

Research Department  
Federal Reserve  
Bank of  
San Francisco

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## More on the Dollar

The recent troubles of the dollar have reminded some observers of the nervous days of the early 1970's when currency "crises" enlivened the days and nights of central bankers. Yet a good deal has been learned, or perhaps re-learned, since that time about the determinants of exchange-rate behavior. We know that rates are fundamentally determined by the *relative* quantities of national money supplies in conjunction with *relative* national rates of economic growth. Where money growth rates exceed the growth of available domestic goods, the resultant excess supply of domestic money leads to increased purchases of foreign goods and assets—which situation then tends to bring about a depreciation of the currency. This proposition was demonstrated in the wake of the December 1971 Smithsonian agreement. Despite the existence of a structure of nominally "fixed" exchange rates, sharp variations in national fiscal and monetary policies made it impossible to maintain the Smithsonian rates after February 1973.

Of course, changes in net demand for foreign goods and assets, which are not proximately related to such fundamentals as the behavior of the money stock or real output, can alter demand or supply conditions in foreign-exchange markets on a day-to-day or even a month-to-month basis. Thus, in view of the absence of any change in

exchange-rate "fundamentals," we must look to these other factors in order to explain the dollar's recent gyrations. Indeed, it could be argued that the earlier conjunction of a steady dollar and record trade deficits could only be explained in terms of a high level of capital inflows, and similarly, that the more recent depreciation of the dollar could be explained in terms of a reduced level of such inflows.

### Shift in capital flows

This shift in U.S. capital inflows had been foreshadowed by late-1976 monetary developments. For 1976 as a whole, the IMF's index of U.S. liabilities to official foreigners rose by about \$11.0 billion, while the comparable figure for private foreigners indicated investment of about \$13.5 billion. But during the first quarter of 1977, the same measure of foreign official capital inflows stood at an \$18.2 billion annual rate, while inflows from private sources abroad were running at a *negative* annual rate of \$17.2 billion. This sharp reversal of private capital flows may have reflected some anticipated weakness of the dollar in the wake of the fourth quarter's rapid rate of U.S. monetary expansion, when the broadly defined ( $M_2$ ) money supply grew at an annual rate of 13.1 percent. Thus, with the deficit continuing and private funds flowing overseas, the dollar became highly vulnerable to depreciation by the end of the first quarter of 1977.

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Following this April's upsurge in the U.S. money supply, when the M<sub>2</sub> aggregate grew at a 14.4-percent annual rate, private concern about the dollar probably increased, and foreign central banks found themselves under greater pressure to prevent an appreciation of their currencies against the dollar. The emphasis by some officials on the benefits of "virtuous deficits," and their apparent unconcern about a possible depreciation in the value of the dollar, may have convinced foreign central banks that further attempts to resist dollar depreciation would require intervention on a scale that would produce considerable inflationary pressure at home. In any case, the dollar would depreciate whenever the level of intervention, relative to a combination of capital inflows and the trade balance, was allowed to fall.

The July depreciation of the dollar has been partially reversed and, in the absence of any new evidence of a more expansionary U.S. policy posture, is unlikely to be resumed. After all, those countries whose currencies have appreciated against the dollar—Germany, Japan and Switzerland—already face rising pressures at home to lower unemployment. These pressures to create jobs, along with the usual pressures to expand exports, suggest severe constraints upon the degree of dollar depreciation which those countries might be willing to accept.

#### **Traders and the dollar**

Some observers have argued that this latest episode of dollar depreciation represents another example of over-reaction on the part of

skittish traders—evidenced by the fact that, despite "fundamentals," the U.S. dollar at times even weakened against such traditionally "weaker" currencies as the pound sterling and the French franc. However, this argument may be misleading. It overlooks the fact that dollar exchange rates are a set of simultaneously determined prices, each of which must be consistent with an entire array of non-dollar cross rates.

The dollar will depreciate against, say, sterling whenever it depreciates faster against some third currency, like the yen, than sterling depreciates against the yen. In such a case, arbitrageurs will insure that the dollar depreciates against sterling by converting yen into dollars and then selling the dollars to buy sterling, until such triangular arbitrage aligns the direct dollar price of sterling with the implicit yen price of sterling and dollars, as well as with the implicit prices of all other "third currencies" in terms of sterling and dollars. On any given day, a rise in the dollar price of some third currency could exceed a rise in the sterling or French franc price of that same third currency, especially in view of an official intervention policy aimed at maintaining bilateral dollar-exchange rates. Such an event reflects no overreaction of the exchange markets. Rather it simply reflects the efficiency of arbitrageurs in maintaining the overall consistency of exchange rates.

