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Interactions and Coordination

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open monetary union seems as important as introducing nominal inertia,

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Comment

Fernando Ballabriga

The chapter in a nutshell

The chapter argues that a set of propositions derived from the basic Fiscal Theory of the Price Level (FTPL) and relevant for the Economic and Monetary Union (EMU) carry through to a more realistic setting characterised by nominal inertia and non-Ricardian consumers. In particular, an equilibrium outcome is possible where fiscal policy is important for the determination of prices and inflation, severely constraining the potential for an active single monetary policy (Proposition 2). Moreover, a single country can place the monetary union in this equilibrium (proposition 3). But, as it turns out, a fiscal policy that reacts weakly to debt, and even responds to cyclical fluctuations, is sufficient to avoid such an 'undesirable' equilibrium (Proposition 4). In this sense, the Stability and Growth Pact (SGP) is asking too much. Therefore, the only way to view the FTPL as a potential rationale for it is to argue that the stringent SGP is required to enhance credibility in order to generate the expectations of fiscal discipline needed to avoid the fiscal dominance equilibrium. This is costly, however, because a more flexible solution to this credibility problem could deliver both fiscal solvency and potential for discretionary fiscal policy stabilisation. The last part of the chapter discusses the delegation of the stabilisation job to an external national agency as one such possible solution to the credibility problem. It also argues forcefully in favour of indirect taxation as an effective stabilisation instrument.

I will organise my discussion as follows. First, I will make what could be labelled as 'insider comments', taking the perspective of a user of the FTPL theory. Then I will make some 'outsider comments', taking the sceptical perspective of those who think that the theory is irrelevant. I will then make some concluding remarks.

Insider comments

A main focus of the chapter is the robustness of the basic implications of the FTPL when a more realistic theoretical setting is considered. By more realistic the author basically means the introduction of nominal inertia. But the resulting framework might still be too stylised. In particular, the discussion in this chapter takes place in an closed monetary union, as is usually the case in most of the FTPL literature. However, in terms of

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and the question of whether the basic FTPL propositions survive this additional dose of realism is certainly relevant. Some initial work in this direction in which I have participated (Andrés, Ballabriga and Vallès, 2002) suggests that the closed-economy fiscal and monetary dominance regimes have their counterparts in an open monetary union framework. However, many other policy combinations generate unique stable outcomes once we open the union. In particular, conditioning on Ricardian fiscal policy and passive monetary policy in the external country, even if fiscal policy is non-Ricardian in one of the union members, monetary policy can be active (in contrast with Proposition 2) in the monetary union without generating inflation/deflation spirals, and

without exacerbating the inflation process as much as it does in the fiscal

dominance regime. Although this is an initial exploratory work, it sug-

gests that the analysis becomes richer and more complex once the union

is open, and that further research is warranted. My second comment focusses on Proposition 3, which states that just one country can place the union in a non-Ricardian regime. Taken at face value, the proposition implies that a single small country (e.g. Luxembourg) could determine the price level of the union. This is a very counter-intuitive result.

As it turns out, the result depends on the restrictions imposed on the lending/borrowing activity across union governments. Under perfect risksharing, governments could lend/borrow indefinitely to/from each other. In such a case, the only relevant intertemporal government present-value condition would be the aggregate condition for all the governments of the monetary union; it would not matter that a single specific government looked insolvent as long as some other government was accumulating enough lending resources to offset that behaviour, so that aggregate solvency was guaranteed. Under this assumption, the size of the insolvent government matters, since a large government with large outstanding liabilities would generate in the fiscal dominance regime more price instability than a small government with a relatively small stock of public debt. However, the assumption of perfect risk-sharing is unrealistic because no government would engage in indefinite lending. Thus, imperfect risk-sharing seems the most appropriate working assumption, and in particular the assumption that each government in the union must guarantee its own solvency. But when this dose of realism is introduced, the puzzling result stated in Proposition 3 arises. How to solve this puzzle remains an open and important question in order to enhance the credibility of the FTPL.

Outsider comments

A distinguishing feature of the FTPL is the assumption that fiscal and monetary policies are autonomous. That is, each policy authority sets its instrument according to its own targets and independently of each other. In such a framework, the monetary authority is not forced to provide seigniorage if the fiscal authority lacks discipline, and only general equilibrium interactions between the two policies are possible.

This assumption is critical and very controversial. In fact, when fiscal stress creates the perception of government insolvency, the assumption may be seen as untenable. Under pressure, the central bank may be expected to jump in and provide seigniorage financing or bail-out support. When this happens we are back in the world of the unpleasant monetarist arithmetic (Sargent and Wallace, 1981), where one of the policy authorities is expected to act in order to re-establish solvency.

A second sceptical comment regarding the FTPL concerns its apparent lack of empirical relevance. It is true that empirical discrimination between fiscal and monetary dominance is not a straightforward matter because the long-run solvency condition holds in both regimes. They are in this sense observationally equivalent. This does not mean, however, that discrimination is not possible. It just means that we face a more difficult econometric identification problem, as pointed out in Woodford (2000).

This caveat notwithstanding, the available evidence tends to point against the FTPL. Thus, Bohn (1998) and Canzoneri, Cumby and Diba (2001a) for the United States, and Ballabriga and Martinez-Mongay (2002; this volume, chapter 8) for the EU members find that monetary dominance seems to be the prevalent regime in those economies. In particular, the results for the EU suggest that during the period 1979–1998 government's response to debt accumulation has been enough to guarantee solvency, and so the prevalence of a Ricardian fiscal policy. Besides, monetary policy looks clearly active during the same sample period.

Where are we left?

What seems to remain true is that fiscal solvency is compatible with a weak reaction to debt and with a stabilisation activity. This is so no matter how one views the potential consequences of government insolvency – that is, no matter if one supports the FTPL and/or if the FTPL turns out to be empirically irrelevant. We all agree that those consequences are undesirable anyway.

Thus, the credibility problem posed by the chapter remains relevant in any case. And so does the discussion of its solution in section 3.3. In this respect, I want to add two final remarks. First, the chapter is probably too optimistic regarding the scope for discretionary fiscal actions. The comments about the implications of the intertemporal consumer paradigm for the effectiveness of fiscal policy are interesting, but I think it is widely accepted that we know much less about fiscal policy effects than about monetary policy effects. This higher uncertainty increases the reluctance to rely on discretionary fiscal policy for stabilisation. Second, the potential coordination problems associated with the external agency are probably underestimated.

