high level of the exchange rate, they do not provide much of an explanation for movements over time. By contrast, the general upward trend in the interest rate differential between the early 2000s and 2008, which contributed to a persistent episode of exchange rate over-valuation, reflects both low global interest rates (as discussed by Dunaway, 2009) but also strong domestic inflationary pressures. These inflationary pressures were driven not only by expansionary fiscal policy, but also by many other factors – such as a significant housing cycle, and high net immigration. The fact that this paper focuses only on the contributory role of fiscal policy should not be interpreted as downplaying the significance of these other drivers.

The link between fiscal policy and interest rates has also been highlighted by the Reserve Bank, which has cited fiscal policy as one of several factors that stimulated demand over the mid-to-late 2000s, contributing to higher real interest rates and a higher exchange rate. For example, the Reserve Bank's submission to the 2007 Parliamentary Finance and Expenditure Committee (FEC) Inquiry into the Monetary Policy Framework noted that:

> *" What makes the current fiscal stimulus unique is that it comes at a time when the economy's productive resources have been severely stretched for several years. To cope with additional government spending without adding to inflation, some other spending must be crowded out. Higher interest rates and a higher exchange rate are part of the mechanism for making that happen ... if the economy faces additional demand pressures from whatever source, when resources are already stretched, then monetary policy has to be tighter than otherwise if inflation is to be kept in check. Even measures that improve the economy's long-term growth potential can exacerbate excess demand pressures in the near-term."*

And the Bank's Monetary Policy Statement in the same year noted that:

> *"We do not have a view on the merits of the fiscal choices themselves. But it is important that the cyclical macroeconomic consequences of those choices are widely recognised: despite the continuing high operating balance, putting additional fiscal pressure on demand means that interest rates and the exchange rate have to be higher than they otherwise would have been; in the past couple of years, both interest rates and exchange rates have already been above long-term average levels."*

The goal of the following sections of this paper is to document the evolution of fiscal policy outcomes in New Zealand over the past decade, so as to illustrate the above trends. It is noted that much of the pro-cyclicality of fiscal policy that resulted was unintended, highlighting the importance of the uncertainty around estimates and forecasts of the structural balance. It is also clear, however, that political economy factors played a key role, as most of the substantial increases in spending were political initiatives, many of which were not supported by Treasury advice. This discussion should provide a suitable backdrop for going on to consider (in Section 4) possible policy responses, or alternative institutional frameworks, that could help to ensure less pro-cyclical fiscal policy in the future.

3.2 To what extent has fiscal policy been pro-cyclical in New Zealand?

Unfortunately, there is no single indicator that we can look at to evaluate the impact of fiscal policy on the economy. Instead, this section discusses what we can learn from a range of different fiscal indicators: measures of fiscal balance; measures of fiscal impulse; and separate measures of the expenditure and revenue components.

While this paper focuses specifically on the stabilisation role of fiscal policy, the importance of fiscal sustainability and fiscal structure is taken as given.[9] Certainly, the focus of this paper on fiscal stabilisation should not be interpreted as suggesting that fiscal stabilisation take priority over fiscal sustainability. Broadly speaking, the tools discussed in this paper for ensuring better fiscal stabilisation during economic upswings would also contribute to improved fiscal sustainability. There may at times, however, be a trade-off between fiscal stabilisation and the *structural* role of fiscal policy (since it is sometimes argued that advantage should be taken of economic upturns to introduce growth-enhancing tax cuts, even if the macro-economic impact

[9] Barker, Buckle and St Clair (2008) set out an analytical framework for viewing the impact of fiscal policy on growth through these three lenses: fiscal sustainability, fiscal stability and fiscal structure.

would exacerbate aggregate demand, and thus interest and exchange rate cycles). This point is touched on again in section 3.4.

Structural fiscal balance measures

Figure 4 illustrates the unadjusted headline operating balance (the Operating Balance before Gains and Losses) together with two alternative Treasury measures of the Structural Balance. The first of the structural balance measures (labelled the CAB) adjusts only for the effects of the economic cycle while the second also adjusts for the terms of trade effects (see Parkyn (2010) for more details).[10]

The trickiest part of estimating a structural balance (also referred to as the cyclically adjusted balance or CAB) is distinguishing between the cycle and trend. Similarly, significant uncertainty also stems from the need to make a judgement about whether terms of trade increases are transitory or permanent, or whether there is some other systematic component of tax revenues that we may have missed.

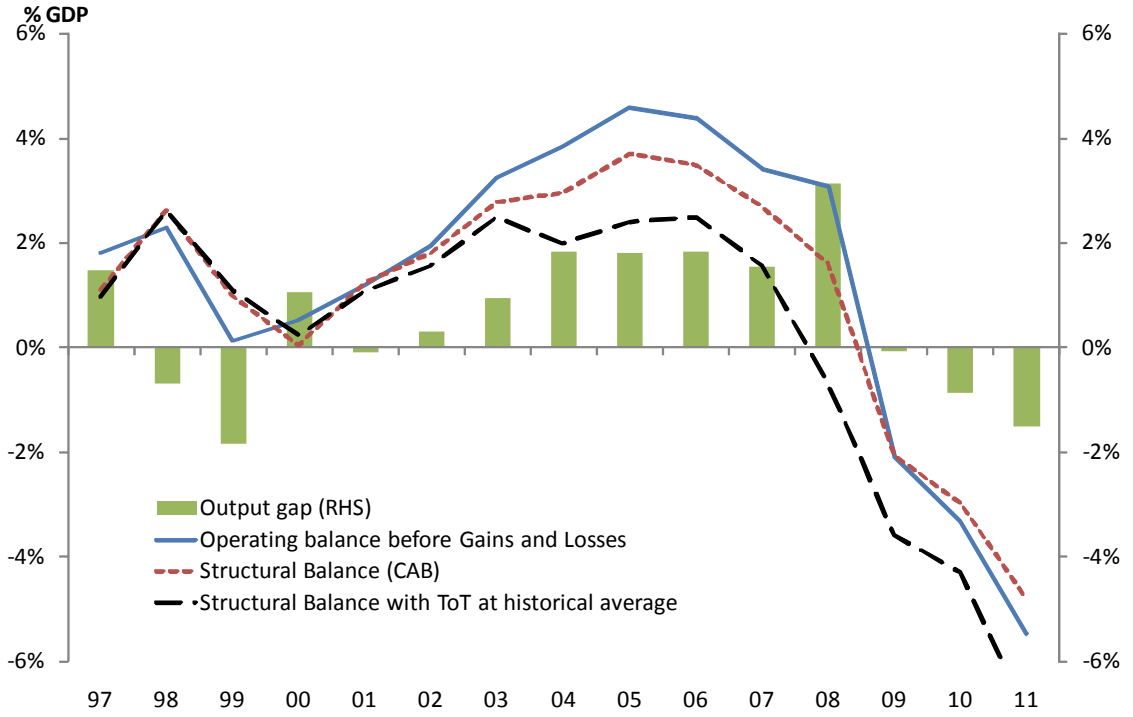
Broadly speaking, counter-cyclical fiscal policy would require running increasingly large fiscal surpluses during upturns, followed by shrinking surpluses or increasing deficits during downturns. Thus it is helpful if improvements in the structural balance coincide with a growing positive output gap. Figure 4 illustrates that this was broadly the case between 2001 and 2005, consistent with avoiding pro-cyclical fiscal policy in those years. Between 2006 and 2008, however, the fiscal surplus fell, while the output gap became more positive. These swings suggest that fiscal policy has sometimes been counter-cyclical, and sometimes pro-cyclical.

Figure 4 also illustrates that the structural (or cyclically-adjusted) fiscal balance moved through a cycle that is only slightly smaller than that of the unadjusted balance, which tells us that the historical swings in the operating balance have been driven more by changes in the *structural* balance than by cyclical influences. This cyclicality in the structural balance could, to some extent, reflect an imperfect separation from trend from cycle. Even to the extent that the structural balance correctly captures the trend, however, it should not necessarily be interpreted as representing changes in discretionary fiscal policy (such as policy-induced changes to taxes or spending). This is because the structural balance is also affected by some non-discretionary economic factors (e.g. changing demographics or trend growth).[11] To the extent that these changes are relatively minor or slow-moving (such as demographics), changes in the structural balance are probably a reasonable proxy for changes in discretionary fiscal policy. But changes to trend growth can be quite significant and occur quite quickly, reinforcing the need to be very careful in our interpretation of the structural balance.

[10] Parkyn (2010) also tests for the importance of equity price movements but (unlike some of the international literature) finds them insignificant in New Zealand. This is consistent with the fact that New Zealand does not have a comprehensive capital gains tax.

[11] See Boije and Fischer (2006) for a taxonomy of fiscal indicators that discusses this in further detail.

Figure 4: Fiscal Balance and Output Gap



Source: Budget 2011 calculations

The problems with using structural fiscal balance measures for fiscal surveillance are also highlighted by a number of international researchers. For example, Hughes Hallet et al (2007) find that data revisions are so great that real time measures of the structural balance have very little power in detecting fiscal slippages as defined by the ex-post data (the same caution also applies to the fiscal impulse, discussed below). Romer and Romer (2007) also discuss the fact that structural revenue increases during economic upturns are typically overstated. This is partly because fiscal revenues tend to be boosted by high commodity prices or a booming equity market and the cyclical dimension of these is very difficult to identify. This is reflected in the tendency of forecasters to revise trend growth estimates upwards during economic upturns and then down again after it becomes apparent that that rate of growth was not in fact sustainable.

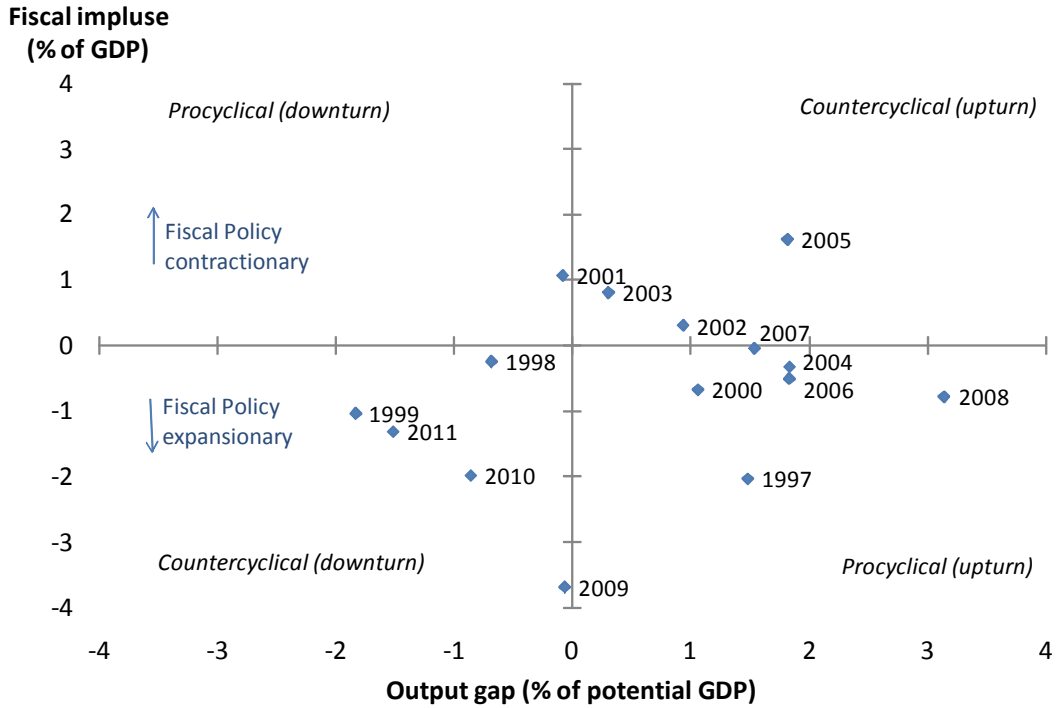
Fiscal impulse indicator

The other key budgetary indicator is the Treasury's fiscal impulse indicator. This indicator attempts to measure whether the net effect of changes to government revenues and expenditures in any one year adds to, or subtracts from, aggregate demand pressures in the economy. It is calculated as the *change* in the structural fiscal balance, where the structural balance is calculated from primary structural net cash flows from operations (excluding spending on kiwisaver), less capital spending (see Philip & Janssen (2002) for more details).[12] This indicator is plotted on the vertical axis of Figure 5.

[12] A key difference with the Treasury's CAB indicator, therefore, is that the fiscal impulse indicator incorporates the effects of capital expenditure. By contrast, the structural balance measures shown in Figure 4 are based on the operating balance, and so do not capture the effects of capital expenditure.

As the most-commonly-referred-to indicator of the extent to which fiscal policy is adding to or subtracting from domestic demand in New Zealand, the traditional fiscal impulse indicator is also often used to assess the extent to which discretionary fiscal policy has been pro-cyclical or counter-cyclical. A very simple way of doing this is to plot the fiscal impulse measure against the output gap, as done in Figure 5.

Figure 5: The cyclicality of fiscal policy from 1999 to 2009 according to the traditional fiscal impulse measure



Source: NZ Treasury, BEFU 2011.

NB: When the fiscal impulse measure is positive, fiscal policy is contractionary. When negative, fiscal policy is expansionary.

