
Why Calculate FEERs?

The calculation of equilibrium exchange rates is likely to be fundamental to any discussion of exchange rate policy. Previously, FEERs were associated by many with certain policy proposals, particularly target zones. In this chapter, we argue that FEERs are more widely applicable. In particular, we discuss the extent to which a FEER gives a medium-term exchange rate forecast, with no necessary normative implications. Critical to this discussion is the relationship between the FEER and fiscal policy, and we begin with this issue.

The FEER and Fiscal Policy

In our model outlined in chapter 1, the FEER is a function of fiscal policy but not monetary policy. The independence from monetary policy comes from neutrality and the assumption of internal balance. Changes in real interest rates will influence the FEER, but medium-term neutrality implies that monetary policy cannot influence real interest rates, only nominal rates.

Fiscal policy can influence the FEER for a number of reasons. A decrease in government spending directly lowers the demand for domestic output, tending to depreciate the FEER. Conversely, a tax cut (which will eventually be introduced if the fall in government spending is permanent) will raise consumption, increasing the demand for domestic output. These two effects push the exchange rate in opposite directions, and it is normally not possible to say a priori which is more important. Fiscal policy could also affect the FEER through its impact on productive potential

(infrastructure investment). In terms of the model of chapter 1, G would appear as an argument in the production function. Fiscal policy may also influence exchange rates via a risk premium that could be introduced into the uncovered interest parity condition.

Whatever the long-term effect of fiscal policy, there are likely to be important dynamic effects. Even if lower government spending is immediately countered by lower taxes (so that the budget is balanced), the initial increase in private consumption may be smaller than in the long term if target wealth stocks rise with after-tax income and wealth is increased through saving. If the lower government spending initially reduces debt, and Ricardian equivalence does not hold, then the tendency for consumption to initially be below its equilibrium level is reinforced. If both effects persist into the medium term (which, given life-cycle considerations, they probably will), then the demand for domestic output will be lower in the medium term than the long term, implying a depreciation in the medium-term FEER compared to its long-term level.

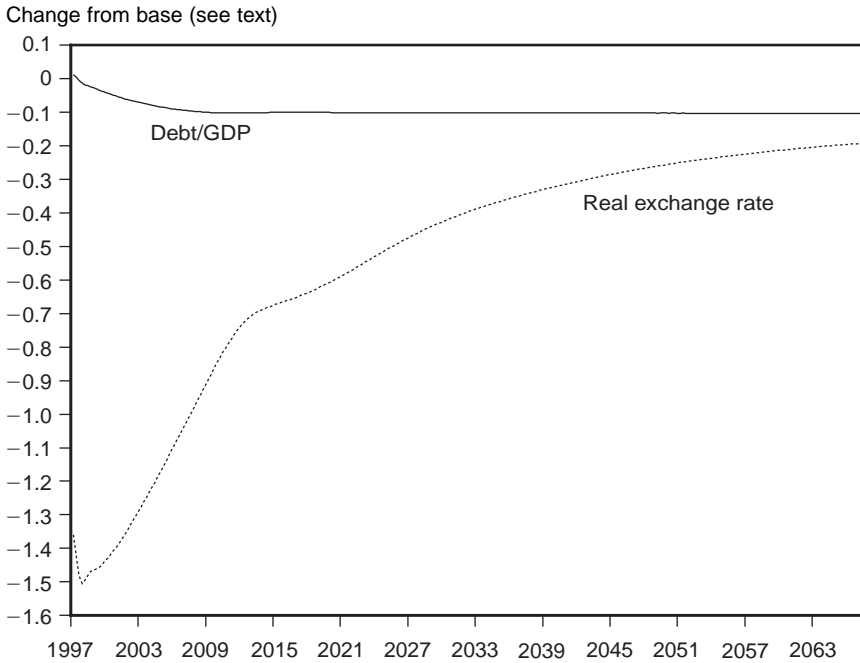
This point can be illustrated by simulating a complete econometric model of an economy, in this case the COMPACT model of the United Kingdom. This model includes a consumption function based on intertemporal optimization and has the generic structure of the model presented in chapter 1.¹ The results of the simulation displayed in figure 2.1 show the paths of the change in government debt/GDP (in absolute terms) and the real exchange rate (in percentage terms) over a 60-year period after a fiscal contraction. The 2 percent cut in government spending is not matched by lower taxes initially, but taxes fall gradually, stabilizing government debt at a lower level after about 12 years. The policy causes an initial and long-term real depreciation, but the size of the depreciation changes substantially over time.