Overall, Wren-Lewis does a good and legitimate job in the search for an *a posteriori* economic rationalisation of the SGP. Its result suggests that the SGP may be a second best only justified by a credibility problem, and a solution of this credibility problem is recommended in order to activate a potentially useful stabilisation tool. In my view, issues regarding the scope for fiscal policy stabilisation and the design of the external stabilisation agency remain open. However, the SGP stringency problem is there, and deserves further attention to reduce to a minimum the risk that economic forces (e.g. fluctuations generated by asymmetric shocks or depression scenarios) could eventually endanger the Pact itself.

The compatibility between monetary and fiscal policies in EMU: a perspective from the Fiscal Theory of the Price Level

Simon Wren-Lewis

3.1 Introduction

It has been suggested that the recent literature on the Fiscal Theory of the Price Level (FTPL) provides both a potential rationalisation for and a critique of the Stability and Growth Pact of EMU. However this literature has, in the most part, worked with very simple and stylised models, in which the role of the central bank in controlling inflation is relatively trivial.

Section 3.2 examines some recent work which has attempted to examine the FTPL in models that allow for nominal inertia. We examine four propositions from the FTPL literature of particular relevance for fiscal policy under EMU, and discuss whether they still hold in models that allow for nominal rigidities.

One of these propositions, which passes the robustness test, is that fiscal actions consistent with an active monetary policy do not preclude either an active or passive fiscal stabilisation role. Governments could in principle pursue policy rules which both ensure long-run solvency and respond to excess demand or inflation. Theory suggests that the effectiveness of fiscal policy in influencing demand is likely to vary significantly across different fiscal instruments, but that some could play a very useful stabilisation role. The key issue is whether a combination of debt stabilisation and fiscal demand management is politically credible. Section 3.3 suggests that these credibility difficulties might be greatly reduced by giving the fiscal stabilisation role to an autonomous agency. It examines some issues that might arise for such a fiscal stabilisation authority. The final section provides a summary of the main findings.

I am grateful to Mike Artis, Fernando Ballabriga, Willem Buiter, Marco Buti, Behzad Diba, and particularly Campbell Leith for discussions and comments. Responsibility is mine alone.

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3.2 The Fiscal Theory of the Price Level

3.2.1 The FTPL: four propositions

In the last five years or so, a literature has developed that appears to be highly relevant to fiscal policy under EMU. The FTPL is particularly associated with papers by Woodford (e.g. 1994) and Sims (e.g. 1994), although it was anticipated by earlier contributions such as Leeper (1991). The theory states, using terms that can be made precise, that the pursuit of active inflation control by a monetary authority puts certain constraints on fiscal policy. If the fiscal authorities do not meet these constraints, then an equilibrium is only possible in which fiscal policy, rather than monetary policy, determines the price level.

A number of papers have explicitly examined the extent to which the Stability and Growth Pact (SGP) can be seen as a means of avoiding this central banker's nightmare (e.g. Sims, 1999; Canzoneri and Diba, 2001). However, the impact of the FTPL on the policy debate may have been muted by two considerations. First, the theory itself has been strongly criticised by some on theoretical grounds, for reasons discussed below. Second, the assumptions usually employed in FTPL models are highly stylised. In particular, consumers are normally Ricardian in the sense that intertemporal reallocations of taxation would have no impact on spending, and prices are normally completely flexible, so no Keynesiantype business cycles can occur.

In this chapter I want to draw on some of my own recent research with Campbell Leith (Leith and Wren-Lewis, 2000, 2001), as well as those of others, to explore this second issue. I will suggest that many of the key propositions of the FTPL hold good within more realistic models involving nominal inertia and non-Ricardian consumers, while in other cases modifications to the theory are themselves interesting. This will allow us to draw out some propositions which are of particular relevance to the SGP.

Proposition 1 A stable equilibrium may exist where prices move to ensure that the government's intertemporal budget constraint is satisfied.

If we ignore money, the government budget constraint can be written as

$$\Delta w_t = (r_t + \lambda (E[\pi_t] - \pi_t)) w_{t-1} - s_t \tag{1}$$

where w are total government liabilities (bonds), r is the suitably defined real interest rate, π is inflation, and s is the real primary government surplus. Government debt may be indexed ($\lambda = 0$), nominal ($\lambda = 1$) or some combination of the two. Thus if all debt is nominal, the term in

expected inflation plus the real interest rate becomes the nominal interest rate on bonds, and the term in actual inflation is the inflation tax.

If we assume that, because all government debt is held voluntarily, we can rule out Ponzi games, then

$$\lim_{T \to \infty} \left[\prod_{j=0}^{T-t} \frac{1}{1 + r_{t+j}} \right] w_T = 0 \tag{2}$$

Along a perfect foresight path we can ignore expectations errors, so the term in λ disappears, allowing us to write the current value of liabilities as the expected present value (discounted by r) of all future government surpluses.

$$w_{t-1} = E\left(\sum_{i=0}^{\infty} \left[\prod_{j=0}^{i} \frac{1}{1 + r_{t+j}} \right] s_{t+i} \right)$$
 (3)

This equation essentially says that, if debt is to be voluntarily held, then it must at some stage be repaid. Woodford uses this solvency condition to distinguish two regimes: a Ricardian and a non-Ricardian. In the Ricardian regime, the fiscal authorities ensure that either their spending or taxes respond to their debt sufficiently for intertemporal insolvency to be ensured for any set of prices. In this regime, monetary policy determines prices in the normal way.

In the non-Ricardian regime, the fiscal authorities do not act to ensure solvency. In this situation, it was traditionally assumed that either the model would be unstable, or the authorities would be forced to renege on their debt. Instead, the FTPL suggests that an equilibrium is possible where the price level moves to ensure the government's intertemporal budget constraint is satisfied. If s and r are exogenous processes, then (3) determines the real value of total liabilities. If some government debt is nominal, then this nominal value is predetermined, so equation (3) determines the price level. Note that this is only possible if some government debt is not indexed ($\lambda > 0$). If all debt were indexed, but real interest rates remained exogenous, then a non-Ricardian equilibrium would not be feasible.

This regime is called non-Ricardian because Ricardian equivalence no longer holds. Implicit in the Ricardian equivalence story was that any tax cut would be followed by subsequent tax rises, that at least stabilised the government's debt stock. In the non-Ricardian regime this does not happen. As a result, government debt is indeed net wealth, even though the rate at which consumers discount future labour income is identical to the interest rate paid on government debt.

As Woodford (2000) and others note, the FTPL is different from the argument sometimes referred to as 'fiscal dominance', where inflation is caused by the monetary authorities issuing money to finance a large budget deficit. As the equations above illustrate, the FTPL can occur in a model without money! These equations also suggest that the logic of the FTPL can operate in a wide class of macromodels, including models without rational expectations. This is demonstrated in Woodford (1998) and Leith, Warren and Wren-Lewis (2002), although in the latter case it does appear that if inflation is backward-looking the stability of the Ricardian-type regime may be more problematic.

