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Budget Deficit Cuts and the Dollar

Since the spring of this year, policymakers and academics have disagreed on how expected reductions in the U.S. budget deficit will affect the U.S. dollar. Prominent policymakers, including the Federal Reserve Board Chairman, the Bundesbank President, and the Japanese Finance Minister have stated publicly that such reductions may lead to a strengthening of the U.S. dollar. Well-known U.S. academics have criticized this view, arguing that budget deficit cuts will lead to a dollar depreciation.

This *Weekly Letter* assesses these conflicting views in the context of standard explanations of the determinants of the exchange rate. A review of these explanations suggests that U.S. academics are focusing on the short-run impact of lower budget deficits on the dollar, whereas policymakers are focusing on medium- and long-run effects.

Budget deficit cuts in the short run

The simplest way to think of how budget deficits affect the dollar is to use a Keynesian framework where the dollar adjusts to restore equilibrium in the balance of payments. The dollar depreciates if the balance of payments is in deficit, and it appreciates if it is in surplus. So the key to predicting what happens to the dollar when the budget deficit is cut is to see what happens to the balance of payments.

Roughly speaking, the balance of payments is the sum of the trade balance and net capital flows. And part of the ambiguity in the debate is because a cut in the budget deficit affects these two components of the balance of payments differently. It tends to *increase* the trade balance, because it cuts today's income, which reduces the demand for imports; in other words, it can create a balance of payments *surplus*. At the same time, it tends to encourage capital *outflows*, because it tends to lower U.S. interest rates relative to foreign rates—that creates a balance of payments *deficit*.

Which effect is likely to dominate? In the case of a small open economy the answer is clear: A budget deficit cut will push the balance of payments toward a deficit and hence will produce a

depreciation of the currency. The reason is that the fall in the domestic interest rate will produce a large incremental capital outflow, because from the point of view of a small economy, the supply of international capital is unlimited.

For a large economy like the U.S., the effects of a budget deficit cut are ambiguous. The supply of international capital is no longer unlimited, so that as domestic income declines, the trade balance increase may exceed the capital outflow associated with the fall in interest rates, causing a balance of payments surplus and dollar *appreciation*. This ambiguity is resolved by (plausibly) assuming that the tendency for budget deficit cuts to result in capital outflows outweighs the effects on the trade balance. Thus, the academics' insistence that a budget deficit cut will tend to lead to a weaker dollar may be motivated by focusing on short-run effects.

Budget deficit cuts and long-run effects

Shifting the focus to the longer-run impacts of budget deficit cuts, we can explore two reasons why such cuts can lead to dollar appreciation.

First, a budget deficit cut may lead to capital inflows and a balance of payments surplus if the risk premium on domestic interest rates falls by enough. Suppose investors are worried that the continued accumulation of U.S. government debt may make investors reluctant to hold U.S. treasury securities some time in the future, exposing them to sudden capital losses. In order to bear this risk, investors require a premium, which is reflected in the spread between domestic and foreign interest rates. A budget deficit cut may reassure investors that the future stock of U.S. government debt will not be so large, which would reduce the risk premium. If the reduction is large enough, there may be incipient capital inflows even if the budget deficit cut causes the domestic interest rate to fall. The dollar would then appreciate to restore balance of payments equilibrium.

Second, a budget deficit reduction may reduce inflationary pressures. Many international economists believe that in the long run, when prices can adjust, the value of the dollar depends on

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the relative price of representative baskets of U.S. and foreign goods and therefore on relative money supplies and money demands. This is an implication of the theory of purchasing power parity, and it is known as the monetary approach to the exchange rate. A decline in the budget deficit today may reduce the expected rate of long-run money creation and inflation required to finance current and prospective deficits. The decline in long-run inflationary expectations causes the long-run nominal interest to fall and money demand to rise and the dollar to appreciate in the long-run. Such an expected future appreciation in the dollar from its current expected long-run level will lead to an appreciation in the dollar today, which will offset the tendency towards depreciation in the short-run highlighted earlier.

It is not clear how big a role these reasons are likely to play. For example, Allan Meltzer has pointed out that historically risk premium effects have been small in the U.S.; however, he notes that they may be rising because private financing of U.S. net debt has been replaced by financing by foreign central banks. In addition, several observers have questioned whether the effect of budget deficit cuts on inflationary expectations is empirically relevant, since the U.S., like other industrial countries, has not monetized its deficits in recent years. However, evidence from other countries suggests that in the absence of credible measures to reduce the budget deficit, the pressure on the central bank to resort to inflationary finance tends to grow.

