
FRBSF WEEKLY LETTER

March 24, 1989

Reagan Fiscal Policy and the Dollar

The U.S. dollar rose sharply from 1980 to 1985, and then depreciated by almost the same amount through 1988. The sources of these large swings in the dollar have been the subject of considerable debate. This *Letter* sorts out the relative contributions of fiscal and monetary policies to the recent swings in the dollar, using a simulation from a macroeconomic model developed at the Federal Reserve Bank of San Francisco. (A complete description of this model is available in FRBSF Working Paper 89-01.) The analysis suggests that the fiscal expansion under the Reagan Administration was the most important reason for the dollar's appreciation, but that monetary conditions at home and abroad were primarily responsible for its depreciation.

Linkages

Financial capital has become highly mobile among industrialized countries. Therefore, movements in the real exchange value of the dollar (that is, the dollar's current value, adjusted for differences in the general level of prices at home and abroad) are dominated in the *short run* by the effects of international capital flows. A rise in real, or inflation-adjusted, interest rates in the U.S. relative to abroad immediately will encourage investors to purchase dollar-denominated assets and thereby cause the real value of the dollar to rise. This rise in the dollar's value will tend to equalize the expected returns on investments at home and abroad because of an expected depreciation in the future. But in the *long run*, real interest rate differentials tend not to persist because the equilibrium value of the exchange rate is not expected to change. Rather, in the long run, it is conditions affecting the underlying fundamentals in markets for goods and services, and not financial markets, that tend to determine the real value of the dollar.

Stated more formally as the so-called "open interest parity condition," this line of reasoning says that the current real value of the dollar reflects the magnitude of any real interest rate differential on domestic and foreign financial assets and the underlying factors that determine the

expected real value of the dollar in long-run equilibrium.

One implication of this analysis is that an appreciation in the real value of the dollar will be temporary if it is caused solely by a rise in the real interest rate differential (and not by any change in the expected long-run fundamentals). Thus, if the U.S. real one-year interest rate exceeds the foreign one-year rate by, say, one percentage point, the real value of the dollar should stand one percentage point above the market's expectation of its value a year from now. At the higher exchange rate, the market would expect the real value of the dollar to depreciate by one percent over the year. The expected depreciation would just offset the higher yield on U.S. assets, making the net return equal to that on foreign assets.

Similarly, because a one percentage point differential in the real interest rate on a 10-year bond implies that, on average, future one-year rates are also expected to exceed foreign rates by one percentage point, this should result in a value of the dollar that is 10 percent above the market's expectation of its value 10 years from now. To the extent that current short- and long-term interest rates are not highly correlated, the longer-term interest rate differential tends to dominate in determining the current value of the dollar. But shorter-term interest differentials will indicate the expected pattern of the dollar's change over the investment horizon.

The open interest parity condition may be modified to include a "risk premium" in the returns to investments in one country versus those in another. Foreigners may regard U.S. and foreign assets as imperfect substitutes, and therefore, may not be willing to absorb higher proportions of dollar-denominated assets in their portfolios unless they can obtain a greater expected return on them. In this case, a higher U.S. real interest rate would not result in as large a current appreciation of the dollar, thereby providing investors with a higher expected return (because of a

smaller expected depreciation in the future) as compensation for holding more dollars. The available evidence suggests that risk premia on internationally-traded assets are small, vary with time, and are difficult to associate systematically with other variables. Nevertheless, there is some intuitive appeal to the idea that investors may require risk premia if exchange rates are sufficiently volatile, or if at some point, portfolios become "saturated" with investments denominated in a particular currency.

Effects of fiscal policy

A sustained change in fiscal policy can be expected to affect the real value of the dollar through two channels. First, in the short run, a higher budget deficit will cause U.S. interest rates to rise as increased government borrowing places greater demands on U.S. capital markets. The associated increase in the real interest rate differential will attract greater inflows of foreign funds until the dollar appreciates by enough to satisfy the open interest parity conditions. Second, an expansionary fiscal policy that is expected to be sustained also can change the anchor of the parity condition, that is, the market's *expectation* of the longer-run value of the dollar. If foreigners were willing to accumulate an unlimited amount of U.S. debt over the relevant investment horizon, the market would tend to expect a sustained *appreciation* of the dollar because of the need for a sustained rate of capital inflow to finance the continued budget deficit.

However, if the foreign accumulation of dollar-denominated assets that would be caused by a persistent U.S. budget deficit is sufficiently large, foreigners eventually might demand a risk premium on U.S. assets. Indeed, it is possible that the expected risk premium would be so large that the expected long-run value of the dollar actually would decline, rather than rise. In this case, the expectation of a continued U.S. budget deficit in the future would tend to cause the dollar to *depreciate*.

Evidence from the exchange rate equation in the San Francisco model, estimated over the entire period of floating exchange rates since 1973, indicates that expansionary fiscal policy has, in fact, *raised* the expected long-run equilibrium value of the dollar. Specifically, the model indicates that risk premiums have *not* been very important and that market participants have

tended to expect about two-thirds of any change in fiscal policy to persist over an estimated investment horizon of about 10 years. As U.S. budget deficits increased in the 1980s, these expectations, in turn, raised the long-run anchor for the dollar and therefore caused the current value of the dollar to appreciate. Moreover, the model also finds that although the rise in the real interest rate differential that was associated with the fiscal expansion played a role in appreciating the dollar, the effect of the change in expectations concerning the long-run value of the exchange rate was more influential.