Adding money does not fundamentally change this logic. We simply need to add seigniorage revenues to the primary surplus. The extent to which this gives the monetary authorities some minor leverage over the price level depends in part on the way money enters into the utility function.

A crucial assumption in the argument above was that the real interest rate was an exogenous process (most simply, a constant). In most accounts of the FTPL this is the case. Leith and Wren-Lewis (2000) generalise the typical FTPL model in two ways. First, consumers discount their labour income at a higher rate than the rate of interest, so Ricardian equivalence would no longer hold even in the Ricardian regime. (They use a version of the model of perpetual youth introduced by Blanchard and Yaari.) Second, nominal inertia is introduced via Calvo contracts. While both generalisations arguably add realism, they also break the clear dichotomy between fiscal and monetary policy in the FTPL formulation.¹ To make the analysis tractable, policy is assumed to follow simple rules. Taxation or government spending responds in a linear fashion to excess debt, and monetary policy moves the real interest rate in response to excess inflation. We will describe this monetary policy rule as a simplified Taylor rule, and the fiscal policy rule as 'fiscal feedback' (which could be zero).

It turns out that there remain two distinct stable policy regimes in this model. In one, fiscal policy reacts sufficiently strongly to government debt that monetary policy can be active, in the sense of Leeper.² In the other, fiscal policy does not itself ensure solvency, but this is achieved by movements in prices and/or inflation. This second regime is similar to a non-Ricardian regime. In particular, it is only viable if the monetary authorities act appropriately – in this case they have to act 'passively', by raising nominal interest rates by less than any inflation disequilibrium.³

One important and interesting difference between this stable, passive monetary policy regime and the non-Ricardian regime is that the former can exist even when all government debt is indexed. Recall that in the non-Ricardian regime, the intertemporal government budget constraint is balanced by prices moving to deflate nominal debt by the required amount. If debt were indexed ($\lambda=0$ in equation 1), this could not happen. However if nominal inertia is present, then real interest rates become endogenous. Even if all debt is indexed, real interest rates can still move to ensure that the intertemporal budget constraint holds. In fact, as Leith and Wren-Lewis (2001) show, the key stability condition is independent of the proportion of government debt that is indexed. The proportion of indexed debt matters for the dynamic path of inflation following any shock. In general, more nominal debt decreases initial price variability, as Woodford (1998) also notes.

The FTPL literature has been strongly criticised by some; see, in particular, Buiter (1997) and McCallum (1997). For a response, see Woodford (1998, 2000). Some of these criticisms appear specific to the highly stylised models that first examined the FTPL, and would not apply to more general models which allow for nominal inertia and finite lives. (Indeed, Leith, Warren and Wren-Lewis (2002) show that FTPL-type results can arise in a model that is entirely backward-looking.) One important criticism that is more general is that governments that do not respond to excess debt may also default, and that the possibility of default may lead the market to discount the debt. However, to the extent that our main focus here is on investigating the conditions on fiscal policy that are required to ensure that monetary policy can be active (i.e. we are in a Ricardian-type regime), this issue need not concern us directly.

Proposition 2 In one regime, monetary policy determines the price level, while in the other, fiscal policy determines the price level.

In the non-Ricardian regime, prices jump to the level that ensures the government's intertemporal budget constraint holds. In this way, fiscal policy, rather than monetary policy, determines the price level. Monetary policy may have some influence through seigniorage.

It is important to note that the monetary authorities still control expected inflation in the non-Ricardian regime. Suppose, for example, they operate a fixed nominal interest rate target. As real interest rates are normally exogenous in these models, fixing the nominal rate fixes the expected inflation rate.

Allowing nominal inertia obviously makes the control of expected (and actual) inflation more difficult. If policy follows simple rules, then Leith and Wren-Lewis (2000, 2001) show that both monetary and fiscal policy influence inflation in both regimes. This is illustrated for a closed economy in figure 3.1 (which is an augmented version of figure 3.1 in Leith and Wren-Lewis (2000)). It shows the response of inflation to an

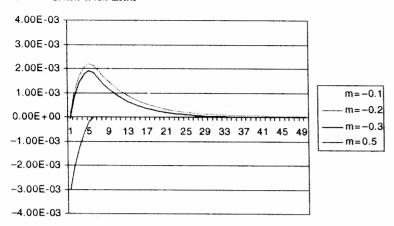


Figure 3.1. Inflation following a consumption shock: different monetary policies.

autocorrelated negative consumption shock⁵ under different monetary and fiscal policy rules, when all debt is indexed. Monetary policy is assumed to move real interest rates in response to deviations of inflation from a target, and m is the coefficient on excess inflation in this simplified Taylor rule. A value of m = 0.5 is often used in the context of Taylor rules, and represents an active policy, using the terminology of Leeper (1991). Figure 3.1 compares inflation under this rule with that under three 'passive' rules, where real interest rates fall in response to excess inflation (and fiscal policy does not react to excess debt). Inflation rises in the passive policy regimes, because the deflationary shock raises debt levels, and real interest rates have to fall to return debt to its steady-state value. Inflation can rise because higher debt raises output once the negative shock to consumption is over. (Here the departure from infinitely lived consumers is critical.) With Calvo contracts, inflation today depends on cumulated expected future excess demand, so in this case short-run inflation can rise even though short-run output falls.

The leverage between inflation and real rates depends on the monetary policy rule, so this rule will influence the path of inflation. This example accords with results in Woodford (1991), who employs Calvo contracts but not Blanchard-Yaari consumers. He shows that the inflationary outcome deteriorates as the response of interest rates to inflation rises, just as they do in figure 3.1.

From the viewpoint of a central banker charged with controlling inflation, the passive monetary policy regime, like the non-Ricardian regime,

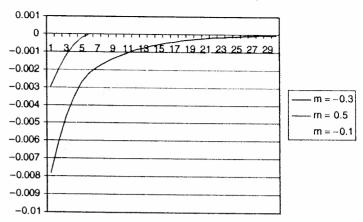


Figure 3.2. Inflation following a government spending shock: different monetary policies.

seems undesirable by construction. Figure 3.1 above confirms this intuition, with a demand shock leading to a more persistent disequilibrium. We get a similar result if we focus on a fiscal shock: in this case an autocorrelated shock to government spending, using the model in Leith and Wren-Lewis (2000) (figure 3.2). This fiscal shock influences inflation in the active regime, because there is no substitution between government and private consumption, so the former feeds straight through into demand. However, the impact is far greater in the two passive regimes. Leith and Wren-Lewis (2001) consider the consequence of initial debt disequilibrium. In this case the contrast between the two regimes is even stronger, partly because fiscal feedback occurs through taxes rather than government spending.