Ideally we would like to see outcomes in the top right and bottom left quadrants of Figure 5. That is, when the output gap is very negative, it would be good to have expansionary fiscal policy, and when resources are stretched (a positive output gap), it would be good to have contractionary fiscal policy. What we observe is that there have, indeed, been a number of years in which this indicator suggests that fiscal policy was counter-cyclical (both during upturns and downturns). However, the results also demonstrate a tendency towards asymmetric Keynesianism, in the sense that pro-cyclicality is successfully avoided during downturns, but not so consistently during good times (too many outturns in the bottom right quadrant).

Two main drawbacks with fiscal impulse measures have, however, been identified. First, as discussed above, it is very difficult to distinguish trend from cycle and therefore to isolate discretionary policy changes. Second, the measure does not take account of second round effects, the composition of the fiscal balance or the way private expectations affect responses to a fiscal impulse. These effects can be very important. To illustrate, consider the data for the year 2005. As shown in Figure 5, 2005 saw a very positive output gap and significantly contractionary fiscal policy, as measured by the traditional fiscal impulse measure. A decomposition of the fiscal impulse reveals

that although cash expenditures increased by a very significant $2.8b in that year (1.9% of GDP), cash tax receipts increased by a much greater $5.9b (4.1% of GDP). Because this fiscal impulse measure does not take account of second round effects, changes in the composition of the balance, or expectations effects, it simply assigns equal weights to the demand effects of one dollar increase in expenditure versus one dollar increase in tax revenues. Thus, since revenues increased by so much more than expenditures in that year, a contractionary impulse resulted.[13] There are a number of reasons why this may give a misleading picture:

- *Revenue effects may not have been very contractionary*: the biggest source of the rise in revenues in 2005 was a big jump in company tax, driven largely by a significant increase in bank profitability. While there will be exceptions, it might be reasonable to think (as a generalisation) that buoyancy in corporate tax revenues – if underpinned by high profitability – would tend to be much less contractionary than increases due to tax rate increases.
- *By contrast, the growth in government expenditure may have had very significant demand effects*: the growth in government expenditure in 2005 came at a time when the economy's productive resources were already stretched, and in areas where a significant demand impact could be expected, such as government consumption of non-traded goods and services, wages of public sector employees and transfers to low and middle-income households (Working for Families).
- *Private sector responses*: 2005 was a boom year. Equity markets were performing well, commodity prices and the terms of trade were high (although they moved even higher later), capacity utilisation and business confidence were high, unemployment was very low. Moreover, strong messages of long-term fiscal prudence were still being delivered by the government (reinforced by the partial pre-funding of future NZ Superannuation expenses), despite the large increase in spending. In this environment it seems plausible that the demand impulse of higher government spending could have been *at least as large* in effect as the contractionary impulse of the much higher government revenues that were collected that year.

In other words, despite the fiscal impulse suggesting a significant (>1.5% of GDP) contraction in fiscal policy in 2005, it is entirely possible that the overall impact of fiscal policy could have been stimulatory in that year.

The limitations of the fiscal impulse measure were well recognised by Philip and Janssen (2002) who put a significant health warning on the unqualified use of fiscal impulse indicators and suggested that their use should be augmented with assessments derived from other analysis and models.

The vector-autoregressive (VAR) modelling work by Claus *et al* (2006) was developed to provide such a complement to the fiscal impulse measure. The VAR approach still only captures the initial (first round) effects of fiscal policy on GDP but it does take account of composition effects by allowing GDP to respond separately to changes in government expenditure and government revenue. It also accounts for dynamic private sector responses and response lags.

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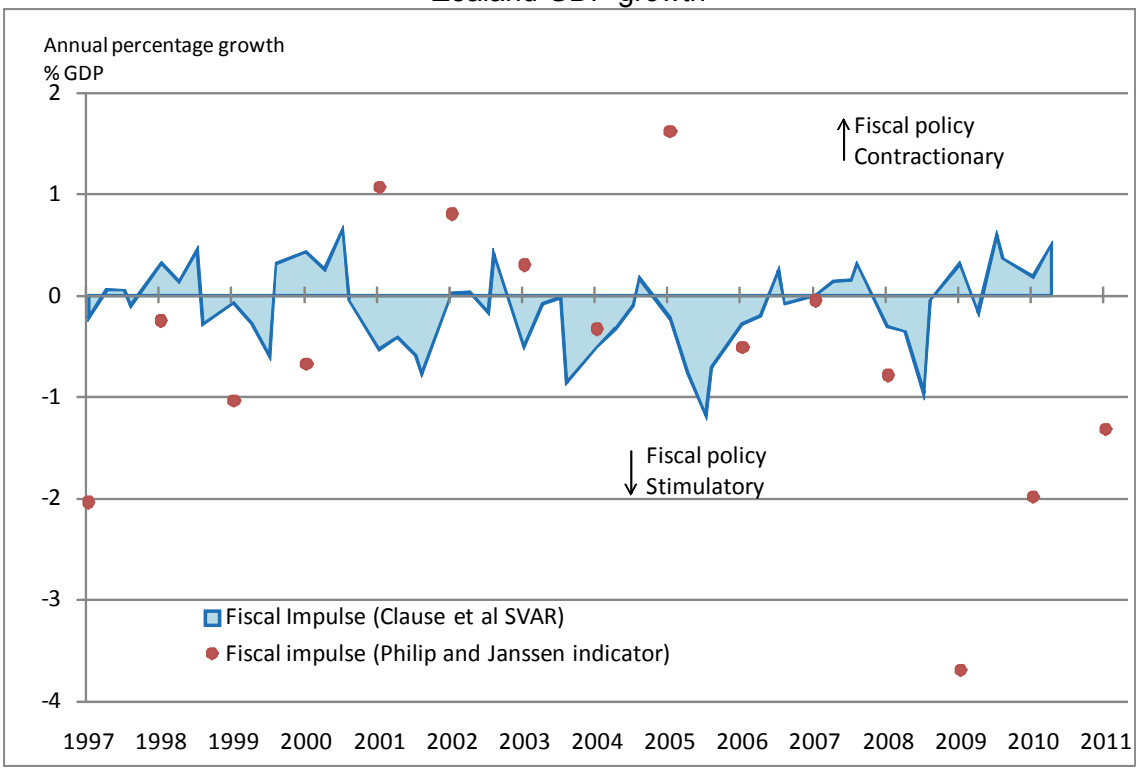
[13] Of course, other factors also influence the impulse, including the cyclical adjustment and adjustment for capital spending. However, these effects were very small, and dwarfed by the changes in cash payments and receipts.

In contrast to the traditional fiscal impulse measure, the Claus *et al* VAR approach finds that fiscal policy was close to neutral in 2005, rather than contractionary, and more expansionary in other surrounding years (see Figure 6).[14]

Figure 6: Comparison of VAR-based and traditional measure of fiscal impulse to New Zealand GDP growth



Source: Claus *et al* (2006), updated with recent data.

More generally, a comparison of the two different fiscal impulse measures shows that the magnitude of the VAR fiscal impulse is significantly lower and less volatile than that of the more traditional Philip and Janssen impulse. The sign and size of the impulse measures also differ significantly in some instances (2001, 2005, 2009 and 2010). These differences highlight the importance of composition effects and private sector responses, as the underlying measures of the fiscal balance are approximately equal.

Other VAR models have also been developed (e.g. Dungey and Fry, 2009) and further analysis using VARs at the Treasury may shed further light on the impact of fiscal policy on the New Zealand economy, including on interest rates and the exchange rate (e.g. Fielding, Gardiner and Parkyn, 2011).

[14] Barker, Buckle and St Clair (2008) note that when the expenditure and revenue components of the traditional fiscal impulse indicator are weighted by the multipliers derived from the structural VAR model, the size of the traditional fiscal impulses tend to be smaller, but the direction of changes still differ from the fiscal VAR impulses in some periods. The difference between the two measures can thus not all be attributed to the fact that the VAR approach puts different weights on the expenditure and revenue impacts on domestic GDP. Private sector responses and expectation effects (captured by the VAR but not the traditional fiscal impulse measure) are likely to also be very important.

Given the importance of composition effects, it makes sense to supplement the above fiscal impulse measures with information on the separate revenue and expenditure components and with more direct indicators about the extent to which a growing government sector may be crowding out private sector activity. It also pays to have a strong awareness of the uncertainties inherent in estimates of fiscal indicators, as discussed next.

Operating in real time: Fiscal Policy in a cloud of uncertainty

A comparison of *ex-post* with *ex-ante* outcomes suggests that the pro-cyclicality of fiscal policy over the 2006-2008 period was not intended. This can be seen from Figure 7 which compares *ex-ante* projections, real time estimates, and *ex-post* outcomes for both the output gap and the fiscal impulse indicator for these years.[15] The figure illustrates that while the fiscal impulse was consistently expected to be stimulatory for those years, the output gap turned out to be significantly more positive than had been anticipated. If the output gap had turned out to be negative (as anticipated *ex-ante*) then fiscal policy would have been counter-cyclical. However, stronger than expected GDP growth (especially for 2007) and downward revisions to Treasury's estimate of potential GDP after the global financial crisis, resulted in output gap estimates that were more than 2 percentage points greater than originally anticipated.[16]

The magnitude of such forecast errors is not Treasury specific[17] or New Zealand-specific. It is well known that empirical estimates of the output gap are subject to significant and highly persistent revisions for all economies. This is why Lane (2010) talks about fiscal policy decision-making taking place "in a fog of uncertainty". In the field of monetary policy, this sort of uncertainty normally leads central bankers to move interest rates more gradually and to be prepared to reverse policy if real economic developments turn out to be different from expectations. But reversals in fiscal policy are more costly and less feasible (Box 1). So the best strategy for the fiscal policy maker – especially once fiscal policy sustainability issues are also taken into account – is probably just to take a more conservative stance, holding back on spending increases and tax cuts until the economy turns down.

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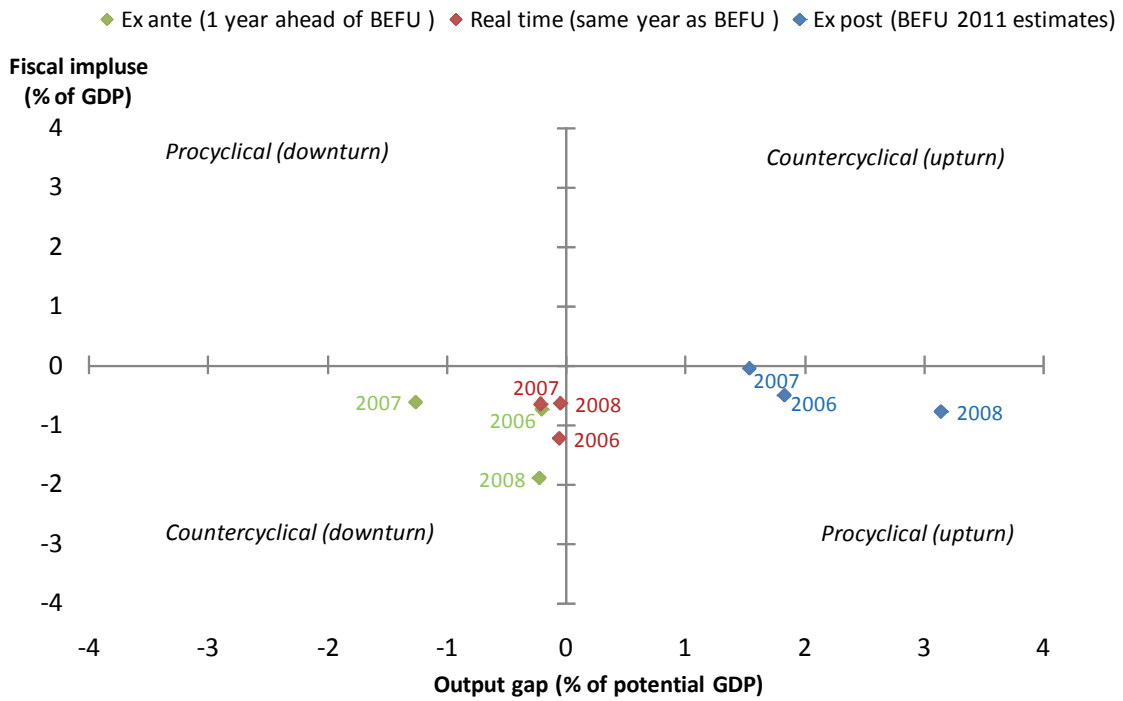
15 A similar analysis could also be undertaken using real time CAB estimates.

16 The forecast team also attribute some of the forecast error to changes in modelling techniques, which highlights a further source of uncertainty surrounding economic projections.

17 Since mid-2002 the Treasury has undertaken periodic analyses of its economic and tax forecasting performance and Treasury scores above average relative to other forecasters although all have been poor at picking turns in the cycle. For more information on Treasury's forecasting performance see:

http://www.treasury.govt.nz/publications/informationreleases/forecastingperformance/reviews

Figure 7: Ex ante, real-time, and ex post view of cyclicality of fiscal policy (2006 to 2008)



Source: NZ Treasury, BEFU 2011.
NB: When the fiscal impulse measure is positive, fiscal policy is contractionary. When negative, fiscal policy is expansionary.

