
FRBSF WEEKLY LETTER

September 15, 1989

Fiscal Policies and Exchange Rates

Early proponents of floating exchange rates argued that floating rates would tend to insulate countries from economic disturbances originating outside their borders. They also suggested that the real exchange rate (that is, the nominal exchange rate adjusted for differences in the general level of prices at home and abroad) would be relatively constant. According to this view, movements in the *nominal* exchange rate would offset differences in inflation at home and abroad, thereby stabilizing both the real exchange rate and the balance of trade.

Following the breakdown of the Bretton Woods system of fixed exchange rates in 1973, the real trade-weighted value of the dollar actually was relatively stable until 1976. But then it dropped 20 percent between 1976 and 1979 and rose over 60 percent from 1979 to 1985. By 1988 it had dropped again, this time by 40 percent.

Obviously, the early view of floating exchange rates failed to consider a key influence on the real exchange rate, specifically, international flows of financial capital. Contrary to the earlier view that flows of goods and services primarily determine the real exchange rate, it is now generally agreed that international capital flows have been the principal reason for the recent swings in the real value of the dollar. These capital flows respond to a variety of factors, including monetary and fiscal policies. In recent years, changes in these government policies appear to have been the most important influence on capital flows and exchange rates.

This *Letter* assesses the impact of U.S. and foreign fiscal policies on the real value of the dollar during the period of floating exchange rates and discusses some suggested policies for dealing with the resulting instability in exchange rates. A subsequent *Letter* will examine the role of shifts in monetary policies.

The effect of fiscal policy.

Under a flexible exchange rate system, an expansionary fiscal policy, in the form of either an

expansion in government spending or a cut in taxes, affects the value of the dollar through two channels. First, a U.S. fiscal expansion increases the demand for credit and therefore, tends to raise U.S. real interest rates relative to those abroad. The increased differential between U.S. and foreign real interest rates encourages investors to purchase dollar-denominated assets, and this increases the real value of the dollar.

Over time, the international mobility of capital tends to eliminate such real interest rate differentials across countries. Thus, if this were the only influence on the dollar, the real exchange rate would be expected ultimately to depreciate, returning to its long-run equilibrium level. However, the dollar's value can be sustained at a higher level even if no real interest rate differential exists if the market's expectation of the long-run real value of the dollar changes. This is the second channel through which expansionary fiscal policy can influence the dollar's foreign exchange value.

Under a floating exchange rate system, a sustained fiscal expansion in the U.S. works to keep the value of the dollar up in the future as it continues to draw in capital from abroad. Thus, when international investors expect a fiscal expansion to be relatively permanent, they also expect the real value of the dollar to remain high in the future and therefore, bid up the *current* value of the dollar.

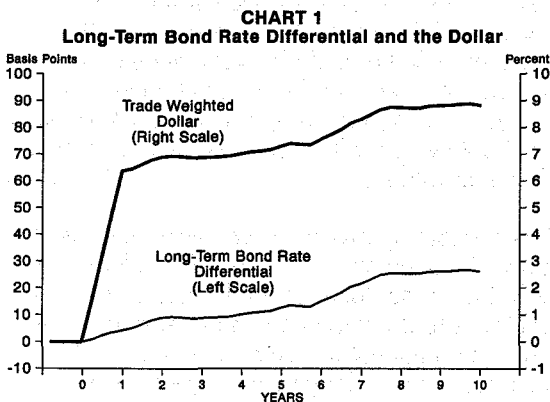
Which is more important?

A macroeconomic model of the U.S. economy developed at the Federal Reserve Bank of San Francisco permits evaluation of the relative importance of these two channels of fiscal policy. The model shows that the expectations effect from a fiscal expansion is quite large compared to the effect of changes in the interest rate differential. According to this model, a fiscal expansion (holding the money stock constant) immediately causes the expected long-run real value of the dollar to rise. This change in expectations causes a similarly abrupt increase in the

FRBSF

current, or spot, value of the dollar. The higher dollar causes the trade balance to deteriorate. With a larger trade deficit, there is a greater volume of capital inflows, which actually works to reduce upward pressure on interest rates. Thus, although the interest rate differential rises as a result of the fiscal expansion, the additional capital inflows associated with the expectations effect minimize the extent of this rise and therefore its influence on the real value of the dollar.

Specifically, the model shows that after two years an increase in government spending equal to one percent of GNP raises the real trade-weighted value of the dollar by about six percent through the expectations channel. The differential between real long-term bond rates also rises, but by only 10 to 15 basis points. This increase in the rate differential induces a modest one to 1½ percentage-point increase in the real value of the dollar on top of the expectations effect. See Chart 1.



Because the rise in interest rates is so modest, a large degree of the crowding out associated with the fiscal expansion falls on net exports rather than on interest-sensitive domestic sectors. This crowding out occurs rather quickly. The model shows that the decline in net exports (or rise in net imports) after two years is nearly 70 percent of the change in government spending (Chart 2). Consequently, there is considerably less impact on interest-sensitive expenditures than other models have suggested.