#### **Domestic implications**

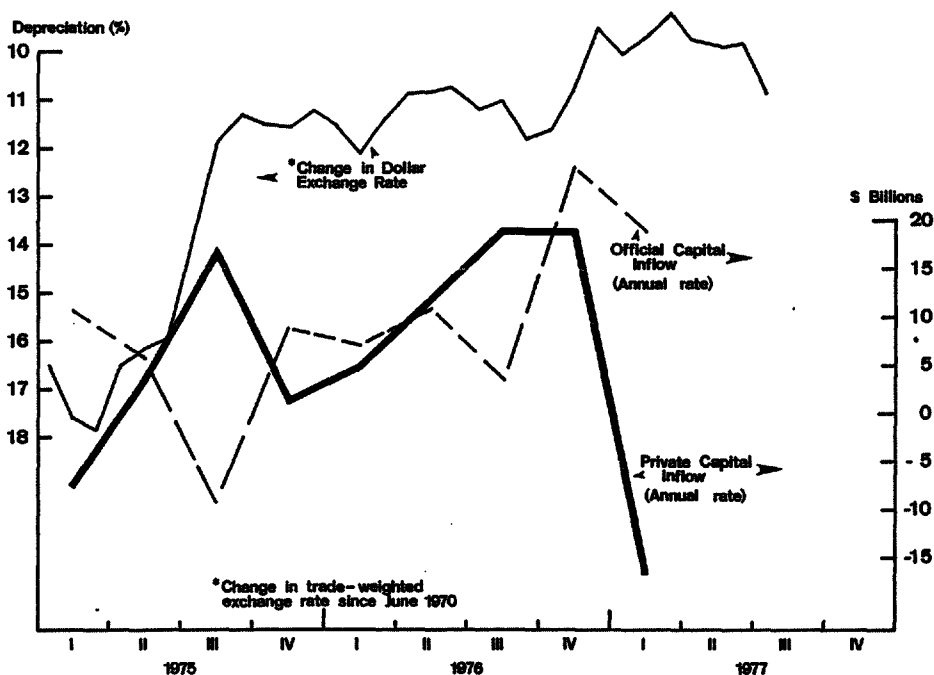
Any decline of the dollar, if not subsequently reversed, will of

course have tangible implications for U.S. producers and consumers. To the extent that a higher dollar price of foreign currencies causes a change in relative prices, U.S. producers of exports and import substitutes will experience an increase in demand for their products. However, this increased demand—and the attendant increase in employment—occur only when the depreciation involves a sustainable new equilibrium set of exchange rates. In many cases in the past, expansionary domestic policies have offset the reduction of domestic consumption required to keep sales of goods abroad above the amounts purchased abroad.

For U.S. consumers, currency depreciation means a rise in prices of

imported goods. It would, however, be a mistake to conclude from this that currency depreciation causes inflation. Rather the depreciation simply describes the inflation. Both the rise in the dollar price of domestic goods and the rise in the dollar price of foreign goods are symptoms of a net excess supply of dollars. In the recent case, the inflationary impact of higher-priced imports has only been delayed by heavy purchases of U.S. dollars by foreign governments. In any event, the dollar could well stabilize in the months ahead—although appreciating against some currencies and depreciating against others—given the achievement of current U.S. money growth targets and the absence of major shocks abroad.

John H. Makin



Source: International Financial Statistics

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**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**  
(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 7/27/77	Change from 7/20/77	Change from year ago	
			Dollar	Percent
Loans (gross, adjusted) and investments*	98,742	+ 269	+ 10,437	+ 11.82
Loans (gross, adjusted)—total	76,144	+ 373	+ 9,511	+ 14.27
Security loans	1,790	- 44	+ 487	+ 37.38
Commercial and industrial	23,658	+ 85	+ 2,034	+ 9.41
Real estate	24,626	+ 134	+ 4,181	+ 20.45
Consumer instalment	13,208	+ 68	+ 1,862	+ 16.41
U.S. Treasury securities	8,747	- 35	- 677	- 7.18
Other securities	13,851	- 69	+ 1,603	+ 13.09
Deposits (less cash items)—total*	97,298	+ 161	+ 8,381	+ 9.43
Demand deposits (adjusted)	27,781	+ 65	+ 2,715	+ 10.83
U.S. Government deposits	350	- 119	- 17	- 4.63
Time deposits—total*	67,379	+ 337	+ 5,388	+ 8.69
States and political subdivisions	5,632	- 13	- 414	- 6.85
Savings deposits	31,992	+ 45	+ 5,431	+ 20.45
Other time deposits‡	27,779	+ 232	+ 767	+ 2.84
Large negotiable CD's	10,337	+ 263	- 1,197	- 10.38
<b>Weekly Averages of Daily Figures</b>	<b>Week ended 7/27/77</b>	<b>Week ended 7/20/77</b>	<b>*Comparable year-ago period</b>	
<b>Member Bank Reserve Position</b>				
Excess Reserves (+)/Deficiency (-)	- 10	+ 74	+ 69	
Borrowings	8	6	1	
Net free(+)/Net borrowed (-)	- 18	+ 68	+ 68	
<b>Federal Funds—Seven Large Banks</b>				
Interbank Federal fund transactions				
Net purchases (+)/Net sales (-)	+ 153	+ 1,364	- 121	
Transactions with U.S. security dealers				
Net loans (+)/Net borrowings (-)	+ 152	+ 244	+ 18	

\*Includes items not shown separately. ‡Individuals, partnerships and corporations.

Editorial comments may be addressed to the editor (William Burke) or to the author. . . .  
Information on this and other publications can be obtained by calling or writing the Public  
Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120.  
Phone (415) 544-2184.