Box 1: Dealing with uncertainty: lessons from monetary policy

In the field of monetary policy, a significant literature has emerged about the implications of output gap uncertainty (e.g. Orphanides and van Norden, 2003) as well as uncertainty more generally. Most famously, Brainard (1967) showed that if monetary policymakers are uncertain about the potency with which policy actions affect the economy, then they should move interest rates only gradually, thus "feeling their way" with small policy changes. However, situations have also been identified where it may be sensible for monetary policy to respond *more* forcefully, such as if policy-makers are uncertain about how much an unexpected inflation fillip will spill over into generalised inflation. Overall, the conclusion is that uncertainty cannot be incorporated into the policy-making process in a mechanical or rigid fashion; so policy-makers must inevitably exercise judgement, and ensure that the issues are looked at from a range of perspectives. See Conway (2000) for further discussion of the literature on monetary policy making under uncertainty.

In the field of fiscal policy there has been much less exploration of these issues, probably because the objectives of fiscal policy are more complex than those of monetary policy and so fiscal policy is less easily proxied by a simple policy rule, making model-based analysis much more difficult. In addition, both policy reversals, and gradualism, are much more costly, and less politically feasible, for the fiscal policy maker. For example, while the 2008 tax cuts could have been scheduled to be phased in more slowly (see discussion of tax cuts in following section for more details), more gradualism would have made it more difficult to ensure that the tax cuts were structurally beneficial (since the biggest efficiency gains are often achieved by restructuring the composition of taxes, which is often more easily achieved in one big hit than gradually).

The evolution of government revenues

Looking at the revenue side of the operating statement, Figure 8 shows that at the time of Budget 2005 (BEFU05), Treasury's estimate of structural revenues had picked up over the previous few years by around 1 percentage point of GDP. Looking forward (from 2005) – and focussing on the data adjusted for policy changes as shown in Figure 8a – it was expected that structural revenues would fluctuate around 31% of GDP over the following four years.

At that time, the increases in revenues that had been seen were considered persistent enough to be judged to be permanent, as this quote from the 2005 FSR illustrates:

> "*We have been cautious not to spend what may have been cyclical increases in operating surpluses. This has enabled us to make faster progress on our debt and NZS Fund objectives over the past four years. However, the persistence of these surpluses and their composition have made us more confident that structural factors have been at work*."

Over the following three years (2006 – 2008), estimated structural revenues were revised upwards by around a further 1 percentage point of GDP in each year (relative to earlier projections). By Budget 2008 the level of cyclically-adjusted tax revenue (adjusted for policy changes) was thought to be as high as 33 – 34% of GDP (Figure 8a). Although unadjusted revenues were expected to fall by around 2 percentage points of GDP over the following few years (Figure 8b), this was due to the 2008 tax cuts, rather than to an expected fall in structural revenues. Rather, the increase in structural revenues was thought to be 'permanent', in the sense that the projected path for structural revenues (adjusted for policy change) did not anticipate any significant reversals in the new higher level of revenues as a percentage of GDP. This view is reflected in the following comment from Barker & Philip (December 2007):

> "*... as higher revenue became a persistent phenomenon it became clear that a large part of the improvement in revenue since 2000 is permanent. This allowed the Government to make several upward revisions in operating allowances over recent years*."

Skipping ahead to the BEFU09 data (Figure 8a), it is clear that the 'permanent' conclusion was reached too hastily, since estimated structural revenues (adjusted for policy change) were revised back down substantially.

Figure 8: Revisions to the estimated Structural Revenue estimates and forecasts (four years ahead)

Figure 8a. Adjusted

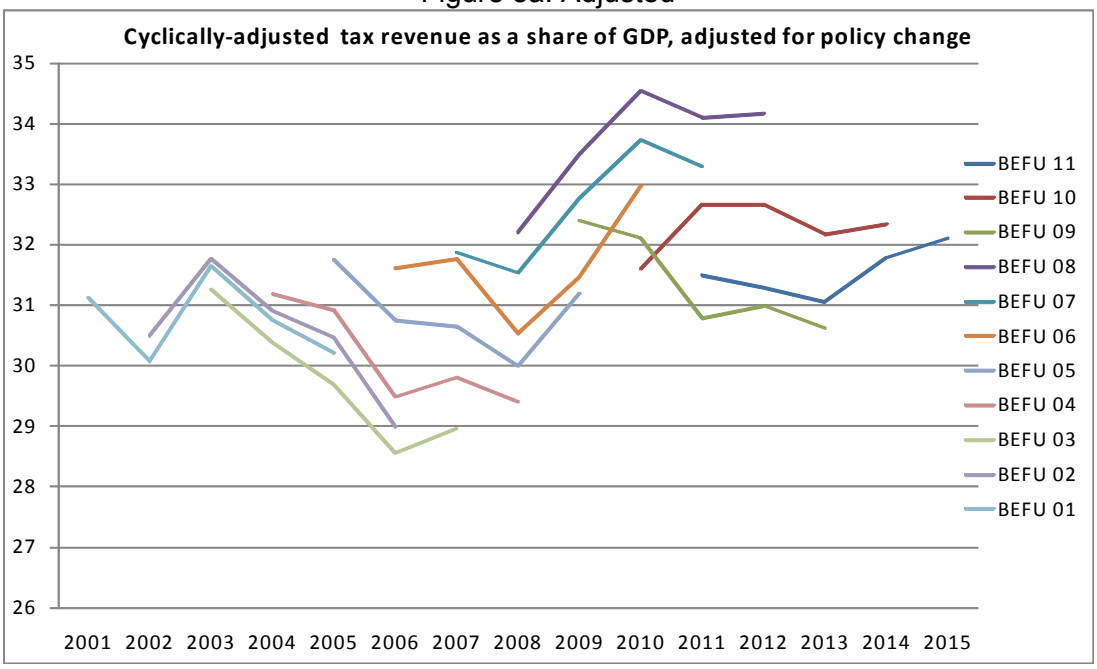
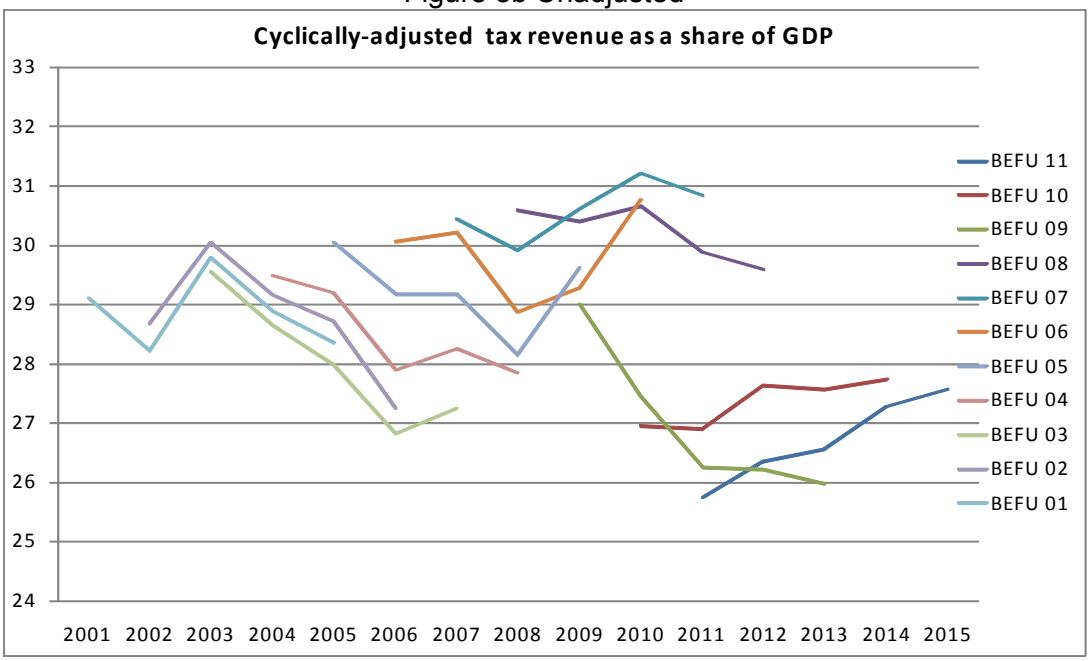


Figure 8b Unadjusted

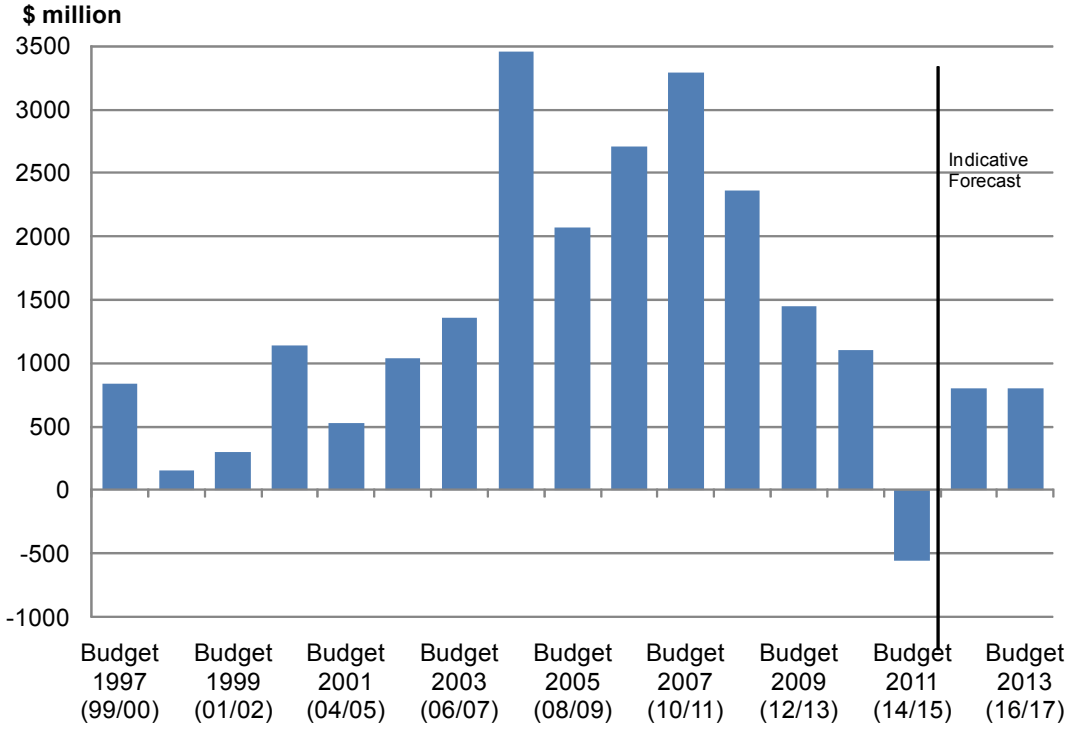


Source: Based on cyclically-adjusted nominal tax revenue data from Treasury CAB model, various years. Data in Figure 8a have been adjusted for the estimated cost of policy adjustments, extrapolated using GDP growth.
NB: In order to facilitate historical comparisons, adjustments have been made to corporate tax receipts and GST to make historical data more consistent with International Financial Reporting Standards (IFRS).

The evolution of government expenditures

Under the Government's current budget management process, expected new spending is captured by the Operating Allowance concept.[18] Originally, operating allowances were expected to be set with a view to achieving the Government's medium-term operating balance and debt objectives, and they were not expected to be revised frequently. However, in practice through the mid-2000s, the Government tended to use any positive revenue surprises and lower-than-expected levels of other expenses to increase the size of the Operating Allowance (Barker, Buckle and St Clair, 2008). The Operating Allowances were typically revised, usually upwards, twice yearly when the economic and fiscal forecasts were updated. Figure 9 illustrates the increases in the operating allowances from 2004 onwards. The cost of revenue-side initiatives is not captured by Figure 9, which shows changes to operating expenses only.

Figure 9. Operating allowances: final forecast year impact of Budget on operating expenses



Notes: These amounts are GST (Goods and Services Tax) exclusive. The three-year forecast horizon was extended to four years in *Budget 2000* (final forecast year is shown in parentheses). Note also that the negative operating allowance for Budget 2011 reflects the fact that savings were greater than new spending (as expenditure relating to the Canterbury earthquakes was managed outside the operating allowance).