These results suggest that a passive monetary policy regime is likely to be more sensitive to shocks. However, the optimality issue needs to be examined more formally. For example, if the key goal of policy is tax smoothing, then the non-Ricardian regime does have the advantage that tax rates are not changed to ensure solvency! Although this represents an interesting line for research, its relevance to fiscal policy-setting within EMU is limited by the following additional proposition.

Proposition 3 In a monetary union where one government cannot lend indefinitely to others, at most one fiscal authority can act in an insolvent manner.

Some of the literature examining the FTPL within the context of monetary union allows union governments to borrow indefinitely from each

other (e.g. Dupor, 2000), which makes the EMU economy behave in a similar manner to a closed economy i.e. we can aggregate EMU countries' government budget constraints. Although this possibility does not seem intuitively realistic, we have to be precise about why. After all, we are willing to entertain equilibria in which governments ignore their own debt, so why should these governments be concerned who owns this debt? (Private investors are happy with their portfolios in all cases.)

Canzoneri, Cumby and Diba (2001b) argue that we may be able to rule out such equilibria by considering an explicit optimisation problem involving a government objective function, because the government is unlikely to gain utility from owning another government, whereas it does derive utility from spending on its own citizens. This suggests some asymmetry that is not normally present in the FTPL (see also the discussion of the SGP below).

Canzoneri, Cumby and Diba (2001b) show that if we do not allow governments to borrow infinite amounts from each other, then a stable non-Ricardian regime can only occur if just one fiscal authority fails to itself ensure its intertemporal budget constraint holds. If purchasing power parity (PPP) holds, the intuition for this is straightforward. In the non-Ricardian regime, the domestic price level jumps to ensure government solvency. For a given real exchange rate and no nominal exchange rates, this then dictates the price level for the whole union. The price level cannot therefore also ensure fiscal solvency for another government, unless both governments happen to have the same intertemporal fiscal position.

In a world where nominal inertia is present in at least one of the economies, PPP in terms of producer prices cannot hold, so we have to allow the real exchange rate (in terms of producer prices) to move. This would seem to allow two insolvent authorities to determine separate price levels in each country, and hence the real exchange rate. However, the real exchange rate is also tied down by more conventional macroeconomic forces. Leith and Wren-Lewis (2001) show that the proposition of Canzoneri, Cumby and Diba (2001b) continues to hold: only one insolvent fiscal authority is compatible with a (non-Ricardian-type) equilibrium.

Introducing nominal inertia and non-Ricardian consumers does, however, allow a degree of trade-off between fiscal authorities within either a Ricardian or non-Ricardian regime. Figure 3.3, taken from Leith and Wren-Lewis (2001), illustrates this. In this diagram, ϕ_1 is the coefficient on excess debt in a simple feedback rule for fiscal policy, and we measure the difference between this parameter for each country and the steadystate real interest rate on each axis. The parameter m is the coefficient on excess inflation in the simplified Taylor rule for the central bank; if m > 0,

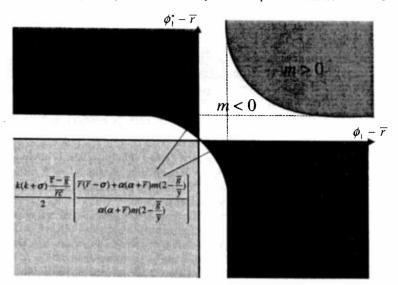


Figure 3.3. Compatibility between monetary and fiscal policy.

policy is active in the sense of Leeper (1991). Where a marked area has a condition on m over it, this represents a condition on monetary policy for stability to be possible in this area of the parameter space.

Note first that if fiscal feedback is strong enough, and monetary policy is suitably active, then we have one stable regime, represented in the north-east quadrant. This is the equivalent of a Ricardian regime. The fiscal feedback parameter in each country has to be greater than the real interest rate, for reasons discussed below. The fact that the shaded region is not rectangular shows that there is some scope for one country to compensate for lack of feedback in the other; however, we show in the paper that this scope is very limited in practice. The shaded regions to the north-west and south-east represent non-Ricardian-type regimes, where an inactive monetary policy (i.e. negative m) compensates for lack of fiscal feedback in one country. If there is no fiscal feedback in either country, then a stable equilibrium is not possible.

Although the model in Leith and Wren-Lewis (2001) only involves two economies, the result clearly generalises: the monetary authorities can 'compensate' for lack of fiscal feedback in only one country. The model also involves two symmetric countries (i.e. of equal size), and it would be interesting to explore whether these results are robust with respect to size or other differences between economies.

Proposition 4 Control of government debt or deficits to ensure we avoid the FTPL can be 'weak' or 'slow'.

What do governments have to do to allow monetary policy to perform its conventional role? Clearly they have to move a fiscal policy instrument in response to disequilibrium in government debt, but how quickly does this have to be done? Is there any relationship between these requirements and the Stability and Growth Pact?

As Sims (1997) and others show, in the most basic models the government simply has to adjust spending or taxation to debt disequilibrium by an amount greater than the real interest rate. The intuition is obvious from thinking about what generates a debt spiral in the first place (i.e. the condition that the budget constraint itself would be stable), but it implies that adjustment can either be infrequent or slow.

Leith and Wren-Lewis (2001) show that, in the context of non-Ricardian consumers, the fiscal requirements are tougher. (How much tougher is indicated in figure 3.3, where k is the probability of death, σ the rate of time preference, and the other variables represent steady-state values of taxes, government spending, output and real interest rates. Note the expression is zero if k=0.) Again the intuition is straightforward. Non-Ricardian consumers will react to any positive debt disequilibrium by spending more. This will add to inflationary pressures, and the (active) monetary authorities will, as a result, raise real interest rates. This will exacerbate the underlying debt spiral, so taxes/spending will have to change by more to prevent it. However, as Leith and Wren-Lewis (2001) show, for realistic parameter values fiscal feedback can still be fairly slow.

We should add a qualification to this result. Even though consumers are non-Ricardian in Leith and Wren-Lewis (2000, 2001), the extent to which they react to changes in debt is relatively muted. As has been observed by others (e.g. Faruqee, Laxton and Symansky, 1997), the extent to which Blanchard-Yaari consumers lead to departures from Ricardian equivalence is second order. If there were other processes in the economy which led to larger demand effects from debt disequilibrium, then this would increase the required speed of fiscal feedback.⁹

Although the extent of fiscal feedback might not have to be large to ensure we are in a regime where monetary policy can be active, it might still be the case that rapid fiscal feedback would help stabilise the economy more rapidly following shocks. This issue is investigated using simulations in Leith and Wren-Lewis (2000) for a closed economy, and in Leith and Wren-Lewis (2002) for a two-country monetary union. They find that rapid fiscal feedback to stabilise debt does not appear to confer any general advantages in terms of model stability, and in some cases can destabilise the economy compared to weaker feedback.