Over the first 10 years, when the fall in government spending is not matched by lower taxes, the absence of full Ricardian equivalence means that consumption does not increase by as much as government spending falls, and the demand for domestic output declines. A real depreciation is required to bridge the gap between supply and demand. In the very long term, a small depreciation is still required, because the import content of private consumption is higher than that of public consumption. However, this long-term depreciation is much smaller than that of the short term.² In the intervening period, the depreciation lies midway between that of the short and long term. Although the tax cut more than matches the

1. The COMPACT model is described in Wren-Lewis et al. (1996).

2. In theory, the long-term effect of fiscal policy on the real exchange rate is ambiguous. While a lower stock of government debt will increase net foreign assets and generate a long-term appreciation, the impact of lower government spending is ambiguous (see Wren-Lewis et al. 1996).

Figure 2.1 COMPACT simulation: Fiscal contraction, March 1997–March 2063



lower spending after 12 years, private consumption is still gradually adjusting to its new higher level, leaving a gap between supply and demand that exceeds the long-term level.

This simulation does not capture all of the potential influences of fiscal policy on the real exchange rate. For example, reductions in government debt might lead to changes in risk premiums, which, if strong enough, could generate a real appreciation. However, the simulation shows clearly that the FEER depends on fiscal policy and that the relationship between the two can vary substantially over time.

This suggests that any government policy that curbs expenditure to reduce government debt (e.g., to meet criteria for joining the EMU) will have important implications for the FEER. Similar points apply to a tax change designed to reduce debt.

Is the FEER a Normative Concept?

The link between the FEER and fiscal policy has led many economists (including Williamson 1994, 181) to argue that the FEER is inherently nor-

mative and tied to some desired policy trajectory.³ Indeed, some economists have relabeled the FEER as the Desired Equilibrium Exchange Rate (see Bayoumi et al. 1994). The word desired clearly conveys a normative intent. In our view, this link between the FEER and some desired policy path is too restrictive and can be misleading.

Internal balance does not normally imply a normative content. Most models of Keynesian disequilibrium suggest that, over some reasonably short period, the economy will, in the absence of shocks, return to internal balance. In other words, we do not require a particular policy to achieve the medium-term equilibrium to which the FEER applies.⁴

It is when we come to the idea of external balance that the FEER appears to become a normative concept. The link between the government's budget deficit and the current account illustrated above clearly shows that medium-term national asset accumulation will depend on fiscal policy. Therefore, setting external balance to some current-account target appears to prescribe some fiscal action.

However, just because a calculated medium-term equilibrium exchange rate is conditional on fiscal policy assumptions, that does not imply that this equilibrium exchange rate has a normative connotation. Any macroeconomic forecast requires an assessment of the future course of policy. A normative exercise might use the optimal policy path, whereas a forecast would choose the most likely policy path. If the two differed, then the FEER associated with each would also differ. An exercise designed to calculate medium-term exchange rates need not choose the optimal fiscal policy trajectory.

This point is clarified by imagining two calculations. The first is the likely medium-term real exchange rate, based on the best assessment of actual fiscal policy in 5 years. The second is an optimal medium-term real exchange rate, based on an optimal fiscal policy trajectory. (This distinction is close to that made by Williamson [1994, 182–86] in discussing current account targets.) The key point is that, once the fiscal policy path is chosen, the method used to calculate the real exchange rate would be exactly the same.

Whether we only call the optimal medium-term real exchange rate a FEER, or whether we call both the optimal and likely medium-term real exchange rates FEERs, is semantic. In practice, the distinction between the two is blurred. The concept of an optimal policy is ambiguous: optimiza-

3. Williamson sees the FEER as essentially normative because "FEERs are intended to be used as intermediate targets in securing the international coordination of economic policy" (Williamson 1994, 185). We argue that the methods used to calculate FEERs have a wider application.