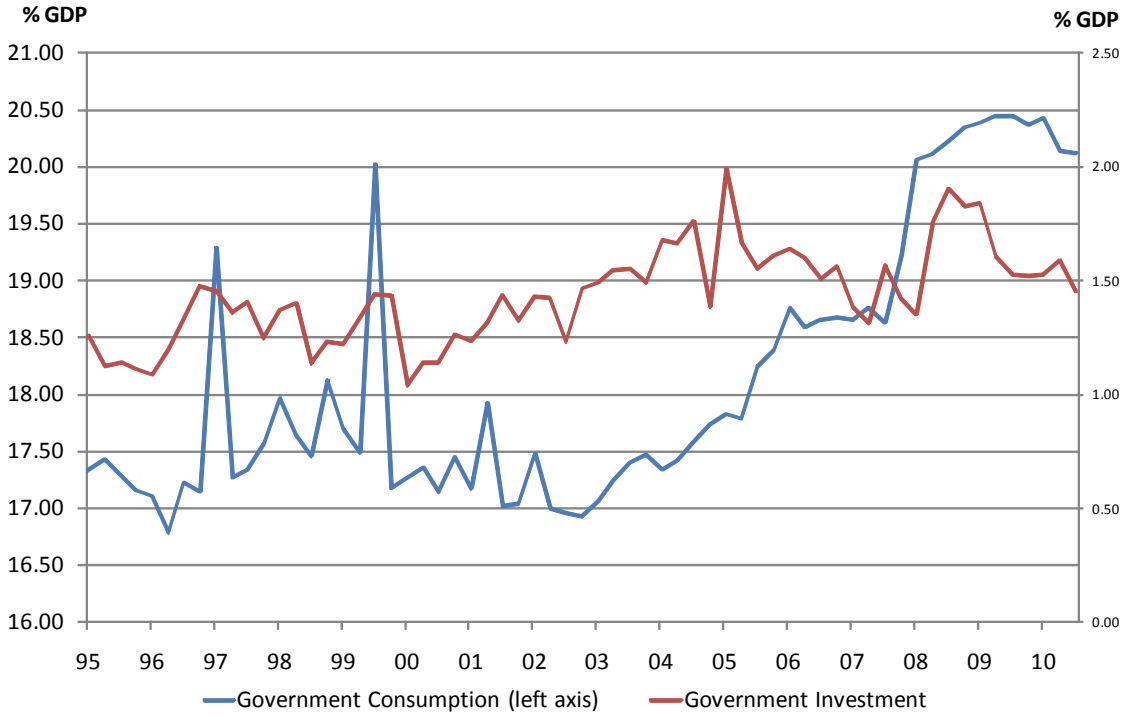
Source: New Zealand Treasury.

[18] Operating allowances are the amounts included in the Budget forecasts and the Fiscal Strategy Report as an assumption for future spending initiatives, including spending and cost pressures. The operating allowance concept has also sometimes been used to capture revenue initiatives. See Mears *et al* (2010) for a more detailed discussion of the evolution and operation of the Fiscal Management Approach.

The upward revision to spending through this period allowed significant new funding to be allocated to flagship projects such as Working for Families (Budgets 2004 and 2006), changes to the Student Loans scheme (2006), Kiwisaver (2007) and (on the revenue side) tax cuts (2008)[19]. As a result, increases in the operating allowance for these years significantly exceeded those of previous years. Indeed, it has been calculated that the average annual nominal increase in the operating allowance between the Budget Policy Statement (typically released in December) and the Budget (typically released in May) was 23 percent between 2002 and 2007.

As a result, primary core crown expenses outstripped GDP growth, pushing the ratio up from well below 30% of GDP in the early 2000s to around its current level of around 32-33% of GDP. A similar magnitude increase is visible in government consumption (Figure 10). As discussed earlier, this increase in government spending came at a time when the productive capacity of the economy was already stretched, including as a result of strong net migration and a buoyant housing market. In this context it is easy to see how fiscal policy could have provided a more significant fiscal stimulus than suggested by the fiscal impulse measures shown in Figures 6 - 8.

Figure 10: New Zealand government consumption and investment expenditure (% of nominal GDP)



Source: Statistics NZ National Account's nominal government consumption seasonally adjusted and nominal total central government non-market investment with Treasury seasonal adjustment.

The government's decision to increase government spending through this period was generally done against a backdrop of Treasury warnings about the implications for macroeconomic stability. For example, Treasury's advice in the lead-up to Budget 2005 (Treasury, 2005) noted that:

[19] The cost of revenue-side initiatives is not captured by Figure 9, which shows changes to operating expenses only.

> *"The estimated scale and timing of the fiscal impulse in 2005/06 suggest more tension between fiscal policy and monetary than has been the case for some time, potentially adding to continued pressure on the exchange rate and tradable sector"*

This same report recommended that the Minister:

> *"consider options to scale back spending in the forecast period or defer spending from 2005/06; and consider reducing the indicative allowance for Budgets 2007 and 2008 from the stated current intentions"*

Although these recommendations were not followed, the government was concerned to minimise the stimulatory impact on the economy. This concern contributed to the development of, and subsequent expansion of, Kiwisaver,[20] as spending on Kiwisaver was considered to be less stimulatory than other expenditure priorities or tax cuts.[21]

Overall, however, the government's concern to minimise the stimulatory impact of fiscal policy on the economy had to be managed against political demands for higher spending. This was exacerbated by the fact that as the debt burden fell the prudent debt target was revised to a target of *maintaining* gross sovereign-issued debt broadly stable at around 20%, as specified in the 2006 and 2007 Fiscal Strategy Reports (Barker *et al*, 2008).[22] Soon, it became clear that running larger surpluses would have implied significantly undershooting this 20% prudent debt level target (based on forecasts at the time).

Getting closer to the prudent debt target, not only made it harder for the government to resist demands for higher spending or tax cuts, but it also influenced Treasury advice, which (perhaps reflecting the focus in the Public Finance Act, as discussed later) tended to put relatively little weight on the stability objective of fiscal policy, unless it was also supported by the sustainability objective.

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[20] Kiwisaver is a voluntary long-term savings scheme, supported by employer contributions and an annual tax credit funded by the government. The original version of Kiwisaver was announced in May 2005 with a significantly lower fiscal cost than the extended version announced in 2007. The scheme came into operation in July 2007. Note that Treasury advice in relation to the extension of Kiwisaver in 2007 emphasised the importance of maximising national saving gains by ensuring ongoing government surpluses and debt sustainability. The subsequent reduction in the tax credit to kiwisaver announced in Budget 2011 was thus prompted by a reassessment of fiscal sustainability following the downturn that occurred from 2008 onward.

[21] Despite the fact that spending on Kiwisaver was excluded from the expenditure measure used to calculate the Fiscal Impulse indicator, it was acknowledged that Kiwisaver spending would still be stimulatory to the extent that private sector saving would fall in response. As discussed earlier, the literature generally concludes that the Ricardian offset to greater government savings is less than one half.

[22] Previously, (i.e. in the 2004 Fiscal Strategy Report) the objective was framed in terms of a downward trajectory (with debt expected to pass through 20% of GDP by 2015). The change in the 2006 FSR to a constant 20% target thus represented a general loosening in the fiscal objectives. The 20% gross debt objective was arrived at on balance, as a level that was considered sufficient to provide a buffer to insulate the economy against economic shocks and to prepare for future fiscal pressures, such as those arising from population ageing. More recently the debt target has been further revised to a long-term *net* debt target of 20% of GDP.

For example, an October 2007 Treasury report advising the minister on the fiscal position and options for budget 2008 (Treasury, 2007) noted that:

> *"...the preliminary HYEFU fiscal forecasts will show a materially stronger fiscal position than at BEFU.... our current assessment is that preliminary fiscal forecasts and projections will show the government* ***overachieving*** *on its long-term fiscal objectives, particularly with respect to gross debt. This opens up additional fiscal policy choices with respect to operating spending, taxation and capital expenditures while continuing to deliver on the existing fiscal strategy".* (emphasis added)

While the stability implications of using the additional revenues for tax cuts or spending increases were acknowledged with this comment, "...*in this environment it is not clear that extra tax revenue could be used without a monetary policy response*", the report did not conclude with a strong case against further fiscal stimulus.

Overall, this suggests that Treasury's advice to restrain fiscal stimulus during the upturn was based largely on an assessment of the sustainability objective. Once a "prudent" level of debt was obtained, Treasury found it more difficult to argue for continuing fiscal restraint.[23] Macro-stability concerns were considered but dominated by fiscal sustainability considerations.

3.3 Policy response following the onset of recession

By the time it became clear that the strength of structural revenues had been misjudged, it was too late to reverse the permanent discretionary increases in expenditures that had been made over the 2004 – 2008 period, and the first tranche of the significant tax cut package of 2008 (implemented on 1 October 2008). While it was clear that a significant global financial crisis was underway by the time the new government took office toward the end of that year, efforts to limit the deterioration in the structural balance were not announced until Budget 2009.[24] At that time the remaining tranches of tax cuts that had been announced in Budget 2008 were cancelled, and efforts were made to restrain expenditure growth in the projection years

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[23] Some commentators would argue that even based on the sustainability objective alone, that Treasury should have argued more forcefully against spending increases, on the grounds that 20% gross debt was not sufficiently prudent. For example, Price *et al* (2008) suggest that New Zealand's fiscal surpluses and net asset positions in the mid-late 2000s should have been seen in the context of relatively sharp prospective increases in public pension and health care expenditure. However, it also should be noted that net debt was reduced by more than gross debt, due to the accumulation of financial assets.

[24] The bulk of the tax cuts announced in Budget 2008 came into effect on 1 October 2008. This first tranche of cuts involved a reduction in the bottom tax rate from 15% to 12.5% and an increase in all tax rate thresholds. Budget 2008 estimated that the cost of this first tranche was $8b over 4 years. After the election later that year, the new government announced a further increase in the tax threshold for the 21% tax rate, which came into effect in April 2009. The cost of this was a further $3.3b over 4 years, although almost all of this cost was funded by expenditure cuts (to Kiwisaver incentives and the R&D tax credit). The second and third tranches of the Budget 2008 tax cuts, which would have involved further (smaller) increases in the top two thresholds (33% and 39%) in 2010 and 2011 was originally estimated to cost around $2.7b over the same time period. Budget 2009 cancelled these two tranches.

by making a small cut in the operating allowance for 2009/10 and by further limiting the operating allowance to $1.1 billion per annum from 2010/11.[25]

It is sometimes observed that the timing of the 2008 tax cuts turned out to be very appropriate, given the economic downturn that began that year. This was more a result of good luck than good design, as the extent of the downturn was not known when the package was announced. The tax package was also not designed as a stimulus package, most importantly because the tax cuts were permanent, rather than temporary – and so did not meet the standard TTT (temporary, targeted and timely) criteria for stimulus spending. Figure 8a makes it clear that, at the time the tax package was announced, structural revenues were estimated to be very high. If the extent of deterioration had been anticipated the tax package would have been judged to be unaffordable. Overall, the large structural deficits that New Zealand is experiencing today can be considered as due to a combination of the spending increases of 2004 - 2008, the 2008 tax cuts, plus the downward revision to estimates of structural revenues.

3.4 Lessons from the last cycle

New Zealand's fiscal framework worked relatively well over the first part of the 2000s, when revenue windfalls were used to make faster progress on the debt objective, thus contributing to good fiscal sustainability and fiscal stability outcomes.

The longer the upturn lasted, however, the easier it became to interpret the revenue increases as permanent rather than cyclical. As debt levels fell, this led to a ratcheting up of government spending. The available indicators of fiscal stance suggest that this led to a pro-cyclical fiscal impulse over the 2006-2008 period, which put pressure on resources and exacerbated the interest rate and exchange rate cycles.

This failure of fiscal policy to prevent pro-cyclicality seems to reflect three factors. First, the Public Finance Act's principles for responsible fiscal management are focussed on fiscal sustainability rather than stability. While there is nothing in the Act that would *prevent* macro-stability considerations from being given weight in policy advice, it is not *required* that such considerations be considered, and so they tend to be underweighted.[26] Second, the uncertainties inherent in the data in real time make it very difficult to evaluate the stance of fiscal policy with any certainty. With the benefit of hindsight it is now clear that the economic upturn was much stronger and more persistent than anyone expected, with the result that Treasury (and others) under-estimated the impact of the fiscal stimulus that was delivered during the 2004 – 2008

[25] Soon after election, the new government announced a further increase in expenditure in the form of an increase in the capital allowance from $0.9b to $1.45b per annum for the following four years, and a further increase to $1.65b for the two years following that (BPS, December 2008). However, this was more than offset in the projection years by reductions in the Operating Allowance (from $1.75b to $1.1b) that were announced in Budget 2009. (The operating allowance consists of *additions* to new spending, which cumulate each year, making these cuts much more significant over time than the increases to the capital allowance, which is *total* spending on capital rather than *new* spending).

[26] This is true for New Zealand's Public Finance Act, but also for other countries. For example, Barker & Philip's (2007) review of the fiscal frameworks of other countries found that the only component of other countries' formal fiscal rules directed toward fiscal stabilisation was support for the operation of the automatic stabilisers (*passive* stabilisation). However, as discussed earlier, there is no reason to expect passive stabilisation to prevent pro-cyclical fiscal policy, as changes in discretionary fiscal policy can easily be larger than, and work in the opposite direction to, the automatic stabilisers.

period. Third, when the economy is performing well and fiscal revenues are strong, there are inevitably strong calls to "spend" the surpluses (either on tax cuts or spending increases). Insufficient effort has been made to address these political economy challenges by looking at policy options to help achieve more stabilising fiscal policy.

Looking ahead, the lessons from the last cycle suggest that we will need to:

- **Do more to address political economy challenges:** Politically, it is very difficult for governments to keep running large surpluses over long periods of time. A debt target that is perceived to be a floor only exacerbates this problem, as witnessed by reluctance over the last cycle to "overachieve on the debt target". This means that fiscal stimulus is most likely to become pro-cyclical towards the end of an extended economic upturn. New Zealand's fiscal institutions need to be designed to explicitly safeguard against pro-cyclicality during long-lasting upturns. At a minimum this is likely to require a higher profile for the macro-stability role of fiscal policy, which could be achieved by revising the PFA as discussed in section 4.1. Some of the other policy options discussed in Section 4 could also help to address this challenge.