U.S. and foreign fiscal policies

If U.S. and foreign fiscal policies both expand or contract together, only the level of world interest rates and not the value of the dollar is affected

because the effects on the exchange rate are offsetting. In the 1970s and 1980s, however, U.S. and foreign fiscal policies generally were moving in opposite directions, thus putting either upward or downward pressure on the dollar. From 1973 to the late 1970s, foreign budget balances shifted from surplus to deficit, thereby tending to *depreciate* the dollar. At the same time the U.S. budget balance shifted from deficit toward surplus, also tending to *depreciate* the dollar. In contrast, during the 1980s foreign budget balances moved sharply into surplus, and the U.S. budgetary position shifted sharply into deficit, in both cases tending to *appreciate* the real value of the dollar.

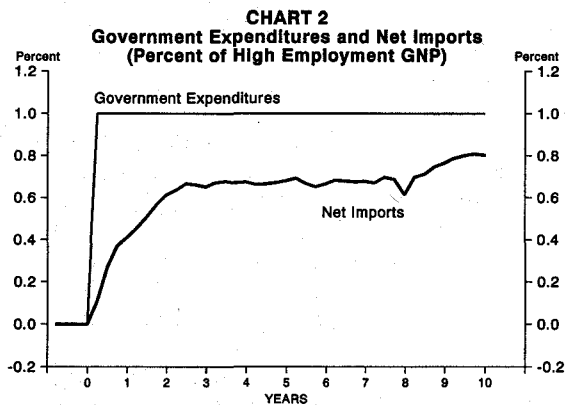
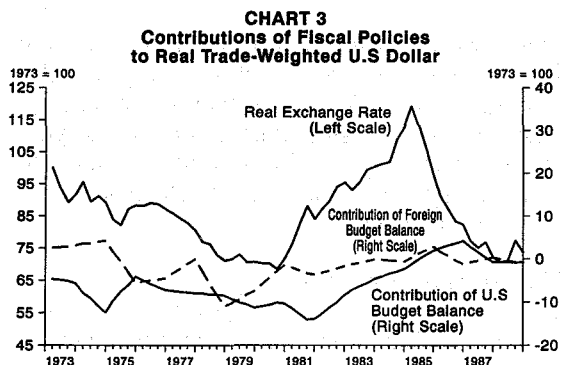


Chart 3 shows the model's estimated contributions of U.S. and foreign fiscal policy to the real value of the dollar. During the 1970s, movements in U.S. and foreign fiscal policies each acted to depreciate the real value of the dollar by about 10 percent, for a combined effect of 20 percent. The real value of the trade-weighted dollar actually declined by 25 percent in this period. Thus, divergent fiscal policies account for the lion's share of the dollar depreciation in the 1970s.



Movements in fiscal policies also helped to appreciate the dollar from 1980 through 1985. The tightening of foreign fiscal policies accounts for about a 10 percent appreciation of the dollar in this period, while the easing of U.S. fiscal policy contributed about another 20 percent. Together, these two factors accounted for about half of the real trade-weighted dollar's 60 percent appreciation in this period.

After 1985, the directions of both U.S. and foreign fiscal policies did not change, thereby contributing neither to an appreciation nor a depreciation of the dollar. Consequently, other factors, such as differential movements in U.S. and foreign monetary policies, explain the sharp decline in the dollar's value from 1985 to 1988. These are explored in the subsequent *Letter*.

Policy alternatives

Some have suggested that controls over international capital flows should be used to prevent large swings in exchange rates such as have occurred since 1976. The analysis presented here suggests that even *if* such a policy could be implemented, it would not insulate economies from the forces that underlie these movements in the exchange rate.

The San Francisco model shows that the swings in the dollar during much of the floating-rate period to a large extent were the result of divergent fiscal policies at home and abroad. Thus, a policy that prevented inflows of foreign capital merely would have transferred the "crowding out" of private expenditures associated with the larger U.S. fiscal deficit from the tradeable goods sector to interest sensitive sectors like housing, other consumer durables, and business investment. In addition, the burden of a budget deficit

on future generations would have been larger because of an inefficient allocation of capital. This would have occurred because controls over foreign capital inflows deprive the economy of a lower cost source of capital.

As an alternative to capital controls, some have advocated a return to a system of fixed exchange rates. Again, such an approach does not eliminate the need for real economic adjustments associated with divergent fiscal policies. Under a fixed exchange rate system, an expansionary fiscal policy in the U.S. would tend to produce large capital inflows and a balance of payments surplus. To correct the payments surplus and still maintain a fixed nominal exchange rate, the U.S. would have to allow domestic prices to rise until the real purchasing power of the U.S. dollar over foreign goods compared with U.S. goods appreciated by as much as under a floating rate system. Clearly, it is less costly to let the *nominal* exchange rate adjust under a floating rate system than to force all of the adjustment on domestic prices under fixed exchange rates.

In conclusion, shifts in fiscal policies require real economic adjustment—whether through interest rates if international flows of capital are controlled, through domestic prices if exchange rates are fixed, or through changes in the nominal exchange rate if exchange rates are flexible. A floating exchange rate regime with no capital controls probably is the least costly mode of adjustment to fiscal changes because it helps to stabilize prices and allocate the world's capital efficiently.

Adrian W. Throop
Research Officer

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, or of the Board of Governors of the Federal Reserve System.

Editorial comments may be addressed to the editor (Barbara Bennett) or to the author. . . . Free copies of Federal Reserve publications can be obtained from the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 974-2246.

Research Department
Federal Reserve
Bank of
San Francisco

P.O. Box 7702
San Francisco, CA 94120