4. This would not be true if hysteresis effects were important (see chapter 1). In addition, the short term may not be short enough from a welfare point of view. Thus, an activist policy may assist in restoring balance.

tion may or may not be subject to political constraints about what is feasible. In addition, an assessment of what policy is likely over the medium term is not apt to be independent of judgments about the optimal direction of policy. The concept of sustainability is not helpful here either: there are generally many sustainable policy paths, and this set is likely to include most medium-term policy forecasts as well as the optimal policy. Westaway and Wren-Lewis (1990) argue that a natural extension of the rational expectations principle (that private-sector agents will make optimal decisions based on optimal forecasts) is that forecasts of future government actions should be based on the government pursuing an optimal policy.

As the discussion by Williamson and Mahar in appendix A makes clear, the assumptions we use for the medium-term current account are an eclectic mixture of the likely and the optimal.⁵ In this book, the term FEER covers both possibilities. We focus on the FEER as a method of calculation based on the use of conventional aggregate trade equations (or equivalently, the generic model set out in chapter 1) rather than any policy stance or proposal.

Calculations of the medium-term real exchange rate using the methods outlined in this book do not require optimal fiscal policy in any sense of the word. Indeed, one of the advantages of the partial-equilibrium approach used here to calculate real exchange rates is that the consequences of different assessments of the medium-term current account can be examined easily, as we do in the sensitivity analysis in chapter 5.

This point is important, because discussion of FEERs often confuse the methods used to calculate them with the policy proposals that apply them. We hope that this discussion makes it clear that a commitment to using the exchange rate as an intermediate target is not a necessary condition for an interest in the FEER, although it is sufficient. Another reason to be interested in FEER calculations is simply a wish to know what the real exchange rate is likely to be in 5 to 10 years.

The FEER as a Forecast

In the previous section, we argued that the FEER could be an interesting forecast even if it had no connection to policy. For example, a firm that is deciding where to put a new plant will study future labor costs in different countries. Although labor may be relatively cheap now in some country, if that country's exchange rate is expected to appreciate in the

5. An alternative methodology for obtaining sustainable capital flows would be to estimate the savings-investment relationship directly as a function of factors such as the output gap, dependency ratios, and the fiscal stance. See Faruquee, Isard, and Masson (1996) and the discussion in Clark and MacDonald (1997).

medium term, this advantage may be temporary. In trying to calculate a medium-term real exchange rate, the firm can use PPP or a FEER calculation of the type presented here.⁶

Whether a FEER calculation based on a partial-equilibrium approach of the type presented here is a forecast or a policy recommendation depends critically on the assumptions behind the medium-term current account input. As in practice any current account inputs are likely to be some mixture of the two and as the latter term has a clear normative implication, we refer to these inputs as medium-term current account assumptions or structural capital flows rather than current account targets. To the extent that we provide a do-it-yourself sensitivity analysis to alternative assumptions in chapter 5, the reader can substitute his or her judgments for those presented in appendix A.

Whether FEERs in this broad sense are of any interest to foreign exchange speculators is less clear. It sometimes appears that the forecast horizon of speculators is so short that any judgment of exchange rates in 5 to 10 years' time is irrelevant to their actions. Even if this is the case, FEERs may be important if they influence the actions of governments or central banks. If the intervention or interest rate policy of a central bank is influenced by the current exchange rate's position in relation to the FEER, then this knowledge will be important for short-term speculation. Indeed, one of the arguments for the use of the FEER as an explicit policy target is based on this point, because it would anchor an otherwise volatile market.

The qualification "medium term" is, of course, crucial to the usefulness of the FEER as a medium-term forecast.⁷ The real exchange rate in the short term can differ from the FEER for many reasons, such as Keynesian disequilibrium, policy responses to that disequilibrium, or incorrect expectations.