Effects on productivity or the composition of demand

While much of the discussion in the financial press focuses on the effects of *deficit reduction* on the dollar, the effect of specific tax and government expenditure policies on sectoral productivity or the composition of demand may have implications for the exchange rate in the long run that are separate from those associated with deficit financing. These policies affect the real, or inflation-adjusted, dollar exchange rate, which, holding monetary factors constant, will affect the nominal exchange rate as well. Some insights into these effects can be gained by assessing how the long-run (real) exchange rate is determined and the possible effects of tax and spending policies.

In what follows, it is useful to think of an economy with two goods, traded and non-traded, and of the real exchange rate as the relative price of traded to nontraded goods. This relative price is

widely taken to represent the real exchange rate, because it reflects the relative profitability, or competitiveness of production, in the traded goods sector. A fall in the price of traded goods relative to nontraded U.S. goods means the traded goods sector is relatively less profitable, and represents an appreciation of the dollar.

International economists believe that an important long-run determinant of the real exchange rate is productivity growth. Bela Balassa and Paul Samuelson concluded three decades ago that if productivity grows faster in the traded goods sector than in the nontraded goods sector, then in the long run, the relative price of traded to nontraded goods will fall, which means that the real exchange rate will tend to appreciate. The reason is that an increase in traded goods productivity drives up the demand for workers and their wages. The price of nontraded goods rises in response to the increase in cost, but the price of traded goods does not adjust because it is set in world markets. Richard Marston (1987) provides empirical support for this theory, finding that rising labor productivity differentials between traded and nontraded goods in Japan, in excess of those observed in the U.S., provide a good explanation of the long-run trend real appreciation of the yen against the dollar.

These findings suggest that if the budget deficit is cut by reducing spending or altering taxes in a way that increases relative productivity growth in the U.S. traded goods sector, the dollar may appreciate. Unfortunately, the quantitative effects of specific spending or tax policies on aggregate long-run productivity growth are not well understood. For example, it is tempting to argue that past Japanese subsidies to the traded goods sector enhanced that sector's productivity growth and contributed to the trend yen appreciation apparent since the 1960s. However, subsidies to specific sectors in other countries have not necessarily enhanced productivity. Further research on this question would be instructive.

Another factor believed to affect the real value of the dollar is the composition of demand. For example, a budget cut achieved by cutting government spending will cause a dollar depreciation (a fall in the price of U.S. domestic nontraded goods) if government spending is more biased towards domestic nontraded goods. There is some empirical evidence of a connection between government spending and the real exchange rate. In this context, it can be argued that the fiscal factors

behind the real appreciation of the dollar in the early 1980s was not so much the result of budget deficits rising as of the increase in government spending that favored domestic goods.

Apart from the composition of government spending, the wealth of consumers is often believed to influence the demand for domestic nontraded goods and therefore the real value of the dollar. In this view, a country incurring a current account surplus accumulates wealth, thus increasing the demand for its own goods and its own money, which results in a real and nominal appreciation of the exchange rate. Thus, fiscal policies that increase the long-run stock of capital or national saving will increase national wealth and the demand for domestic goods, thus causing the dollar to appreciate in the long run. In particular, tax policies that encourage consumers to invest rather than to consume may lead to dollar appreciation.

Conclusions

The disagreement between policymakers and some academics on the effects of budget deficit reductions on the dollar appears to reflect the former's emphasis on long-run effects and the latter's emphasis on the short-run effects. It is difficult to tell which viewpoint is more credible empirically. As discussed by Kasa (1995), there is no close empirical relationship between macroeconomic fundamentals, such as budget deficits, and short-run exchange rate behavior. Furthermore, while there is some evidence that certain variables (including inflation and productivity growth) affect the exchange rate in the long run, it is difficult to isolate the impact of such long run factors on the behavior of exchange rates in the short run.

It can be argued that if the short-run reduction in the budget deficit is large relative to the planned reductions in the future, short-run effects may dominate and, under plausible conditions, the dollar will depreciate, as argued by academics. If deficit reductions will take place largely in the future, and consumers and investors are mainly worried about the accumulation of government debt, long-run considerations may be dominant. In this case the dollar may appreciate, as suggested by policymakers. In either case, the types of tax or government spending policies that are used to achieve deficit reduction are likely to affect the path of the dollar as well.

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References

- Kasa, Kenneth. 1995. "Understanding Trends in Foreign Exchange Rates." *FRBSF Weekly Letter* (June 9).
- Marston, Richard. 1987. "Real Exchange Rates and Productivity Growth in the United States and Japan." In *Real Financial Linkages among Open Economies*, S. W. Arndt and J. D. Richardson, eds., pp. 71-96. Cambridge: MIT Press.
- Meltzer, Allan H. 1995. "Comment on: 'What Do Budget Deficits Do?' by L. Ball and N. G. Mankiw." Delivered at *Budget Deficits and Debt: Issues and Options*, FRB Kansas City Symposium, Jackson Hole, Wyoming.