- **Improve reporting of fiscal policy and its impacts:** It is well known that distinguishing between trend and cycle is very difficult. This is true for both GDP (potential GDP, output gap) and for government revenues (structural vs cyclical). This suggests that Treasury should: (i) expand the repertoire of indicators so that advice on the fiscal stance is less reliant on any single measure,[27] with particular care taken to augment fiscal impulse measures with complementary measures that can capture the balanced budget multiplier, such as measures of government expenditure; (ii) strengthen our understanding of the macro-economic impact of the fiscal stance; (iii) be more cautious than in the past about judging persistent upward revisions to revenues as being permanent; this will require more work to characterise uncertainty and communicate it, including the implications of over- vs under- estimating structural revenues; and (iv) be reluctant to introduce fiscal institutions that rely on an accurate decomposition of trend from cycle (such as a structural budget target – discussed further in section 4.5).

- **Put more emphasis on getting the *timing* of stimulus right:** A fiscal policy framework that is able to guard against pro-cyclicality across a range of circumstances will need the flexibility to accommodate the political preferences of different governments during times when there is an extended economic upturn. This suggests that, in the context of a government which is inclined to increase the size of the government, Treasury's policy advice should focus on seeking the best *timing* for the desired fiscal stimulus. Essentially this means that tax cuts or spending increases need to be avoided (or minimised) during periods of strong economic growth and high capacity utilisation. A number of the policy options in Section 4 could help to refocus fiscal policy in this way.

While the focus of this paper is on the stabilisation role of fiscal policy, the sustainability goal remains of primary importance. It is vital that any additional attempts to make fiscal policy more stabilising do not compromise the sustainability of the long term fiscal position. Fortunately, there is no trade-off during the upturn of the economic cycle,

[27] A particular indicator could be chosen from this set to serve as the *leading indicator.* However, regular monitoring of the full set of indicators would minimise the risk of misinterpretation.

when greater fiscal prudence has benefits for both stability and sustainability. It is worth being careful, however, to ensure that attempts to make fiscal policy more stabilising during upturns (the focus of this paper) do not compromise the other objectives of fiscal policy during downturns. As long as the government's net worth position is built up sufficiently during the upturn, then fiscal sustainability should not need to be put at risk during the downturn. There is, however, some risk of a trade-off between the stability and *structure* objectives of fiscal policy.[28] For example, the quality of fiscal stimulus could deteriorate if the focus shifted excessively towards cushioning the impact of the downturn.

This highlights the potential inappropriateness of using the standard TTT (timely, temporary, targeted) criteria for discretionary fiscal stimulus in such a context. To the extent that politicians are persuaded to delay permanent tax cuts or spending increases when the economy is operating above capacity, the passage of such permanent fiscal stimulus should be permitted during downturns. In other words, the T for *timely* should be given the greatest weight. In contrast, the traditional focus on *targeting* expenditure to those areas where the fiscal multiplier is thought to be the largest may be less appropriate, at least as long as monetary policy does not hit limits of effectiveness (such as by hitting the zero interest bound). Likewise, depending on the strength of the government's net worth position, the traditional focus on ensuring that stimulus is *temporary*, may also be inappropriate as some permanent reforms may be affordable.

4. Policy options

Policy options for making fiscal policy 'more stabilising' generally fit into one of two camps. One camp consists of policies that would raise the profile of the stabilisation objective of fiscal policy. This could be done by revising the principles of the Public Finance Act (PFA) so as to increase the importance that is placed on avoiding pro-cyclical fiscal policy. Alternatively – or in addition – an independent fiscal council (IFC) could be introduced, to promote informed public discussion of the impacts of fiscal policy. A structural budget balance target would also fit in this camp, although this option is not recommended, as discussed in Section 4.5.

The second camp consists of policies that seek to credibly de-link expenditure decisions from revenue windfalls in a way that will be politically sustainable even through a long period of strong growth. Options include rules to better control expenditures (e.g. a spending cap) or institutions for quarantining revenue surprises (e.g. a stabilisation fund).

The following discussion of these policy options builds on the abundant literature that has developed on the theory and practice of fiscal rules. Organisations such as the IMF have developed best practice principles for the design of such rules (e.g. IMF (2009)). The general consensus is that a well-designed fiscal rule *can* have a positive impact on fiscal outcomes, by placing some durable constraints on fiscal discretion through e.g. numerical limits on expenditure, revenue, the budget balance and/or public debt (Kumar and Ter-minassian, 2007). However, such positive impacts are by no means guaranteed, since no rule can be assumed to permanently suppress or contain

[28] See Barker, Buckle and St Clair (2008) for a discussion of the Sustainability, Stability and Structure roles of Fiscal Policy.

discretion. It follows from this argument that a credible solution to biased policies cannot be to suppress discretion but to find mechanisms through which it could be exerted more wisely (Debrun and Kumar, 2007).

This section also takes as given the relatively good fiscal outcomes in New Zealand to date. There is general agreement that New Zealand's principles-based framework works well, with only a few enhancements required, rather than wholesale reform.

With that background, Table 1 provides a brief summary of the pros and cons of the main policy options to ensure less discretionary fiscal policy stimulus during the next upturn. Option A (discussed in more detail in section 4.1) considers the role that a revision to the principles of the PFA could play. Options B and C consider, respectively, a multi-year cap on expenditure growth, and a more medium-term target for the level of government spending as a percentage of GDP (see section 4.2). Spending caps have been adopted in a number of countries in recent years and are quite commonly advocated by the OECD and IMF. However, the main benefit of spending caps is to improve the quality of spending and to increase control over total spending, rather than to reduce the chance of pro-cyclical fiscal policy. Greater macro-stability benefits could be obtained, however, if combined with other tools (such as option A).

Option D is more focussed on the revenue side of the ledger; specifically, a stabilisation fund that would facilitate the "banking" of windfall revenues, so as to "pre-commit" governments to run large fiscal surpluses during booms. A stabilisation fund would be designed to build up funds over economic upswings and then run them down again during downturns (see section 4.3). Compared with an expenditure cap, the main benefit of this approach is that it would better address the political economy barriers that get in the way of conducting more stabilising fiscal policy. It would do this by re-focussing attention on *when* and *how*, rather than *whether* fiscal surpluses should be spent. However, significant judgement would be required to determine contributions to and withdrawals from the fund.

Option E involves establishing an independent fiscal council (IFC), whose purpose would be to monitor the compliance of fiscal policy with the stated objectives, raise the quality of the public debate around fiscal policy in New Zealand, and enhance the credibility of any other fiscal policy institutions (e.g. a stabilisation fund, if one were to be created). See section 4.4 for further discussion.

Finally, Options F and G describe two possible policy tools that are *not* considered a good option for New Zealand at present. A structural balance target (discussed in section 4.5) is dismissed largely because it relies too heavily on the ability to accurately distinguish structural from cyclical revenues. Such a rule could also lead to excessive focus on that single indicator and/or encourage circumvention of the rule. Active tax policy tools (section 4.6) are also dismissed, due to concerns about the significant efficiency and compliance costs that they would entail. It is also noted that there are other (non-active) tax policy tools – such as a capital gains tax or a land tax – that would improve macro-stability without these accompanying costs, and these should be introduced before considering more activist tools.

Table 1: Main policy options for making fiscal policy more stabilising

Options worth considering

Policy	Pros	Cons
Option A Revise PFA	- Relatively easy to revise PFA to make macro-stability a principle of responsible fiscal management. - Would strengthen rationale for running surpluses during upturns even when debt is low.	- May not be sufficient to prevent pro-cyclicality given difficulty of measuring fiscal stance.
Option B Multi-year expenditure cap	- Would improve quality of base spending by forcing trade-offs. - Would introduce a lag between increases in revenue and higher spending, which *could* help reduce pro-cyclicality. - Would assist the government in better managing future spending pressures/ facilitate a smaller size of government (lower taxes) if desired.	- Complicated to explain (e.g. Operating Allowance interactions; accruals) - If lag short, pro-cyclical spending increases could still easily occur, especially given difficulty of distinguishing trend from cycle. - Even if lag long, incoming governments could reset cap. - Would not constrain fiscal stimulus on revenue side. - Could reduce flexibility to respond to recessions. - Could be perceived only as a tool to control the size of government.
Option C Medium-term spending/GDP target	- Better transparency of government's view of desirable long-term level of spending and taxes. - Could improve focus on macro stability if combined with option A.	- By itself would not be sufficient to prevent pro-cyclicality.
Option D Stabilisation Fund	- Idea of saving for a rainy day easy to explain to the public. Importance of not exacerbating e.r. cycles would be emphasised. - Would ease political economy challenge of running large surpluses in good times.	- Difficult to determine contributions to and withdrawals from fund. - May not be sufficient to prevent pro-cyclicality given difficulty of distinguishing structural from cyclical revenues. - Some fiscal cost from investing in lower yield securities rather than paying down domestic debt during good times (partially offset by gains on currency movements).
Option E Independent Fiscal Council	- Could help to address political economy challenge by raising awareness of the risks of pro-cyclicality. - Could support other options (e.g. advise on appropriate contributions/withdrawals for a stabilisation fund).	- No guarantee that fiscal council would offer better advice or that advice would be heeded. - Could become a source of political tension. - Resourcing cost.

Options not recommended

Option F Structural Balance Target	- Makes focus on stabilisation explicit.	- Relies on being able to distinguish structural from cyclical revenues. - Could lead to excessive focus on single indicator and/or encourage circumvention of the rule.
Option G Active tax policy instruments	- Would strengthen the automatic stabilisers.	- Efficiency and compliance costs could exceed benefits (cf other tax policy reforms which would have macro-stability benefits without these costs). - Stronger automatic stabilisers could still be offset by discretionary policy.

All of the policy options discussed are potentially complementary (i.e. it would be possible to adopt elements of all, simultaneously).

4.1 Option A: Revise the Public Finance Act

The Public Finance Act (1989), which was amended in 2004 to incorporate the Fiscal Responsibility Act (1994), sets out – among other things – the principles for responsible fiscal management and the requirements for regular reporting on the extent to which the Government's fiscal policy is consistent with those principles. While the principles for responsible fiscal management pay considerable attention to fiscal sustainability issues, the PFA is silent on the importance of conducting fiscal policy in a way that best helps to stabilise the macro economy.

Indeed, the principles of responsible fiscal management may unintentionally encourage pro-cyclical discretionary fiscal policy in certain circumstances. At present, the principles of responsible fiscal management note that "once prudent levels of total debt have been achieved, [the Government must] maintain… those levels by ensuring that, on average, over a reasonable period of time, total operating expenses do not exceed total operating revenues". While the *over a reasonable period of time* formulation is clearly intended to permit the operation of the automatic stabilisers, the current formulation may not provide a sufficiently strong mandate for continuing to run down debt levels, or build up the government's net worth position *for macroeconomic stability reasons* (i.e. even when long-run fiscal sustainability appears sound).[29]

To increase policy-makers' focus on the stabilisation role of fiscal policy, the PFA could be revised to include an additional principle relating to playing a macroeconomic stabilisation role.[30] Alternatively, the existing principles and departure clauses could be reworked to provide a clearer mandate for building up the government's net worth position for macro stability reasons.

What might such a change mean for the existing focus in the PFA on fiscal sustainability? This paper focuses on the stabilisation role of fiscal policy rather than the importance of fiscal sustainability. But the two are not independent and so it is worth discussing how the sustainability objective of fiscal policy would be affected by some of the alternative fiscal tools and institutions that have been discussed above.

With respect to sustainability, this paper implicitly argues that the case for permanent tax cuts or permanent increases in expenditure should be largely unrelated to the size of temporary fiscal surpluses. For example, an argument for a permanent tax cut should rest on one of two grounds: either (i) spending is or is expected to be permanently lower (as a percentage of GDP); or (ii) productivity growth is expected to be permanently higher, so that comparable revenues can be generated with lower tax rates.

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[29] While the principles of responsible fiscal management do not actively *mandate* a running down of debt levels below what is considered a prudent level for macro-stability reasons, neither does the PFA *prevent* the government from taking macro-stability considerations into account.

[30] As part of an assessment of the merits of this proposal, it could be useful to look at the attention given to stabilisation in other countries where public finance legislation assigns a formal role to the stabilisation objective.

The problem, of course, is being able to distinguish between temporary and structural surpluses. But this difficulty will never be completely resolved. As documented in section 3, Treasury's advice during the mid-late 2000s was that more of the revenue "windfall" was permanent than subsequently turned out to be the case. It was that advice which facilitated a significant increase in permanent discretionary expenditure, which eventually (when the economy turned down) resulted in large structural deficits, compromising the sustainability objective.

This example illustrates that neutral or more counter-cyclical discretionary fiscal policy during upturns would be favourable for fiscal sustainability. While fiscal stimulus during downturns could put sustainability at risk, this risk would be alleviated if the additional fiscal surpluses run during upturns were used to pay down debt or to build up a stock of assets in a stabilisation fund.

Overall, there is little reason to think that a greater focus on fiscal stabilisation would have anything other than positive implications for fiscal sustainability, particularly if the increased focus on fiscal stabilisation encouraged a more rigorous assessment of the conditions under which permanent expenditure increases, or tax cuts, should be made.

4.2 Options B and C: Spending cap or Spending/GDP target

Setting a cap on the government's spending is probably the most obvious way of de-linking expenditures from revenue windfalls. Expenditure rules have become increasingly popular in recent years, supported by a growing body of empirical evidence suggesting that well-designed expenditure rules can be useful devices to limit spending profligacy (e.g. see Haumptmeier *et al*, 2007). While there is a correlation between spending rules and fiscal prudence, some critics point out that it is difficult to establish causality, given that countries are more likely to adopt spending rules if they are already inclined towards fiscal prudence (e.g. Debrun and Kumar, 2007).