It therefore appears as if the requirements on the fiscal authorities in EMU implied by the FTPL can be relatively weak. The main counterargument concerns credibility. One feature of the FTPL literature is that it is expectations about the fiscal authority's behaviour that are critical. We do not have to wait for the fiscal authorities to ignore debt disequilibrium to be in a FTPL world: expectations that they will behave in this way are enough. One legitimate point of view might be that to maximise credibility, reaction to debt disequilibrium has to be much more rapid than formally required.

3.2.2 Does the SGP follow from the FTPL?

We have noted above that in models which allow for nominal inertia and finite lives, something similar to a non-Ricardian regime appears to be a possible equilibrium. As we might expect, in these more complex models it is no longer possible to say that only fiscal policy determines the price level (or that monetary policy determines expected inflation) in the non-Ricardian-type regime. However, it is the case that the potential for an active monetary policy is severely constrained in such regimes.

The possibility of such regimes raises a number of interesting issues, but for many - especially central bankers - they may simply represent situations to avoid at all costs. Can the SGP been seen in this light?¹⁰ In this respect Canzoneri and Diba (2001) raise an obvious question why has the Federal Reserve, for example, never seen the need to request a similar arrangement? The answer probably lies in Proposition 3 above (demonstrated in Canzoneri, Cumby and Diba (2001b) and confirmed in Leith and Wren-Lewis (2001)), which argues that only one fiscal authority within EMU can ignore solvency, as long as EMU governments are unwilling to contemplate Ponzi games with each other. In a situation of just one fiscal authority, the monetary authority can perhaps rely on the fiscal authority avoiding a non-Ricardian regime. When there are many fiscal authorities, they and the monetary authority cannot collectively trust that one among their ranks will not fall victim to political pressures, thereby putting the whole union into permanent instability or a non-Ricardian-type regime. 11

Does the FTPL therefore provide an intellectual underpinning for the SGP? There are at least three aspects to the SGP which appear to be at odds with this interpretation. The first is symmetry, the second the use of ceilings, and the third flexibility.

To avoid the FTPL regime, fiscal feedback has to respond to both positive and negative debt disequilibrium, while the SGP appears only concerned about the former. One explanation for this is that a reverse debt spiral, where government debt keeps declining, is not credible politically, and so there is no need to write rules to prevent it happening. If debt ever did look like falling cumulatively below equilibrium levels, politicians would be only too happy to adjust spending or taxes to prevent this happening. As we noted above, a similar argument could be used to rule out an equilibrium where one government borrows indefinitely from another.

The second aspect of the SGP that appears not to fit with the logic implied by the FTPL is the focus on an upper bound for debt or deficits. Although specifying an upper bound for debt will constrain governments to some extent, Woodford (2000) argues that it may still be possible to generate 'local non-Ricardian' equilibria. In these equilibria, 'moderate' exogenous variations in the primary surplus that do not violate the upper limit for debt may still generate unwelcome movements in prices.

The SGP focusses on an upper limit for the deficit rather than the stock of debt. As Canzoneri, Cumby and Diba (2001b) show, limits on deficits similiar to those in the SGP can be recast in the form of inequalities not unlike the rules on debt of the type often examined in the FTPL literature. A rule that constrains the primary surplus plus debt interest can be transposed into a rule relating the primary surplus to the debt stock, where the rate of interest determines the speed of fiscal feedback. However, because this rule is an inequality, the possibility of local non-Ricardian equilibria remains.¹²

The focus on deficits rather than debt contributes to the third inconsistency between the SGP and the FTPL, and that is the inflexibility of the former compared to the apparent requirements of the latter. Proposition 4 above notes that, in principle at least, the correction of excess debt can be pretty slow. In realistic models, with nominal inertia and finite lives, the feedback from debt to either taxes or government spending only has to be slightly more rapid than the steady-state real interest rate. In addition, as long as this correction is going on, then fiscal policy can be allowed to do other things as well, such as responding – actively or passively – to the economic cycle (see below).

In contrast, the SGP seems altogether more inflexible. Most commentators have discussed the danger that the automatic stabilisers may be overridden in a recession. This problem could be overcome by focussing on a cyclically adjusted budget deficit. However, I argue below that discretionary fiscal action may be a more useful counter-cyclical tool, and this would be discouraged even if the SGP was reformulated in terms of cyclically adjusted deficits. In addition, there may be many other situations beside the business cycle where the SGP may be much more constraining than the FTPL requires. For example, a government may

quite reasonably want to run a series of large deficits if it is undertaking an unusually large amount of capital investment. If these investments are expected to yield a return (i.e. some benefit to citizens) over a generation, then it makes sense to allow debt to increase substantially while the investment is made, and subsequently to return the debt to its initial level only very gradually. Such a path might be quite consistent with avoiding a non-Ricardian-type regime, but it could fall foul of the SGP. More generally, any autocorrelated shock to the budget deficit can be accommodated under the FTPL, as long as some fiscal feedback occurs. Under the SGP, more drastic action would be required.

Of course, the SGP might be based on a quite different framework from the FTPL. However, there is a counter-argument that arises naturally from the FTPL perspective. Non-Ricardian regimes arise because governments are not expected to act to ensure their own solvency. Expectations about government actions are critical. It could be argued that slow or infrequent debt correction is not credible. In the next section we examine one possible way of pursuing fiscal stabilisation that will not compromise long-run solvency.

3.3 Fiscal policy and stabilisation

In the simple models that introduced the FTPL, once we ensure we are in a Ricardian regime, any link between fiscal policy and inflation disappears. In more realistic models, with non-Ricardian consumers and nominal inertia, fiscal actions can influence demand and inflation even if we are in a Ricardian-type regime. Does this influence represent a problem for policy-makers, or a potential opportunity?

The FTPL literature emphasises the importance of ensuring fiscal solvency through fiscal actions, assuming we want to avoid non-Ricardian-type regimes. However, the discussion above suggests that there is no necessary conflict between ensuring solvency and either passive or active demand stabilisation. To ensure solvency we need relatively slow but steady, or larger but infrequent, reactions of policy to debt (or deficit) levels. This is potentially quite compatible with allowing fiscal policy to do other things in the short run, such as responding to excess demand. For example, a fiscal rule that responded to 'excess debt' but also to excess inflation would be just as compatible with an active monetary policy as one that just targeted debt (see Wren-Lewis (2000) for an example).

