

THE RELATIONSHIP BETWEEN FISCAL POLICY AND MONETARY POLICY

This article by Andrea Doughty examines some of the analytical issues relating to the implications of fiscal policy for monetary policy.

Introduction

This article discusses the issues involved in assessing fiscal policy from a monetary policy viewpoint.¹ The conduct and stance of fiscal policy affects monetary policy and inflation on two principal levels. Firstly, in the short term, fiscal policy interacts with elements of the monetary policy transmission mechanism. Secondly, fiscal policy can influence the long term sustainability of monetary policy.

The article first outlines how fiscal policy interacts with various monetary transmission channels. It then presents a practical framework for analysing issues arising in respect of the sustainability and credibility of fiscal and monetary policies.

Fiscal Interactions with the Monetary Transmission Mechanism

Fiscal policy impacts both directly and indirectly on a number of monetary transmission channels, and thereby has implications for the implementation of monetary policy. The principal channels by which fiscal policy affects monetary policy are discussed below.

- Domestic Demand

When households and businesses base their expenditure decisions on short or medium term time horizons (as opposed to very long term or cross-generational time horizons), then changes in government revenue and expenditure policies are likely to have direct effects on nominal domestic demand. This arises because, with short time horizons, household and business spending patterns are likely to be relatively closely related to current incomes and to current taxation liabilities. Therefore, when fiscal decisions reduce current disposable incomes, for example, households will tend to respond by reducing their spending to some degree.²

1 In discussing fiscal policy from a purely monetary policy perspective, the article deliberately abstracts from analysing other aspects of fiscal policy such as the appropriate level of public savings and the optimal size of the public sector. This in no way implies that these aspects are unimportant.

2 Where economic agents have longer term or, at the extreme, lifetime or cross-generational time horizons, fiscal policy is likely to have less effect on domestic demand. In these circumstances, households and businesses may tend to discount transitory changes in fiscal policies, or changes that are viewed as potentially unsustainable over time. With long time horizons, households may anticipate corresponding, offsetting shifts in fiscal policy over future years. As current fiscal policies will thus be expected to have little effect on incomes and taxes over the longer time horizon relevant to the consumer in this case, fiscal policy is likely to exert significantly less influence on short term private sector spending behaviour.

Household spending behaviour is likely to be particularly affected by specific fiscal measures in areas of significance to households, such as superannuation, education, health, and personal taxation. Equally, businesses may be expected to respond directly to fiscal changes in areas such as business taxation. For this reason, the fiscal impact on domestic demand cannot be summarised simply by looking at an aggregate measure of the fiscal deficit. It is conceivable, for instance, that a higher deficit may be more contractionary in terms of domestic demand than a lower deficit depending on the specific nature of the expenditure and revenue policies.

Fiscal policy may also affect domestic demand indirectly via its influence on interest rates (discussed further below). Where policies to reduce a fiscal deficit, for example, are reflected in lower interest rates than would otherwise have occurred, such interest rate effects are likely to have a positive influence on domestic confidence and activity.

Through both the direct and indirect channels, fiscal policy is likely to influence aggregate demand conditions within the economy. Demand conditions in turn tend to influence wage and price-setting behaviour and thus the stance of fiscal policy can affect inflation and inflationary expectations. The first round impact of fiscal consolidation, for example, is likely to reduce aggregate demand and through this channel ultimately to exert pressure on profit margins. Flow-on effects to the labour market may also act to dampen wage pressures.

Interest rate effects on demand, on the other hand, act in the opposite direction to the direct fiscal influence. Thus the overall longer-term impact of fiscal consolidation on domestic demand is ambiguous.

- Interest Rates

Movements in interest rates arising from changes to fiscal policy may have several aspects:

- (a) The impact of fiscal policy on domestic demand may alter the demand for funds in the economy and thereby affect interest rates.
- (b) Longer term considerations related to the *sustainability* and overall stability of the fiscal/monetary policy mix may lead to changes in the risk premium related to government policy built into interest rates. Fiscal policy sustainability in this context may be defined as the ability of government to continue to pursue a set of budgetary policies over the medium term without the need to increase taxes, decrease spending, have recourse to monetisation of the deficit, or to restructure or even repudiate debt.³ Fiscal policies that are viewed as unsustainable over time may impact on expectations of future monetary policy, increasing the perceived likelihood that the situation will arise in the future where the growing cost of servicing a rising public debt forces or encourages the Government to monetise its deficits, rather than to fund them in financial markets. Thus, unsustainable fiscal settings are likely

³ See Blanchard, O., 1990, 'Suggestions for a New Set of Fiscal Indicators', OECD Working Paper, No. 79, and Horne, J., 1991, 'Indicators of Fiscal Sustainability', IMF Working Paper WP/91/5.

to reduce the credibility of a government commitment to direct monetary policy towards price stability. In turn, this reduction in credibility will raise longer-term inflation expectations, and so increase the costs of pursuing an anti-inflationary monetary policy.⁴