While the FEER is not a short-term exchange rate forecast, it could well be an important tool in attempting to explain the exchange rate in the short term. UIP suggests that expected changes in the real exchange rate will reflect real interest rate differentials plus or minus a risk premium (i.e., equation 1.4 in chapter 1). Projecting this equation forward n periods implies that the current real exchange rate is a function of current and expected real interest rate differentials (corrected for risk premiums) n periods ahead and of the expected real exchange rate in period $n + 1$. Expected short-term real interest rate differentials can be influenced by monetary

6. It could also use a published forecast based on an econometric model, but if that model shared the generic structure of the model outlined in chapter 1, then it would also be a FEER in our sense of the term.

7. Of course, this forecast is almost certain not to come about, because over the next 5 to 10 years new shocks will hit the economy. However, as these shocks are unpredictable, it is still the best guess of medium-term outcomes.

policy if nominal inertia is important (i.e., in a Keynesian world). FEER analysis adds nothing here. However, if n is large enough so that it applies to a non-Keynesian medium term, then the expected real exchange rate n periods ahead will be the FEER. Therefore, if expectations are rational, currencies that are overvalued in relation to the FEER should have or will have positive interest rate differentials (corrected for risk premiums), and vice versa. This is not inevitable, however, because currencies can also be subject to fads or self-fulfilling speculative bubbles that take them off the UIP path.

FEERs and Exchange Rate Regimes

The FEER analysis is likely to be critical to economies that are already part of a fixed or quasi-fixed exchange rate regime or are about to enter such a regime. This proved to be the case in 1992–93 for many European economies, and could well be the case again if an EMU is formed. An economy in a fixed or quasi-fixed exchange rate regime need not have a central parity for the exchange rate that is consistent with the FEER. However, if the current parity is undervalued in relation to the FEER, then between now and the medium term, inflation in that economy must be above that in the other members of the regime, and vice versa. Relatively high inflation may be undesirable, while relatively low inflation may be costly to achieve in terms of lost output.

In 1992, speculative pressure forced the United Kingdom and Italy out of the ERM of the EMS. FEER analysis suggested that the deutsche mark parities for the pound and the lira were overvalued (see Williamson 1991), a conclusion that is confirmed in chapter 5. Overvaluation could only be consistent with these nominal parities if these countries achieved a significantly lower inflation rate than did Germany over the subsequent 5 to 10 years. An earlier study by Wren-Lewis et al. (1991) had predicted that, for the United Kingdom, this could only be achieved through a sustained recession. By 1992, that recession had come about, but the real exchange rate remained overvalued compared to the FEER. The United Kingdom was forced to abandon the parity, and it left the ERM. In contrast, PPP calculations suggested that the pound's ERM parity was slightly undervalued.

Countries entering an EMU will need to decide at what parities to link their currencies, and for these economies there is no going back through revaluation.⁸ As nominal inertia appears to be important in these econ-

8. They could leave the choice to the market, but the experience in 1992–93 suggests that that would be an unwise decision. Governments will certainly want their views about reasonable parities to be known.

omies, it would be sensible to join at rates consistent with FEERs. For these economies, therefore, FEER calculations will be critical.

At a global level, the FEER analysis is associated with Williamson and Miller's target zone scheme for international policy cooperation (1987). The FEER becomes a central parity for wide target zones for real exchange rates. In broad terms, Williamson and Miller have monetary policy targeting the exchange rate and fiscal policy targeting domestic demand, although this simple assignment is modified by global interest rates that influence demand at the global level and by the use of wide exchange rate bands.⁹

It is perhaps the association of FEERs with this scheme that has led some to describe the FEER as a normative concept. If the FEER becomes a policy target and the FEER depends on fiscal policy, then the FEER needs to be consistent with a desired path for fiscal policy. It is a potential problem that deviations away from this desired path, which are required to stabilize domestic demand, may also influence the FEER. However, the practical importance of this problem is less clear given the wide bands associated with the target zone proposal.

While the target zone scheme requires an estimate of FEERs, this chapter has shown that the importance of FEERs goes well beyond this particular plan for international policy cooperation.

9. For an analysis of the scheme, see Currie and Wren-Lewis (1989).