For this reason, the FTPL suggests that the SGP could have been framed in terms of cyclically adjusted deficits, allowing automatic stabilisers to work freely. 13 However, it would be a mistake to limit fiscal policy's role simply to automatic stabilisers, for two reasons. First, these

stabilisers may be becoming less effective. Second, discretionary fiscal action remains in principle an effective tool, and indeed the only instrument currently available, to deal with asymmetric shocks within a monetary union.

3.3.1 The effectiveness of fiscal policy

The intertemporal consumer makes the impact of fiscal policy problematic in two ways. First, the income effects of temporary tax cuts are likely to be smoothed away. This is true even if we allow for finite lives and rule out Barro-type bequests: for any sensible value of the probability of death with the Blanchard-Yaari framework, deviations from Ricardian equivalence are second order. Second, for similar reasons, the Keynesian multiplier largely disappears.

If some consumers are credit-constrained, then their personal marginal propensity to consume out of temporary changes in income will approach unity. However, it is difficult to believe that in advanced industrialised countries today more than a minority of consumers are constrained in this way. The work I have done with colleagues on the UK economy suggests that the proportion of income going to consumers who are credit-constrained may have been around 10–15 per cent in the 1990s, although the figure was rather higher before the 1980s (Darby et al., 1994). Lauch a proportion modifies but does not fundamentally change the propositions about tax smoothing and the multiplier stated earlier (Wren-Lewis, 2000). However, it does mean that because fiscal transfers tend to go to groups who are also particularly likely to be credit-constrained, these transfers may have a relatively large demand impact, a point we discuss further below.

If intertemporal consumers have destroyed the Keynesian multiplier, they have moved it towards unity, not zero. To argue that changes in government spending on goods and services will have no demand effect we have to assume that there is perfect substitution with private consumption, a proposition that seems doubtful both empirically and in theory. If substitution between public and private consumption is zero or small, then, in simple models, government spending becomes a potentially useful demand management tool.

More generally, once we allow for the impact that specific types of fiscal action can have on relative prices (either across goods or across time), then the number of policies that can have potentially large demand impacts grows. For example, if we make the reasonable assumption that changes in sales taxes (e.g. VAT) are passed on to consumers, then a temporary change in this tax will encourage consumers either to delay

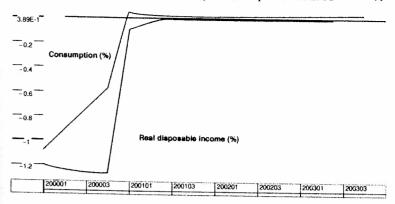


Figure 3.4. One-year indirect tax rise worth 1 per cent on the CPI using COMPACT.

or bring forward consumption. The scale of the impact will be directly related to the sensitivity of consumption to interest rate changes i.e. to the potency of monetary policy! For example, figure 3.4, taken from Wren-Lewis (2000), shows the impact of a rise in VAT in the UK econometric model COMPACT. In this model a similar cut in income taxes has little effect, because Blanchard-Yaari consumers are near-Ricardian and the proportion of credit-constrained consumers is small.

In this model, expectations are rational, so the fact that the VAT increase is temporary is known. Consumers delay purchases as a result. In COMPACT this is an intertemporal reallocation of spending brought about by a change to the real interest rate facing consumers, and not an income effect. The leverage that temporary changes in tax incentives have on investment spending may be even greater.

This discussion suggests that it is largely pointless to talk about the effectiveness of fiscal policy, without specifying what fiscal policy instrument we are talking about. The tendency to discuss the impact of all fiscal instruments as if they were similar is a hangover from the Keynesian consumption function, where income effects did most of the work. As modern macroeconomic theory has played down the income effects of fiscal actions, it has also tended to place greater emphasis on the impact of changes in relative prices. Unless taxes really are lump-sum, then they invariably do change relative prices. If we choose the right instruments, then fiscal policy can impact on aggregate demand in a significant way.

The same point, however, means that some automatic stabilisers may not be as effective as traditionally assumed. If these stabilisers work through income tax (i.e. people pay less tax in a recession because of tax allowances), then they may have little impact because consumers are income smoothing anyway. However, stabilisers that work through transfers to groups such as the poor and unemployed are likely to be much more potent, because these groups are likely to be highly credit-constrained. If unemployment and income support provision have decreased in recent years, then so may the importance of automatic stabilisers. (For some estimates suggesting that stabilisers may be relatively ineffective with EMU, see Barrell and Dury (2001).)

Unfortunately the potential for different fiscal instruments to have different aggregate demand effects has been largely unexplored in empirical studies. As Blanchard and Perotti (1999) note, reduced-form studies have 'typically concentrated either on the effects of some summary statistic of fiscal policy such as the cyclically adjusted deficit, or on spending, or on taxes. Most theories do not suggest however that the effects of fiscal policy on activity can be summarised by a single measure . . .'. In this area, empirical analysis needs to catch up with theory.

One final implication of the diversity of fiscal impacts is that balanced budget changes in fiscal policy may be almost as effective in influencing demand as bond-financed policy, if the residual method of balancing the budget is changes to income tax allowances.¹⁷ The impact of a temporary tax switch from sales to income taxes may be almost as great as a bond-financed cut in sales taxes, if consumers largely smooth temporary income tax changes.

The reason why the effectiveness of fiscal policy is important is, of course, the vulnerability of monetary unions to asymmetric shocks. The literature on this issue is large, and space precludes any survey here. Suffice it to say that a good deal of evidence suggests that active fiscal stabilisation by national governments could significantly mitigate the impact of asymmetric shocks (e.g. Hughes Hallet and Vines, 1993; Driver and Wren-Lewis, 1999).

Many economists may buy the idea that some types of fiscal policy may be effective in a demand stabilisation role, and yet they may still not want governments to contemplate discretionary counter-cyclical policy. I want to discuss two reasons why this might be the case, and ask whether institutional reform can overcome these objections.

3.3.2 Credibility and institutional change

In the basic Barro-Gordon-type model, inflation bias arises in a world where governments directly control inflation; it is not said how they control inflation. If fiscal policy can influence demand and inflation, then using it in a discretionary manner is subject to the same time-inconsistency

problem as monetary policy. However, I suspect that concern over the use of counter-cyclical fiscal policy stems mainly from another source: a conflict with the long-term solvency of government debt.

As we noted above, ensuring solvency is consistent with a quite weak feedback rule from excess government debt to spending or taxation, and in theory this rule could be augmented with additional terms that performed a stabilisation role. The concern is that, in the absence of a formal enforceable rule, any stabilisation role might allow policy-makers to neglect the solvency issue. In short, stabilisation compromises solvency.