- (c) *Capital markets effects* related to government funding requirements may lead to changes in interest rates in response to fiscal policy changes. An increase in the demand for funds by government may lead to a rise in domestic interest rates if domestic and foreign debt are not perfect substitutes. Such a rise in interest rates increases the cost of capital to firms, raising the rate of return required on potential new investment projects to break-even, and thus potentially 'crowds out' some private sector investment spending. The funding by government of fiscal deficits may also have signalling effects. The structure of funding between domestic and foreign markets or between short and long term maturities may have an effect on interest rates and the yield curve if the authorities' debt portfolio decisions appear inconsistent with their policy objectives. For example, long term government borrowing at high nominal interest rates relative to a low inflation target may impact negatively on the credibility of monetary policy if the funding decision is interpreted as reflecting a view about the future direction of inflation and the likelihood of the inflation target being achieved. On the other hand these potential signalling effects will be minimised if the authorities' decisions are interpreted as legitimate portfolio decisions consequent on taking both risk and return factors into account.

- Direct Inflation Effects

Changes in the settings of indirect tax rates, tariff levels, government user charges and other fiscal instruments can have a direct impact on measured inflation.⁵ Although technically a change in the price *level*, the experience of recent years suggests that adjustments to these administratively-determined 'prices' may have more than a transitory effect on inflation through their influence on inflation expectations. The introduction of GST in 1986 and its subsequent increase in 1989, together with changes in other government charges, appear in part to have underpinned stubbornly high inflation expectations over the period. This has particularly been so with households, which appear less able than the financial and business sectors to distinguish one-off effects on the price level from an ongoing inflationary process.

Fiscal consolidation achieved via increases in government user charges and other indirect forms of taxation that are perceived to contribute to the inflation process may thus lead to a rise in inflationary expectations. Via this route, fiscal consolidation may be transmitted into higher wages and interest rates. While the resultant change in nominal interest rates will affect domestic demand and, ultimately, through that channel, depress inflation, the rise in inflation expectations may put upward pressure on wages

4 For an analysis of an extreme case of such credibility concerns, see Sargent, T.S., and Wallace, N., 1981, "Some Unpleasant Monetarist Arithmetic", *Federal Reserve Bank of Minneapolis Quarterly Review*, Autumn.

5 It should be stressed that the Reserve Bank's focus is an underlying inflation; that is, on measured inflation excluding the effects of one-off impacts such as those arising from changes in GST or government user charges. However, to the extent that inflationary expectations are affected by such changes there will be implications of the changes for monetary policy.

and, potentially, on prices for final goods. The degree of upward impact on inflation, and thus the implications for monetary policy, will depend on the degree of capacity utilisation and the stage of the business cycle.

Assessing Fiscal Policy in Practice

Given the transmission channels between fiscal and monetary policy described above, it is necessary for the Bank in assessing fiscal policy developments, to consider whether new fiscal policy settings have any implications for monetary conditions, and consequently whether any change in monetary policy is necessary to maintain course for the inflation targets. This assessment involves consideration of the range of issues identified above such as the potential inflation and inflation expectations impact of the fiscal policy changes, the likely direct and indirect influence of the fiscal measures on domestic demand (and thus their indirect influence on inflation), the response of interest rates (and exchange rates) to the fiscal policy announcements, and any sustainability issues for monetary policy. Overall, fiscal policy changes are weighed up in terms of their likely effect on underlying inflation over subsequent quarters. Given the variety of channels whereby fiscal policy can affect inflation in the short term, it is impossible to specify a simple summary measure of fiscal policy to which monetary policy should respond. Much will depend on the specific policies that are announced.

In the longer-term, however, the most fundamental influence for monetary policy is likely to be the perceived economic sustainability of fiscal policies. Where uncertainty about the sustainability of fiscal policies disturbs the perceived achievability of monetary policy objectives, the economic costs of an imbalanced macro-economic policy mix begin to rise and, ultimately, the feasibility of both monetary and fiscal policies may be called into question.

The importance of the sustainability issue for the longer-term monetary policy strategy implies that the Bank must assess the long-term sustainability of announced fiscal policies. One indicator of fiscal policy sustainability that is derived from the government's inter-temporal budget constraint, and which is widely used, straightforward to calculate, and easily understood on an intuitive level, is the *public debt stabilisation ratio*.⁶

The debt stabilisation ratio can be used to estimate the magnitude of the financial surpluses required, under alternative assumptions about the real interest rate on government debt and the real growth rate of Gross Domestic Product (GDP), to stabilise the ratio of net public debt (i.e. gross public debt less the Government's financial assets) to GDP. It can equally be used to calculate the surpluses required to achieve specified reductions in the net public debt : GDP ratio.