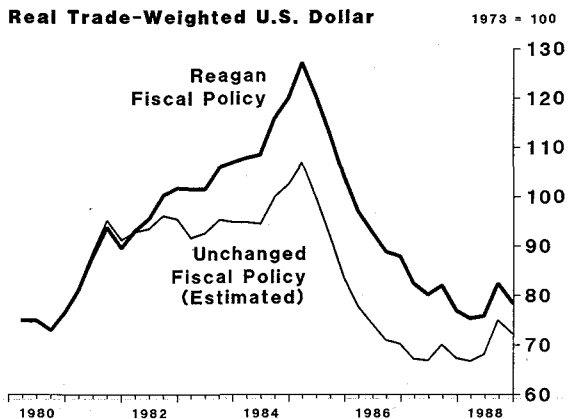
Reagan fiscal policy

Due to the tax cuts and expenditure increases introduced by the Reagan Administration, the federal budget moved from a position of approximate balance in 1980 to a deficit equal to four percent of high-employment GNP in 1986 before declining to 2.4 percent of high-employment GNP by 1988. (The measure of the deficit used here counts the erosion in the real value of the federal debt due to inflation as tax revenue.) To assess the impact of this fiscal expansion on the dollar, the San Francisco model was used to simulate the economy's path as if there had been no change in fiscal policy after 1980.

Such a simulation requires that there be no change in federal marginal tax rates that would alter economic incentives for saving, investment, and work effort. It also requires that federal outlays and receipts as a fraction of high-employment GNP remain at their 1980 levels. Such unchanged receipts and outlays, as well as unchanged marginal tax rates, would result in no change in aggregate demand or supply due to fiscal policy. In the simulation, the path of M2 was kept unchanged, although the results would have been fairly similar if the simulation had proceeded on the assumption that the Federal Reserve had targeted M3 or nominal GNP instead.

As shown in the accompanying chart, the simulation indicates that even under an unchanged fiscal policy, the real trade-weighted value of the dollar would have appreciated by about 30 percent from 1980 to 1985, compared to an actual real appreciation of 55 percent. Because a variety of factors account for this 30 percent appreciation, the single most important contributing factor to the appreciation that actually

Real Trade-Weighted U.S. Dollar



occurred was, in fact, the Reagan fiscal expansion, which by itself contributed nearly half of the overall appreciation.

Moreover, the effect of the U.S. budget deficit on the expected long-run value of the dollar was found to be a considerably more important cause of the dollar's appreciation than its short-run effect through raising U.S. real interest rates. In the simulation of unchanged fiscal policy, the differential between U.S. and foreign real bond rates was changed very little. U.S. real interest rates did increase relative to foreign real rates in this period, but not primarily because of larger budget deficits.

Of the 30 percent appreciation that would have occurred anyway, about equal contributions can be assigned to domestic monetary tightening, fiscal tightening in the U.S.' major trading partners, and unexplained speculative factors that appear to have been present in 1985. It is interesting to note that it primarily was the monetary tightening that occurred in the U.S., not the fiscal expansion, that caused the real interest rate differential to rise. As a result of the Federal Reserve's attempt to reduce inflation, the U.S. real bond rate rose between 1980 and 1984. And although foreign countries also were pursuing policies that raised interest rates (to counter the inflationary effects of a strong dollar on their economies),

foreign real rates did not rise by as much as those in the U.S.

Reasons for the dollar's fall

After 1985, the effects of the Reagan fiscal program on the value of the dollar were relatively small. In the absence of the Reagan fiscal expansion, the dollar would have declined by about as much as it actually did, but starting from a lower level. In this period, a decline in the real interest rate differential from about four percentage points in 1985 to less than one percentage point in 1988 accounts for close to 80 percent of the dollar's depreciation. The decline in this differential primarily was the result of two developments. During this period, the U.S. real bond rate declined as the Federal Reserve's disinflationary goals were achieved and monetary policy eased. At the same time, foreign real bond rates continued to rise as foreign central banks tightened policy in response to the inflationary effects of the strong dollar on their economies. The strong dollar tended to create inflation abroad both directly through higher prices of tradable goods and indirectly through the boost to aggregate demand from increased exports to the U.S.

Summing up

In summary, then, fiscal policies at home and abroad were more important than underlying monetary conditions in pushing up the real value of the dollar through 1985. But from 1985 to 1988, monetary conditions, including the lagged response of foreign monetary authorities to the effects of a strong dollar, were more important than fiscal policies in bringing the dollar down. Moreover, as a result of their effect on expectations, fiscal changes have had a relatively large impact on the dollar, but only a small influence on real interest rates. In contrast, although variations in monetary conditions also have affected the real value of the dollar substantially, they have done so solely by moving the differential between U.S. and foreign real bond rates.

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