The FTPL literature is based, of course, around the possibility that governments might neglect solvency altogether. The reasons why this might be so are generally not spelt out in detail, but often political factors are alluded to. To put it far too simply, raising taxes or cutting spending to stabilise debt may be politically unpopular, at least amongst the interest groups that matter politically.

In a context in which ensuring solvency is politically fragile, giving policy-makers another macroeconomic objective for fiscal policy may increase this fragility. This possibility is increased because the political impact of the stabilisation role is greater than the political points scored for maintaining solvency. If the direction implied for fiscal policy by stabilisation and solvency conflict, then the solvency role might be neglected sufficiently to allow a non-Ricardian-type regime. This possibility is also reinforced by the fact that actions to ensure solvency can be delayed, whereas stabilisation concerns generally require immediate action.¹⁸

We therefore have the following impasse. Fiscal policy represents a potentially diverse and rich means of tackling demand imbalances within the macroeconomy. Automatic stabilisers only utilise a fraction of this potential. In the context of EMU, there is no other means of tackling these imbalances at the national level. Yet there is a widespread view that giving the fiscal authorities a stabilisation objective would compromise their ability to ensure fiscal solvency, with the consequences that have been explored in the FTPL literature.

One solution to problems of this kind is to delegate to an external agency. A number of authors have suggested setting up some kind of 'Fiscal Policy Agency' or committee, for example Wyplosz (2001) and the subsequent report of the Swedish Committee on Stabilisation Policy, and Eichengreen, Hausmann and von Hagen (1999). These proposals (including those made by myself some years ago in Wren-Lewis (1996)) generally involve the agency advising on both stabilisation and long-term solvency. What I want to propose here is more modest: only the stabilisation role would be delegated.

Restricting delegation to short-term stabilisation has a number of attractions. First, it clearly mirrors the delegation already undertaken by many countries for monetary policy. Second, issues about long-term solvency are highly political, as they involve distribution across generations. Third, as I argue below, complete delegation of fiscal stabilisation is possible, but it is much more difficult to take debt stabilisation completely out of the hands of governments. Fourth, separating the stabilisation and solvency roles goes to the heart of avoiding the conflicts faced by governments noted above. ²¹

How might the delegation of the fiscal stabilisation role work? Clearly decisions about the detailed structure of taxation – its microeconomic role – would have to remain with elected governments. Governments would also retain control over the long-run level of all taxation. The new agency would only require temporary control over a limited number of tax instruments, instruments chosen so that they had maximum leverage over aspects of the macroeconomy.

The reason why the agency would need to change tax instruments for only a temporary period is straightforward. Cyclical imbalances are, by definition, self-correcting eventually (ignoring any hysteresis effects), and fiscal action is simply designed to speed that correction. The parallel with monetary policy is quite close. If governments set the inflation target for a central banker in a small open economy, then central bankers only have temporary control over nominal interest rates: the long-run nominal rate is determined by overseas real rates and the inflation target.

What fiscal instruments might be involved? The discussion above suggests that income tax allowances would not be a good candidate, because their demand impact may be small. Temporary changes in sales taxes, by contrast, could be quite an effective way of inducing short-term changes in demand. However, the impact of temporary tax changes in delaying (or bringing forward) spending on investment rather than consumption goods is likely to be even more powerful. In the UK and elsewhere there have been examples where changes to tax rates or allowances have been announced ahead of implementation. Ironically such events have often been regarded as a nuisance in empirical studies, requiring liberal use of dummy variables, but this fact itself suggests that they could instead provide valuable evidence of the effectiveness of an imaginative fiscal stabilisation policy. However, it seems unlikely that any changes in government spending could be delegated to this agency. Although temporary spending changes could be effective in influencing demand if there was little substitution with private spending, implementation lags are generally long, and the government does not normally have a list of projects that can be turned on or off in the way that tax rates can.²²

The objective of the agency could simply be the stabilisation of national inflation. For a single nation-state this would obviously raise issues of monetary and fiscal policy coordination, the obvious solution to which is to give both sets of instruments to the same agency (Wren-Lewis, 2000). In the context of EMU, there would still be potential advantages in coordination between national fiscal policy and union-wide monetary policy. For example, the inflation target for the national fiscal agency would generally be the inflation target for the ECB. It would clearly be unfortunate if a situation arose where all the national fiscal agencies thought that their national inflation rate was going to exceed the inflation target, but the ECB thought aggregate inflation was going to be below target. This coordination could be largely achieved by both agencies being open in publishing their macroeconomic forecasts.

There may also be occasions at which the national agency might not wish to counteract a divergence between national and union inflation, for example when it was believed that a permanent shift in the real exchange rate had occurred. An obvious example might be the consequences of a permanent change in the real oil price, which would be likely to shift the real exchange rate between oil producers and non-producers (Wren-Lewis, 1997).

Although the agency would only make temporary changes in a few selected fiscal instruments, these changes would still have a permanent impact on government debt. There are three possibilities here. First, if we are prepared to believe that most consumers are not credit-constrained and behave in an intertemporal manner, then we could require the fiscal authority to balance its 'own budget', by changing income tax allowances to offset the budgetary impact of any other tax changes it made. If consumers were 'almost Ricardian', then these income tax changes would have little demand impact.

Second, we could require the agency to balance its books over a set time period, rather than year to year. The third and final possibility would be to simply pass over the problem of solvency to the national government. The actions of the stabilisation agency on debt would be just one more shock to the government accounts, and hopefully if the fiscal agency was transparent the government would know a little more about this shock than most. In this respect, fiscal shocks generated by the national fiscal stabilisation agency would be similar to the impact on debt solvency of shocks generated by the ECB every time it changed interest rates.

The existence of this agency does not address the issue of how other EMU countries ensure that the national government acts to ensure its own solvency. As such, it has no bearing on whether the SGP is a useful framework for ensuring that EMU avoids the FTPL. However, it should

not complicate this task. This is straightforward for the first two options discussed above, because the agency is required to be solvent itself, either in each period or within some defined period. However, even in the third case, the fact that the agency is only allowed to implement temporary changes in tax rates should ensure that it could not compromise the national government's commitment to solvency. However, for the agency to be effective, it would require that the SGP ignore the short-term impact the agency's actions had on the budget deficit.

Delegating counter-cyclical fiscal policy to an independent agency avoids some of the objections normally raised against discretionary fiscal policy. As tax changes could only be temporary, the agency would avoid political pressure always to cut and never to raise taxes. Delays in changing taxes due to parliamentary processes would be avoided.²³

To set against this is the removal, to a very limited extent, of democratic control over tax changes. In this regard it is important to note that this bridge has, in an important sense, already been crossed, with the delegation of monetary policy to central banks. As individuals differ widely in terms of their wealth, changes in interest rates have a large and direct financial impact on most of the electorate, which in many cases is at least as great as the impact of changes in tax rates.