Given the focus of this paper it is important to note that expenditure control alone does not automatically prevent pro-cyclicality, since during boom periods governments are often tempted to cut taxes or increase tax expenditures, both of which also stimulate the economy. Even if this temptation is resisted, the effectiveness with which a spending cap would achieve our macro-stability objectives would depend on its design.

Consider, for example, the multi-year expenditure cap that was proposed (and rejected by the government) in early 2010 (Mears *et al*, 2010). The main benefit of such a spending cap (Option B) is that it would reinforce the existing limit on new discretionary spending initiatives (specified in terms of the annual Operating Allowance) and also place a limit on other forecast expense increases that occur via the six-monthly Baseline Update process. With such a spending cap in place, the significant upward revisions to the Operating allowances that are shown in Figure 9 would not have been permitted. The main benefit of the proposed cap would thus be to permit better control of aggregate expenditures and to improve the quality of base spending (by increasing attention on the relative trade-offs between different spending pressures).

However, a spending cap also has some limitations. Most importantly, it could not guarantee an avoidance of pro-cyclical spending increases. This is due to the relatively short duration of the cap (i.e. the Mears *et al* proposal envisaged a rolling budget year plus two out-years). So, although upward revisions of fixed allowances would not be permitted under the cap, the allowances could still grow over time as the rolling out-year is set (potentially responding to in-year-revenue windfalls). Thus, while introducing

a lag between unexpected increases in revenue and higher expenditure *could* contribute to better macro stabilisation, there would be a significant risk that pro-cyclical fiscal policy would still eventuate. For example, a planned increase in expenditure for year t+3 might be justified by an expected slow-down in the economy in that year. But this could inadvertently result in pro-cyclical fiscal policy in that year if economic growth remained unexpectedly strong.

One way of addressing this problem could be to combine a revision to the PFA as discussed above (i.e. Option A: a requirement to include macro-stability as a principle of responsible fiscal management) with Option C: a requirement that the Minister of Finance also specify a medium term (five to ten year) target for future real government expenditure as a share of GDP and subsequently report publicly on progress relative to that goal.[31] This would not restrain the freedom of any government to pursue the size of government of their choosing. However, it would improve transparency of expenditure trends, by forcing governments to focus on the question of the desirable long-term level of spending, while also paying greater attention to the macro-stability implications of the transition path to a higher level of spending, if that was chosen. The requirement to specify a medium term target would be accompanied by a requirement to account for progress relative to the stated goal and to explain the macro stability implications of expenditure trends.[32]

A potential disadvantage of a multi-year spending cap is that it could give the impression that the only objective of the rule is to constrain the size of the government. If the macro-stability objective of preventing pro-cyclical spending of revenue windfalls were to be lost, then the rule would be unlikely to address the political economy challenges of preventing expenditure increases during long-lasting expansions. A poorly designed expenditure rule could also limit the ability to implement stabilising expansionary fiscal policy during a downturn. These difficulties could be partially avoided by combining a spending rule with a revision to the PFA (Option A).

4.3 Option D: Stabilisation Fund

Instead of restraining spending, an alternative approach is to lock away revenue surprises. Stabilisation funds (SFs) normally aim to save *temporary* increases in revenue in order to finance deficits in later years. A stabilisation fund is thus an alternative or complement to using changes in debt to manage volatility in revenues. In some countries (e.g. Chile), a stabilisation fund has been used to save only those revenue increases that are not judged to be structural. However, if the estimated level of *structural* revenues is often found to be cyclical (as documented in Section 3), then a more conservative approach should be used, so that some or all increases in estimated structural revenues would also be saved.

Compared to the current approach (where changes in debt are used to manage volatility), a stabilisation fund would have the following advantages:

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[31] This was proposed in the first report of the 2025 Taskforce (2025 Taskforce, 2009).

[32] A more extreme variant on the idea of an expenditure cap would be a more permanent expenditure cap, such as that in the ACT Party's Spending Cap (People's Veto) Bill. The formula determining the cap would be codified in legislation, in contrast to the Mears et al (2010) cap, which would have been chosen by the government-of-the-day. As a means to shrink the size of the government, and increase transparency, the Spending Cap (People's Veto) Bill could be effective. However, it would reduce flexibility to stabilise the macro economy in recessions (by reducing governments' ability to engage in counter-cyclical spending).

- The "prudent" debt objective (currently articulated as 20% of GDP) would be less likely to limit additional savings in the event of better-than-expected fiscal outcomes. This is because a stabilisation fund would shift the focus of fiscal policy towards the goal of fiscal stabilisation.
- A stabilisation fund would assist in communicating the goal of fiscal stabilisation to the public, and therefore help to overcome the political economy challenges of not spending revenue windfalls during protracted upturns. The focus on "saving for a rainy day" is easy to understand and by separating the fiscal stabilisation goal from other fiscal policy objectives (such as the size of government and the partial prefunding of demographic pressures), ongoing expenditure restraint during prolonged upturns should become more politically acceptable.
- Given the difficulty in distinguishing temporary from permanent increases in revenue, a stabilisation fund could facilitate a deliberately conservative approach by making funds withdrawal conditional on a clear economic downturn.
- As well as preventing pro-cyclical increases in expenditure during upturns, the fund would also serve a stabilisation role during the downside of the economic cycle by making it easier for governments to raise expenditure (above and beyond the impact of the automatic stabilisers) or reduce taxes at a time when the long-term sustainability objective is under increased pressure. Clear rules would need to be set to ensure that funds withdrawn during downturns be used only to fund deficits resulting from efficient stimulus expenditure or tax cuts.

The big downside of a stabilisation fund is that significant judgement would be required to determine the appropriate level of contributions to/ withdrawals from the fund. This may not be an appropriate role for either the government to play (who on average may have a bias towards not quarantining an upsurge in revenues in a Stabilisation Fund) or the managers (presumably a Crown entity) of the Stabilisation Fund (who may have a bias towards maximising the amount held in the Fund). Determining these matters may therefore be best done by some sort of independent fiscal council or regulator with sufficient autonomy and status that its decisions would be respected (see Section 4.4 for further discussion).

Rules would also be needed to specify how any excess build-up of funds be used, e.g. if the economic cycle was asymmetric so that assets in the fund reached a particularly high level. Whether or not this would eventuate would depend very much on the design of the Fund. In principle the macro-stabilisation role of the Fund could be designed to be symmetric, with the build-up of funds at above trend output fully offset by deficit funding when output is below trend. However, if there are more years when the output gap is negative than positive, then the funds could be exhausted too soon. Alternatively, if draw-downs of the funds were restricted to years where the economy is in recession, draw-downs could be relatively rare, resulting in a very large build-up of assets in the Fund. In such a case options could include using the funds to pay down debt, or pre-fund other objectives. One option would be to make additional contributions to the New Zealand Super Fund at such times. Further work could look at the experiences of other countries (e.g. Australia's Future Fund etc). Some of these considerations are also discussed by Price *et al* (2008).

There would likely be some trade-off between the degree of prescription of the rules governing the fund and extent to which judgements and flexibility should be permitted.

To ensure that the fund be used as intended, an independent expert committee to oversee the fund would probably be needed (discussed further in section 4.4).

Experiences of other countries with Stabilisation Funds

Most countries with so-called stabilisation funds use them to insulate their domestic economy from large influxes of revenue (normally from oil or some other commodity). By doing so they maintain a more steady level of government revenue in the face of major commodity price fluctuations (hence the term stabilisation), while also avoiding inflation and minimising the risk of 'so-called' Dutch disease.[33] Injections to the SF are normally used to purchase foreign denominated securities, especially if a goal is to prevent overheating in the domestic economy. Many of these countries' *stabilisation funds* are conceptually similar to *sovereign wealth funds,* although some also play a short-term macro stabilisation role. For example, Norway's *Government Pension Fund Global*[34] was established to smooth the effects of fluctuations in oil prices and fund pension liabilities in the future as income from the petroleum sector declines. It is funded from taxes on both private and public oil companies, and payments for exploration and production licenses for petroleum and natural gas. The fund's economic stabilisation objectives are primarily long-term, and there has been no drawdown from the Fund, which makes it similar to a sovereign wealth "saving" fund.[35] At the same time, however, the fund also has an implicit counter-cyclical role, as transfers from the fund to finance the non-oil budget deficit are permitted to vary across the cycle (thus permitting larger deficits during downturns and smaller deficits during upturns). Most other 'stabilisation funds' around the world are also primarily sovereign wealth "saving" funds – existing to cope primarily with unusually high economic returns from non-renewable resources.

The best example of a stabilisation fund whose *primary focus* is to stabilise fiscal policy over the cycle, rather than over the longer-term, is Chile's Economic and Social Stabilisation Fund (ESSF). This fund – originally established in 1985 as the Copper Stabilisation Fund – has played an important role in contributing to macroeconomic stability in Chile. Contributions to the fund are made when copper prices are high and withdrawals (during periods when copper prices decline) have been used to finance fiscal deficits and reduce Chile's foreign debt. In 2009, withdrawals were also used to fund a fiscal stimulus plan. The ESSF is a key pillar of Chile's fiscal institutions, which also comprise a structural budget target, the outsourcing of key technical assumptions to independent expert panels, and a sovereign wealth fund. Together, these fiscal institutions have been credited with greatly smoothing the macroeconomic impact of

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[33] The term Dutch disease refers to the negative impact on the manufacturing sector that can result from an exchange rate appreciation driven by an increase in revenues from the sale of natural resources. The term was coined in 1977 by *The Economist* to describe the decline of the manufacturing sector in the Netherlands after the discovery of natural gas in 1959.

[34] Prior to 2006 this was known as the Petroleum Fund of Norway. As of mid-2010, the fund is valued at around US$450b, and holds around 1% of global equity markets. Regulations of the management of funds have changed from time to time. E.g. the proportion of the fund that can be invested in international equity markets has been increased over time (currently 60%). Most of the rest is invested in fixed income securities. Recently the government decided that up to 5% of the fund should be invested in real estate.

[35] This characterisation of the fund as primarily a "saving" fund is supported by the fact that the fund was designed to be invested for the long term, as a tool to manage the financial challenges of an ageing population and an expected future drop in petroleum revenue.

copper price fluctuations, with positive effects on the real exchange rate and on government revenues (Medina, 2010).

Despite these many positive impacts, fiscal policy in Chile has still been pro-cyclical at times, most recently when a series of upward revisions to the Chilean expert panel's estimate of the long-term copper price during the 2004 – 2008 period, allowed for significant spending increases.[36] The panel of experts may have been correct in its assessment that copper prices are likely to stay higher for longer. However, the resulting additional impulse from public spending was not warranted when the economy was already booming. Chile's experience is not surprising, given evidence that it is easy to overestimate trend growth and thus underestimate the cyclical budget component during long-lasting asset price booms (Jaeger & Schuhknecht, 2004).

The key features of the ESSF and related fiscal institutions in Chile are summarised in Annex 1, including proposals to strengthen the framework to reduce the pro-cyclicality in future. One lesson to be learned from other countries' experiences is not to put a cap on the size of a stabilisation fund as this can risk a pro-cyclical blow-out in spending if the cap is reached during an unexpectedly strong upturn (e.g. Finland, Russia).