The ratio is defined as the ratio of the *primary* fiscal balance (i.e. the fiscal balance excluding interest payments and net lending items) to GDP that is required to maintain net public debt constant as a percentage of GDP. On the assumption of constant real interest rates and real economic growth rates (and abstracting from the effect of exchange rate movements on debt levels), the debt stabilisation ratio (DSR) is given by:

6 See Blanchard, O., *ibid.*

$$\text{DSR} = \frac{D}{\text{GDP}} (r - g)$$

Where:	D	=	nominal net public debt
	GDP	=	nominal GDP
	r	=	forecast real interest rate on government debt
	g	=	forecast real GDP growth rate, and
	DSR	=	ratio of the primary fiscal balance to nominal GDP.

A high positive DSR indicates that a high primary surplus (as a proportion of GDP) is necessary to hold the net public debt to GDP ratio at a specified level. From the expression for DSR, it is clear that for sustainability purposes a higher primary surplus will be required the higher is the initial net debt:GDP ratio, the higher is the real interest rate or the lower is the real GDP growth rate.

The debt stabilisation ratio can be compared with actual or forecast primary balance:GDP ratios to assess whether a given set of fiscal policies is likely to result in an improvement, worsening, or stabilisation of the government's net debt position.⁷ If the forecast primary balance falls short of the debt stabilisation ratio, there is a strong probability that current policy settings will need to be adjusted at some future point. A government may, of course, also use asset sales as a substitute for financial surpluses, although continuing one-off revenues from this source are not possible over the longer term.

Actual and projected primary fiscal balance and net public debt statistics for New Zealand over the period 1989/90-1993/94 are recorded in Table 1. These projections indicate the increase expected in the Government's primary surplus over the coming 2-3 years and the consequent small reduction projected to occur in the net public debt to GDP ratio over the same period.

A matrix showing the primary balances required to stabilise New Zealand's net public debt ratio at the 1990/91 level under different real interest rate and growth scenarios is contained in Table 2.

Monetary Policy and the 1991 Budget

The ratios shown in Table 2 can be used as benchmarks against which the Government projections for the primary fiscal balance (in Table 1) can be assessed in terms of their potential impact on the future public debt position. They demonstrate that the projected primary balance outcomes are sustainable even under conservative assumptions about

⁷ The concentration here on stabilisation of the net debt:GDP ratio does not imply that this is necessarily an optimal strategy: a lower debt level, for instance, may be preferable. The key point is that an exploding debt level raises serious concerns about the credibility of future monetary policy and therefore any medium-term fiscal policy must at least meet these sustainability criteria to be considered reasonable.

TABLE 1¹

PRIMARY BALANCE AND NET PUBLIC DEBT : GDP RATIO

Fiscal Year	Primary Balance \$m.	Primary Balance % of GDP	Net Public Debt \$bn²	Net Public Debt % of GDP
1989/90	3,141	4.5	36.2	51.6
1990/91 (e)	1,181 ³	1.6	34.3	47.9
1991/92 (p)	2,173	3.0	35.4 ⁴	48.2
1992/93 (p)	3,160	4.1	35.6 ⁴	46.7
1993/94 (p)	3,250	4.1	36.2 ⁴	45.3

- 1 Projections/estimates of nominal GDP, the primary balance, and net public debt are based on Treasury's Budget Projections.
- 2 Net Debt is equal to gross public debt less the Government's financial assets.
- 3 Excludes revenue from the sale of forest cutting rights (\$1,054 million).
- 4 Debt projections exclude any impacts from asset sales and from changes in reserves and debt levels related to exchange rate movements over the period.

TABLE 2

PRIMARY SURPLUSES (AS A % OF GDP) REQUIRED TO STABILISE THE NET PUBLIC DEBT RATIO AT THE 1991 LEVEL

Real Interest Rate (%)	Real Growth Rate (%)				
	0.5	1.0	1.5	2.0	2.5
8	+3.6	+3.4	+3.1	+2.9	+2.6
7	+3.1	+2.9	+2.6	+2.4	+2.2
6	+2.6	+2.4	+2.2	+1.9	+1.7
5	+2.2	+1.9	+1.7	+1.4	+1.2

the real growth rate and the real interest rate. Hence the current fiscal stance should be considered as fundamentally consistent with the price stability objective and the wider monetary policy framework over the medium term.

In the shorter term, when analysing the impact of the 1991 Budget the Bank has also had to take account of the other impacts (described in this article) of fiscal policy on monetary conditions. In particular, the contraction of household disposable incomes consequent on the Budget, and the need for households to increase savings to cater for future retirement, health and education needs, will have a downwards impact on domestic consumption. In this environment, constraints on profit margins and wage growth are likely to increase. These constraints should place downwards pressure on inflation relative to that previously forecast.

This improved short-term outlook for underlying inflation following the Budget has, as noted, been accompanied by an improved long-term outlook for inflation based on increased confidence that monetary policy would not be diverted from its pursuit of price stability by concerns about fiscal sustainability. Because of these overall improvements in the inflation outlook, the Bank indicated in public statements that monetary conditions would be allowed to ease following the Budget.