3.4 Summary

The Fiscal Theory of the Price Level suggests that, if the fiscal authorities fail to take actions to ensure that their intertemporal budget constraint is satisfied, equilibria are possible where fiscal policy rather than monetary policy determines the price level. In the first half of this chapter we looked at some recent research which generalises the theory to incorporate nominal inertia. Although it is no longer the case in these more general models that only fiscal policy can determine prices, it is still true that an equilibrium is possible in which monetary policy is forced to be passive, because the fiscal authorities do not control the level of their debt sufficiently. We suggest reasons why this situation is one which the ECB, and most EMU governments, might want to avoid. However, the literature also suggests that only slow or weak feedback from excess debt to taxes or spending is required to avoid this outcome. To use this literature as a defence of the SGP therefore requires an additional argument that slow or weak fiscal feedback is not credible.

The second half of the chapter began by arguing that the impact of fiscal policy on output and inflation is likely to vary considerably among different fiscal instruments, and that some instruments may be quite potent in influencing demand. We therefore have the following impasse. Fiscal

policy represents a potentially diverse and rich means to tackling demand imbalances within the macroeconomy. Automatic stabilisers only utilise a fraction of this potential. In the context of EMU, there is no other means currently available of tackling these imbalances at the national level. Yet there is a widespread view that giving the fiscal authorities a stabilisation objective would compromise their ability to ensure fiscal solvency, with the consequences that have been explored in the FTPL literature.

The chapter ended by arguing that this impasse could be overcome by giving the fiscal stabilisation role to an autonomous agency. Unlike some other recent proposals, this agency would deal only with short-term stabilisation and not long-term budget sustainability. We briefly explored how such an agency might operate, and alternative ways in which its cyclical stabilisation role might interact with government measures to ensure solvency.

Notes

- 1. Both extensions nominal inertia and consumers with finite lives are important; the impact of each on particular results is outlined below.
- Both Leeper and Leith and Wren-Lewis use the term active monetary policy
 to mean that the monetary authorities operate a policy rule such that real
 interest rates respond positively to inflation. They use 'active' in relation to
 fiscal policy in different ways.
- Strictly this is only the case when the probability of death approaches zero; the condition is slightly more complex in general, but the essence of the result remains.
- 4. In Leith and Wren-Lewis (2000), all debt is indexed.
- 5. Ceteris paribus, consumption falls by 1 per cent of GDP in period 1, 0.8 per cent in period 2 etc.
- This is emphasised in Leith, Warren and Wren-Lewis (2002), who show that in
 a passive regime where the nominal interest rate is normally pegged, monetary
 policy shocks may have counter-intuitive effects on prices.
- 7. See Woodford (1998). Woodford (2000) examines the possibility of self-fulfilling deflations made possible by the liquidity trap (e.g. Japan?). Here a commitment by the fiscal authorities to take action to satisfy their intertemporal budget constraint may be unhelpful in preventing such deflations. This issue is also discussed in Sims (1999).
- 8. This condition is stronger than that outlined in Canzoneri, Cumby and Diba (2001a) where the fiscal authorities must simply make some attempt to repay any debt interest which is rolled over from previous periods, but this attempt can be arbitrarily small and infrequent. The difference arises since Canzoneri, Cumby and Diba wish to define the conditions under which the economy operates under a Ricardian regime, while Sims (1999) gives conditions under which fiscal policy ensures that the real debt stock is bounded. The finite lives for consumers analysed in Leith and Wren-Lewis (2000, 2001) imply that

- the real debt stock must be constant in equilibrium, so the Sims condition is relevant here.
- The critical degree of fiscal feedback clearly also depends on how active the monetary policy is.
- For an extensive discussion of the Pact and its rationalisation, see Brunila, Buti and Franco (2001).
- 11. The standard proposition, found in Beetsma and Uhlig (1999) for example, is that increasing the size of the union reduces the impact of any fiscal actions on the average inflation rate, which reduces any constraints an individual government faces in raising debt. Here, however, the actions of an individual government can change the policy regime for the whole union, or cause global instability.
- 12. How serious this problem is in practice depends in part on the effectiveness of the Commission's monitoring rule, and the predictability of deficits. Woodford (2000), by considering a fixed deficit target, turns the inequality into an equality, but there are serious problems with a fixed deficit target, which we note below.
- 13. This point is put forcibly by Canzoneri and Diba (2001) among others.
- 14. Unfortunately, there is far from an econometric consensus on this issue, for the UK or elsewhere. Kirsanova and Sefton (2001) argue that differences in credit constraints account for a significant part of the higher savings rate in Italy compared to the UK.
- 15. We assume, of course, that the monetary authority is sensible enough not to raise nominal interest rates to offset the impact of VAT changes on real interest rates.
- See Darby et al. (1999) and Wren-Lewis et al. (1996) for a complete model description.
- 17. If the residual tax was the income tax rate, and consumers react to post-tax real interest rates, then temporary income tax changes would have intertemporal substitution effects.
- 18. Buti, Roeger and in't Veld (2001), examine a model in which governments attempt to raise output above its natural rate, as in Barro-Gordon, but also care about the deficit.
- 19. Wyplosz (1999) argues that a monetary policy committee has to combine long-term price stability with short-term stabilisation, so a more general fiscal policy committee could combine a stabilisation role with long-term debt stability. My own view is that the government should specify the objective of price stability (i.e. an inflation target, as in the UK), in which case the role of monetary policy essentially just involves stabilisation.
- 20. Some have argued that democratic control is inherently imperfect in this case because future generations are not represented, and politicians have high discount rates. This, for example, is a major factor behind the proposals in Eichengreen, Hausmann and von Hagen (1999) for Latin America. Whatever the merits or otherwise of this viewpoint, it seems to me clear that the primary purpose of short-term stabilisation is to avoid aggregate cyclical fluctuations in output and inflation, while the primary purpose of debt stabilisation is to avoid imposing too high (or low) a tax burden on future generations.

- While the former has distributional consequences, the latter is inevitably more political.
- 21. As governments are clearly fallible on solvency, there may remain a useful role to be played by some form of advisory commission, as suggested by Wren-Lewis (1996) and Wyplosz (2002): the 'wise men' approach. The UK government has introduced a rather imperfect version of this, where the budgetary forecasts are 'audited'.
- 22. Even tax changes sometimes involve some implementation delay, but this varies across countries and according to the tax involved. It is also important whether the tax change can be applied retrospectively.
- 23. It is sometimes argued that discretionary action should be avoided because of model uncertainty. However, I know of no reason why the uncertainty is greater for fiscal policy than monetary policy.