While the Chilean approach is a potentially useful model, it is not directly applicable to New Zealand, primarily because of the greater cyclicality of estimated structural revenues in New Zealand. As illustrated in Figure 13, Chile not only ran much larger fiscal surpluses than New Zealand during the mid-2000s (over 8% of GDP at its peak, compared to about half that in New Zealand) but Chile's estimated structural balance has also been significantly less cyclical than ours. There are two main reasons for this.[37] First, New Zealand's exposure to commodity price volatility is nowhere near as great as Chile's exposure to copper prices.[38] Second, the impact of high commodity prices on tax revenues in New Zealand is much more difficult to identify, as the impacts are more dispersed throughout the economy, unlike Chile where the impacts show up more directly as higher profits in the state-owned copper company Codelco. Since the copper industry in Chile is easily identifiable, it has been relatively easy (i.e. credible and transparent) for the government to ear-mark a proportion of tax revenues from Codelco to the Stabilisation Fund (ESSF). By contrast, it would be much less straightforward to strip out the "cyclical" component of revenues in New Zealand, although not necessarily impossible.[39]

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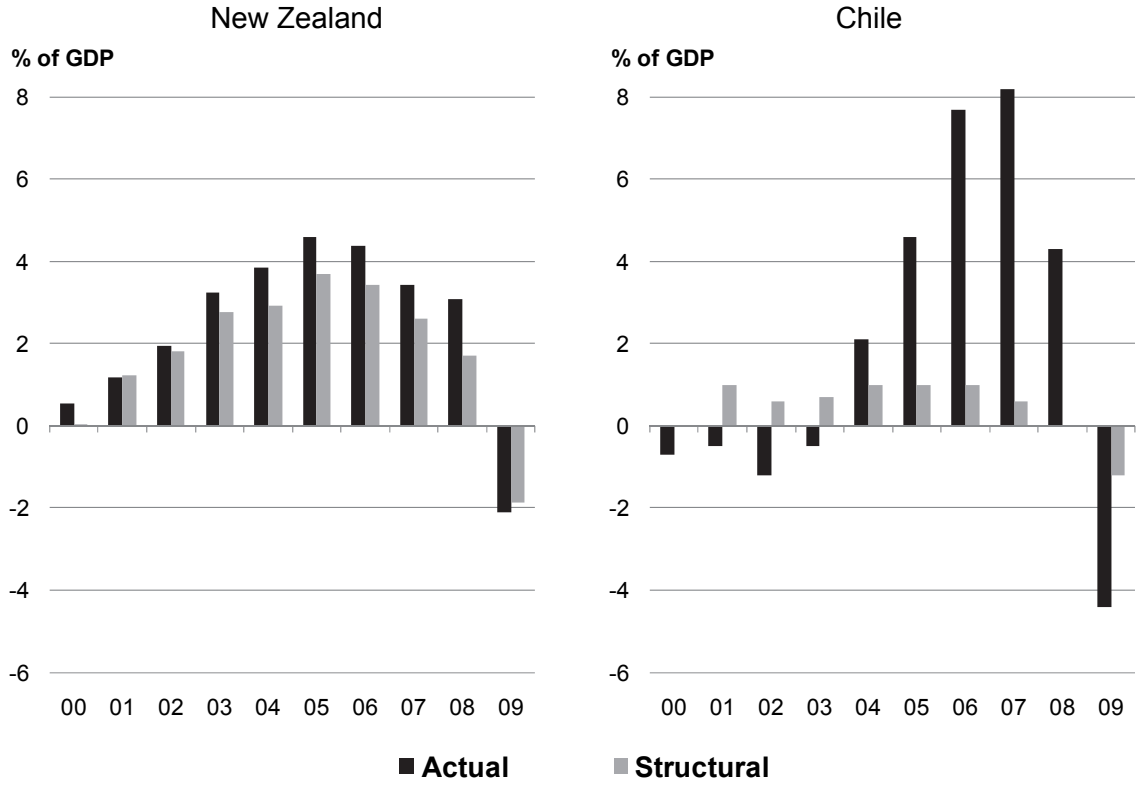
[36] Public spending growth accelerated from 3.5% in real terms during 2000-03, a period of rather sluggish growth and low copper prices, to 7.5% during the copper price boom of 2004-08 (OECD, 2010b).

[37] Another potential explanation for New Zealand's more cyclical path of structural revenues could be a more cyclical evolution of discretionary fiscal policy in New Zealand.

[38] Between 2003 and 2008 Chilean commodity prices more than quadrupled, while New Zealand's commodity prices less than doubled.

[39] In theory it could be possible to estimate the proportion of taxes paid by various sectors that is attributable to commodity prices. However, much of the stimulatory effects of high commodity prices in New Zealand infiltrate gradually into private sector demand (e.g. via higher investment by dairy farmers) rather than always showing up as higher tax revenues.

Figure 13: Actual vs Structural Fiscal Balances: New Zealand vs Chile



The fact that there is no easy way of earmarking, for New Zealand, commodity-driven tax revenues, highlights why the Chilean model could not be applied directly to NZ. However, an extension of the Chilean approach could see the development of a stabilisation fund for New Zealand which would save windfall gains in *all* sources of government revenue. This would require the estimation of the long-term level of structural revenues, a task that would not be easy (see further discussion below). Nevertheless, if such an approach would make it easier to run budget surpluses of up to 8% of GDP – as in Chile in 2006 and 2007 – it is worth considering.

The key to success in Chile was a set of fiscal institutions which facilitated communication of the fact that if high fiscal revenues were fully spent in real time, they would have put pressure on absorptive capacity and triggered a sizeable appreciation of the real exchange rate (Chan-Lau *et al*, 2010).

How could a stabilisation fund work in practice in New Zealand?

In the case of New Zealand, there would be two main options for determining contributions to a stabilisation fund. One option would be to save some general definition of "revenue windfalls", rather than simply actual fiscal surpluses in excess of the structural surplus target (i.e. largely cyclical revenues), as is done in Chile. The other option would be to earmark a specific type of tax for the fund – e.g. a capital gains tax (CGT). Since capital gains taxes tend to exhibit a highly cyclical pattern, earmarking them to be quarantined in a stabilisation fund would reduce the risk of them being 'spent', such as occurred in Ireland during the 2000s. It is also possible that linking CGT revenues to a stabilisation fund could make a CGT more politically palatable, depending on how draw-downs from the fund would be spent.

The ‘terms of reference’ of a macro stabilisation fund for New Zealand could include the following features:

- Contributions to the stabilisation fund would consist of all revenue surprises. Surprises could be defined as all actual government revenues in excess of the estimated long-term level of government revenue (i.e. the revenue that would be received if commodity prices were at their long-run sustainable level and the economy was growing in line with trend).
- Draw-downs would be permitted when actual revenues are lower than the long-term estimate (OR when the economy is in recession OR in certain other circumstances on recommendation of an independent fiscal council).
- Funds would be invested offshore in low-risk liquid assets (e.g. high-rated sovereign debt).
- Offshore assets would be held on an un-hedged basis. This may help to stabilise the exchange rate (to the extent that investments would be typically made when the economy is performing well, which normally correlates with a stronger exchange rate, while assets would be sold when the economy is weak, which normally correlates with a weaker exchange rate).
- The implied cost for the Crown Balance Sheet would need to be acknowledged (return on high-rated international sovereign debt < cost of holding additional domestic debt). This cost *could be* partly offset by gains on currency movements (see above bullet) but this could not be guaranteed.

In considering the pros and cons of a stabilisation fund, the following considerations should be kept in mind. First, a stabilisation fund means that cyclical fluctuations of the Crown balance sheet would be managed through the asset side of the balance sheet rather than the liability side. Alternative ways to manage balance sheet variation could include a better-specified net debt target (i.e. in a way that would avoid reaching a ‘floor’ during good times) or having a ‘notional’ account on the balance sheet. These options would avoid the fiscal cost (due to the interest rate spread) of investing in high-rated international debt rather than paying down domestic debt. However, the stabilisation fund may have significant political economy benefits, as discussed above.

Second, more work would need to be done to explore the challenges of ensuring that draw-downs from the fund be spent efficiently. In particular there is a danger of misallocation in an environment where the planning of spending programmes would become conditional on stabilisation fund resources becoming available.

To some extent this challenge could be mitigated by permitting draw-downs to be used only to finance fiscal deficits, rather than to fund stimulus programmes. This would keep the path of expenditure in line with that of long-term revenue, and prevent the need for borrowing during recessions. However, large or persistent deviations in government revenues from the estimated long-run level could lead to prospects of an indefinite accumulation of funds or the prospect of the fund being exhausted, as discussed in RBA (2011). If facing the prospect of exhaustion, a downward adjustment would need to be made to the estimated level of long-term revenues. The prospect of an indefinite accumulation of funds could open the door to one-off injections of funds to pay down debt or contribute to the New Zealand Superannuation Fund (NZSF).

Finally, it is worth noting the distinction between a stabilisation fund and a saving fund, such as the NZSF. Whereas the NZSF is used to accumulate revenues for the purpose of funding future pension liabilities, a stabilisation fund would be used to insulate the

domestic economy from the volatility in government revenues by accumulating revenues when they are strong, and injecting the accumulated funds back into the budget when revenues are weak. As such the investment objectives of the two funds would be quite different. Since savings funds aim to earn a real return they are typically invested in more risky asset classes than stabilisation funds, which should be invested in very liquid and low-risk assets such as government bonds.

In this light it is worth noting that the NZSF already plays a broadly equivalent role to the Chilean Savings Fund (the PRF - see Annex 1 for more detail), although the two funds differ significantly in their risk profile. The creation of a macro stabilisation fund in New Zealand would be complementary to the NZSF in that its purpose would be to run assets up and down over the economic cycle, rather than to save for the longer-term, as is the purpose of the NZSF. As in Chile, contributions to the macro stabilisation fund could be defined as those in excess of those required to fund the NZSF.

4.4 Option E: An Independent Fiscal Council

The political economy challenge of running large fiscal surpluses during an economic upturn is well recognised, and in response, it is now commonly recommended that aspects of fiscal policy be delegated to some kind of Independent Fiscal Council (IFC). However, since each country has different fiscal policy challenges, an IFC may not be appropriate in all cases.

While a few countries have had IFCs for several decades, most IFCs around the world are relatively new.[40] Where the mandate is to provide relatively technical input to the fiscal policy decision-making process (such as in Chile), the role of IFCs seems very clear. However, political independence makes less sense if the choice of fiscal policy actions includes choices among different expenditure programmes or among different taxes. As Solow (2005) points out, part of the reason why intelligent discretionary fiscal policy is so difficult in a democracy, is because there is no perfectly 'neutral' fiscal package. Every expenditure change and every change in tax rates has distributional and allocation effects. If choice is left to the democratic process, stabilisation issues will tend to be fought out in terms of distribution and allocation, and the stabilisation results will tend to be delayed and may sometimes be perverse.[41]

In many other countries, the lack of independence of the economic forecasts is considered a significant problem impeding quality fiscal policy analysis. This problem underpinned the recent creation of the Office for Budgetary Responsibility (OBR) in the UK. In New Zealand, however, where the economic forecasts are signed off by the Secretary to the Treasury rather than by the Minister of Finance, forecast independence is not considered a problem.

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[40] For an overview of govt-funded institutions that have a degree of independence in providing additional macroeconomic/fiscal advice see: http://www.economics.ox.ac.uk/members/simon.wren-lewis/fc/fiscal_councils.htm

[41] With this potential dilemma in mind, Solow (2005) proposed the idea of an "automated" (expansionary or contractionary) pre-determined fiscal policy package that would come into play when the appropriate economic indicator was triggered. He suggested that the composition of the "standard package" could be adjusted once every 10 to 12 years. At the same time, however, he warned of the risks that too frequent changes to tax rates or to expenditure programmes could be costly in terms of efficiency and effectiveness.

Instead, New Zealand's biggest fiscal policy problem may be related to the *shallowness of the public debate about Fiscal Policy.* New Zealand has no private sector economists or think tanks that specialise in fiscal policy analysis and commentary. If this problem is considered significant, however, there may be other ways of addressing it, rather than through creation of an IFC. For example, it would be cheaper to provide public funding to support Fiscal Policy research and commentaries at Universities or think tanks than it would be to set up an IFC.

IFCs in different countries perform a wide range of functions that vary significantly across countries. If we were to have one in New Zealand, the obvious mandate would be positive (rather than normative) *ex-post* and *ex-ante* commentary on actual and expected Fiscal Policy outcomes relative to objectives. The case for an IFC that undertakes costings and evaluations of opposition party policies is less clear-cut.

A more specific role for an IFC would arise if a stabilisation fund were to be established (see discussion above). In this case, thought would need to be given to the design/selection of *macroeconomic triggers*; i.e. the identification of the economic developments that would determine the contribution to/draw down of funds from the stabilisation fund. Regardless of whether the rule determining contributions to/draw downs from the stabilisation fund was mechanistic or flexible, an IFC could enhance the credibility of the arrangement.

An important question is who an IFC should report to. If the IFC were to report to the parliament, a risk is that the council could be seen by the government as a tool of the opposition, resulting in a break-down in cooperation. Askari, Page and Tapp (2011) discuss the Canadian Parliamentary Budget Office (PBO)'s such experiences. This suggests that it could be more successful to have the IFC report to the executive (e.g. following the OBR model), although in that case it would be important to ensure that the executive did not have the power to compromise the IFC's independence. These are issues that would need to be further explored.

One of the issues in the New Zealand context is the potential cost of resourcing an IFC, and also staffing it appropriately, given the relatively shallow pool of suitable economists from which to draw in a small economy. To reduce the resource cost, options could be considered such as utilising Reserve Bank and Treasury staff (e.g. as full-time or part-time secondees). The Reserve Bank is already independent from government, and has a relatively large and highly qualified staff. Like many other central banks around the world, the Reserve Bank has at times seemed reluctant to comment on fiscal policy. However, secondees from the Bank could be well-placed to provide useful independent technical advice and commentary.

Given the importance of ensuring that fiscal policies not exacerbate monetary policy, another option would be to amend the Reserve Bank Act to *require* the RB to explicitly comment in the Monetary Policy Statement on the cyclical dimensions of fiscal policy. This is similar to a recommendation by the UK House of Commons report on the Monetary Policy Committee of the Bank of England that the Bank of England "should monitor fiscal policy, and issue a warning if it was concerned about its effects". (House of Commons Treasury Committee, 2007). Eric Leeper's Jackson Hole paper also suggested that central bankers should "break away from the taboo against saying anything substantive about fiscal policy" and play a more prominent role in debating the role of fiscal policy in macro stability (Leeper, 2010).

Before making any recommendation on the strength of the case for a IFC for New Zealand, more work needs to be done to investigate the different models of IFC. The best model for New Zealand would be likely to depend on what other fiscal policy tools are adopted to assist with making fiscal policy less pro-cyclical. Treasury will be undertaking further work over the next few months to explore the case for an IFC in New Zealand.

4.5 Option F: The case against a structural balance-based fiscal rule (SFR)

It is commonly argued that a structural balance-based fiscal rule would be the best way of achieving less pro-cyclical fiscal policy. However, as Ter-Minassian (2011) puts it: "… while a SFR is superior to a rule targeting an unadjusted budget balance in preventing fiscal pro-cyclicality, it shares with the latter the risk of hindering active counter-cyclical fiscal responses to a crisis. … Even during boom periods, a SFR may constitute a hindrance to a needed fiscal tightening, if it lulls a government into believing that, by meeting the SFR's target, it has done all it needs to do on the fiscal front to stabilize the economy".

Looking at estimates for the structural balance for New Zealand, one can speculate about what fiscal policy outcomes might have been under a SFR. Of course, the results would depend on what specific SFR was used. As illustrated in Figure 4, New Zealand ran significant structural operating balance surpluses through most of the 2000s, so a rule targeting a structural operating balance surplus of, say, 1% of GDP would have probably made it more difficult to run surpluses much larger than 1%. In this case, we probably would have ended up with even larger spending increases, or tax cuts, through the mid part of the 2000s, implying a further loosening of the fiscal policy stance and putting even more pressure on monetary policy.

A more ambitious target – such as a SFR for a 4% structural operating balance surplus – would have been more likely to avoid pro-cyclicality. However, such a target would probably not have been politically achievable. In addition, unless such a rule had good escape clauses, it also would have prevented much fiscal stimulus during the downturn.

Finally, it is worth noting that a fiscal rule that focuses on a single target may lead policy makers to ignore other policy indicators that suggest a greater level of risk, or to seek to reach the target in ways that circumvent the intention of the rule. Examples of accounting tricks that could be used to circumvent rules are: misclassifying current expenditures as capital ones under a golden rule; overestimating potential GDP growth under a SFR; resorting to tax expenditures under an expenditure rule or shifting spending off the balance sheet, under a debt rule.

These risks strongly support the current approach embedded in the PFA of requiring governments to seek to achieve certain principles of fiscal responsibility, while monitoring a *range* of fiscal variables, rather than a single specific target.

4.6: Option F: Active tax policy

Another common suggestion is to develop some tax policy tools that can be used actively over the cycle to dampen aggregate demand during upturns and stimulate aggregate demand during downturns. The most common suggestions are for a variable petrol tax or a variable GST (e.g. as suggested by Buiter, 2006).

Gaukrodger (2011) discusses the case for using tax policy tools in such an active counter-cyclical way and notes that there would typically be strong political resistance to reversing any temporary tax cuts introduced during economic downturns. This suggests that temporary tax rate changes would be most feasible during the upside of an economic cycle (since there would presumably be little resistance to reversing tax rate increases). Even on the upside, however, using fiscal policy tools in such an active counter-cyclical manner would imply substantial efficiency and compliance costs. Overall, Gaukrodger (2011) concludes that it would be better to maximise macroeconomic stability within the parameters of an efficient tax system – e.g. by introducing a capital gains tax or a land tax, both of which would have some macro-stability benefits – before resorting to such temporary fiscal policy measures.

5. Conclusion

A key problem with the current fiscal framework (which relies on running debt up and down to achieve macroeconomic stabilisation) is that debt can hit the "prudent" debt level target during good times. Even if the prudent debt level is not reached it can be very difficult to persuade the public, and politicians, that revenue windfalls should be saved rather than spent. This contributes to pro-cyclical fiscal policy during the upside of the cycle, exacerbating interest rate and exchange rate cycles.

Looking back at the last economic upturn, a 2-3 year episode of pro-cyclicality can be identified, and this is likely to have contributed to higher interest rates and a more over-valued exchange rate than might otherwise have been the case. The international evidence shows that pro-cyclicality is a common phenomenon during upturns in other countries also, suggesting that it is likely to be a challenge that New Zealand will face again in future. The cause of the most recent pro-cyclicality episode in New Zealand seems to be a combination of: political economy factors; insufficient emphasis on macro-stability objectives; and – with the benefit of hindsight – genuine mistakes in assessing cyclical conditions.

Looking ahead, it is recommended that we modify the fiscal policy framework to facilitate a more active stabilisation focus for fiscal policy, in time for the next upturn. The desired change could be characterised as follows:

Standard prescription		Future prescription
Fiscal policy should follow stable and transparent rules that allow automatic fiscal stabilisers to operate fully while refraining from the temptation to use discretionary countercyclical policy owing to the likely decision and implementation lags.	→	Fiscal policy should actively seek to avoid offsetting the automatic fiscal stabilisers, by putting in place institutional structures that promote greater transparency and accountability and build public support for the need to run large fiscal surpluses during upturns.

While better fiscal policy analysis may be able to help at the margin, the biggest challenge in designing a better set of fiscal rules and institutions is the political economy one. Greater public support is required for the need to run increasingly large

fiscal surpluses during upturns (there already seems to be sufficient support for running deficits during downturns). At the same time New Zealand's fiscal institutions need to be able to cope with real-time uncertainty and foster a greater degree of caution in the way revenue windfalls are interpreted.

Features of a future fiscal framework could therefore include:

- Increased focus on the macro-stabilisation objective (without diluting the importance of the long-run sustainability objective) and a greater focus on building public support for stabilising fiscal policy. Tools to achieve this may include:
    - A *more explicit mandate* in the PFA relating to fiscal policy stability.
    - Better and more regular communication (to both the government and the public) of the fiscal stance and its macroeconomic impact.
- A more explicit de-linking of expenditure decisions from revenue outturns. This could be facilitated by clearer *ex-ante* specification of spending plans in fiscal strategy documents, or through use of a well-designed stabilisation fund.
- Permanent tax policy reforms such as a capital gains tax that would increase the strength of the automatic stabilisers, while also improving the efficiency of the tax system more generally. Since such a tax would, at the same time, increase the pro-cyclicality of tax revenues, the need for other institutional reforms to de-link expenditure decisions from revenue windfalls would gain further importance.
- Consideration of the role that an independent fiscal council could play in raising the quality of public debate and transparency and accountability of key fiscal policy judgments.
- Finally, an increased focus on introducing policy changes more *gradually* would also help to mitigate the problems of trying to operating fiscal policy in a fog of uncertainty.

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Annex 1: Fiscal institutions in Chile[42]

Chile adopted a structural surplus rule in 2000. Until 2007 a structural surplus of 1% of GDP was targeted. The target was lowered to ½% as of 2008 and (temporarily) to 0% for 2009. The government calculates structural revenues with the help of two independent expert panels who provide inputs for the long-term reference price for copper and an estimate for potential output growth. Under the rule the government saves all revenues above the estimated structural component of central government revenue. Actual fiscal surpluses in excess of the structural surplus target are allocated to the Stabilisation Fund (ESSF), the Savings Fund (PRF), and the Central Bank of Chile, as described below. In practice, when very large fiscal surpluses were recorded over 2007-2008, most allocations were to the ESSF. The fiscal framework enjoys a broad political consensus.

In the face of fiscal surpluses as large as 8% of GDP over the mid-late 2000s (Figure 13) the government was successfully able to communicate that growth of public spending beyond the limit implied by the rule would risk putting renewed upward pressure on the exchange rate. However, the framework has not been foolproof, as evidenced by the fact that upward revisions to the long-term copper price, by the independent expert panel, allowed for pro-cyclical spending increases.

Chile has both a Stabilisation Fund (ESSF) and a Savings Fund (PRF)

Chile's 2006 Fiscal Responsibility Law involved the creation of two new sovereign wealth funds. The first of these is the Pension Reserve Fund (PRF) which is essentially a Savings Fund – not dissimilar to the New Zealand Superannuation Fund – (no withdrawals are allowed to be made from the fund for a minimum of ten years). *This fund receives a minimum annual contribution of 0.2% of GDP (to be made even in the case of an overall deficit), which can be increased to up to 0.5% of GDP*, and initially received a one-off sum of $600 million in 2006 to kick-start the fund. In addition, 0.5% of GDP is allocated to the central bank each year, for recapitalisation, provided the central government runs an overall surplus. These recapitalisation payments are expected to cease after 2011.

The other fund, the Economic and Social Stabilization Fund (ESSF), came into existence in 2007 with a one-off payment of approximately USD5 billion, (from its predecessor, the 1985 Copper Stabilization Fund). *The ESSF receives each year any positive balance resulting from the difference between the actual and structural fiscal surpluses after the contributions to the PRF and to the Central Bank of Chile have been made.* Resources from the ESSF can be used to fund the contributions to the PRF when the overall central government balance is negative.

Contributions to and withdrawals from the ESSF:

Contributions to the ESSF since its creation in 2007 total almost USD 20 billion, and withdrawals just under USD 10 billion (see Table below).

[42] The information in this annex is drawn largely from the website of the Chilean Ministry of Finance: http://www.minhda.cl/english/fondos_soberanos/index.php. Information on the independent expert panels is drawn from other sources.

The assets accumulated allowed the government to implement a USD 4,000 million fiscal stimulus plan in 2009 to compensate for the sharp drop in private demand associated with the global economic and financial crisis. This plan included: a special program of public investment worth USD 700 million; a capital injection of USD 1,000 million for the state copper company Codelco to support its investment plans; two special grants of 40,000 pesos (approx USD 80) per dependent to the country's poorest families; a temporary reduction in stamp tax on loan operations; a postponement of the reversal of part of an earlier temporary cut in fuel tax; and the bringing forward of income tax rebates. In line with the key purpose of the ESSF an additional USD 4,000 million was withdrawn from the fund to help finance the actual fiscal deficit, USD 441 million was used to pay down public debt and USD 837 million was withdrawn for payment into the PRF. As a result total withdrawals from the ESSF in 2009 totalled USD 9,278 million (approx 5.5% of GDP).

	Contributions to the ESSF		Withdrawals from the ESSF		Market Value USD million
	Amount USD million	% of previous year's GDP	Amount USD million	% of previous year's GDP	
2007	13,100	8.9	-	-	14,033
2008	5,000	3.1	-	-	20,211
2009	-	-	9,278	5.5	11,285
2010	1,362	0.8	150	0.1	12,720

Note: Approximately USD5 billion of the contributions in 2007 were a one-off payment from the fund's predecessor.

Further significant withdrawals in 2010 were not required since GDP growth returned to a healthy rate. Indeed, contributions resumed in the second half of that year. Government policy minimised the effect of the inflow of dollars from the ESSF on the exchange rate by using domestic borrowing to finance the deficit.

Corporate Governance, Objectives and Strategies:

Both funds are managed by a Financial Committee, the members of which are appointed by the (independent) central bank. The Committee is responsible for making investment decisions and for the day-to-day running of the funds.

The aim of the PRF is to address an expected future government pension liability shortfall. As a Savings Fund, it takes a longer-term view. This means it has a higher risk profile and can invest in a broad range of asset classes. The ESSF, on the other hand, has macroeconomic stabilisation objectives. It has the aim of accumulating excess revenues when the price of copper is high in order to channel revenues into the budget when the price of copper is low, thereby smoothing out government expenditure. As a Stabilisation Fund, it has a lower risk profile in terms of its investments because it must take a short-term view due to liquidity concerns. Despite the differences in risk profile, both funds are exclusively invested in low-risk asset classes, similar to those used in international reserves. This conservative risk profile for the PRF was initially intended to be temporary, and the Financial Committee has recommended a move to more diversification. The performance of the funds is measured in US dollars and investments are not hedged.

The role of the independent expert panels:

Chile has two independent expert panels to which key technical decisions are delegated. The "potential output" panel estimates the main parameters that are used for calculating the structural balance. The panel – which consists of about 14 well-known economists from academia and research bodies – meets twice during each budget season. At the second meeting, each member of the panel submits a forecast for each of the inputs required by the model (labour force; real investment; and total factor productivity). Each of the estimates is published anonymously so that each forecaster recognises only his/her own. The two extremes on either side are discarded and then a simple average of the remaining 12 forecasts is used to estimate the output gap from a production function. There is no discussion to achieve a consensus among panel members.

The "copper price" panel is similar to the "potential output" panel, except that it is charged with the job of estimating the average long-term (ten-year) price for copper as the reference price (which serves as an input to the structural balance). The same procedures are followed as for the potential output panel. Panel members are employees of mining companies and related enterprises, or financial analysts in this sector.

Members of both panels are appointed by the Minister of Finance for one year at a time, although they are typically re-appointed every year. Most members have been there since the beginning (approximately 2006). The experts receive no remuneration. The establishment of these independent panels seems to have alleviated fears about the impartiality of the calculations underlying the structural budget surplus, although some commentators have recommended that the independence of the panels be boosted by requiring them to publish some commentary on the fiscal position.

Proposals to strengthen Chile's rule-based fiscal framework

Both the IMF and the OECD have noted that Chile's fiscal framework has contributed to very impressive fiscal performance (IMF, 2010b; Chan-Lau *et al*, 2010; OECD, 2010b). Nevertheless, a key weakness of the framework has been noted: that upward revisions to the long-term assumption for copper prices imparted an unintended pro-cyclicality to government spending over the last upturn. A number of different proposals to address this include:

- Introducing an expenditure growth ceiling, to help prevent pro-cyclical increases in public spending.
- Focussing more attention on the structural non-mining primary balance.
- Adding provisions to handle *ex-post* deviations to avoid last-minute fiscal tightening or loosening at the end of the year to comply with the rule.
- Expanding the role of the expert committees to include an *ex-post* assessment of the implementation of the rule.
- An alternative proposal was to convene the expert committee for the determination of long-term copper prices less frequently, ideally only once a full copper price cycle has been completed.