
FRBSF WEEKLY LETTER

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The Dollar and Policy Options

The phenomenal strength of the dollar in the foreign exchange markets — rising more than 50 percent on a trade-weighted average basis against other currencies since mid-1980 — has raised concern both here and abroad. On the one hand, U.S. business and government officials are chafing at the decline in U.S. international competitiveness that has resulted in a record \$107 billion trade deficit in 1984. On the other hand, foreign officials are concerned about the inflationary pressures arising from the higher domestic cost of imports caused by the decline in the value of their currencies against the dollar.

Against this background, the finance ministers of the United States, Great Britain, France, Germany and Japan met in Washington in January and issued a statement reiterating their commitment to coordinated intervention in the currency markets “whenever it is deemed helpful.” Market commentators interpreted the statement as signalling a significant departure from the established U.S. policy of minimal intervention, that is, intervention only to counteract disorderly conditions in the foreign exchange market. Many hoped that the Federal Reserve would now actively intervene to halt the dollar’s rise by large dollar sales in the foreign exchange market. This *Letter* considers the efficacy and desirability of using foreign exchange market intervention and, more generally, monetary policy to bring the dollar exchange rate down.

Sterilized intervention

An exchange intervention involves a central bank’s open market purchase or sale of a foreign currency against the domestic currency. Besides its impact on the exchange rate, the action also affects bank reserves in the same way as the central bank’s domestic open-market operations. For instance, when the Federal Reserve purchases the German mark with dollars, it injects reserves into the banking system just as a Federal Reserve open-market purchase of domestic securities does. Thus, an exchange intervention has a *monetary* dimension as well as a *pure exchange market* dimension.

The pure exchange market effect can be conceived as arising from a *sterilized* exchange intervention, that is, one in which the monetary effect is offset by a domestic open-market operation. In the example above, a sterilized Federal Reserve purchase of German marks would be one that is coupled with a simultaneous open-market sale of U.S. securities to “mop up” the additional liquidity injected into the banking system by the exchange intervention. When the Federal Reserve buys marks in the foreign exchange market, it invests the proceeds in interest-bearing, mark-denominated securities. The public holds fewer mark-denominated securities and more dollar deposits as a consequence. These additional dollar holdings of the public, in turn, are replaced by U.S. securities when the Federal Reserve undertakes an open market securities sale. The net outcome of a sterilized intervention operation to support the German mark, therefore, is that the public as a whole holds fewer mark-denominated securities and more dollar-denominated securities.

Investors may not be indifferent about the “currency mix” of securities in their portfolios, however. If they do have other preferences, they will try to restore their portfolios by buying mark-denominated securities and selling dollar-denominated securities. This will tend to place downward pressure on the dollar and cause it to depreciate.

Hence, whether a sterilized exchange intervention can have a significant and lasting effect on exchange rates depends on the extent to which the two types of securities substitute for each other in private portfolios. If they were perfect substitutes, there would be little or no effect on the exchange rate; for investors indifferent to the currency mix of securities, shifts in their relative supply caused by intervention operations would not matter. In contrast, the less the two securities are substitutable for one another, the greater the likely effect of sterilized exchange intervention on the exchange rate.

Empirical studies find, not surprisingly, that securities denominated in different currencies are not perfect substitutes for one another. Thus the question becomes, how large is the effect of sterilized

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exchange intervention? Besides the degree to which assets can be substituted for one another, the magnitude of the effect should also depend on the size of the intervention relative to the total size of the securities in the public's aggregate portfolio. Purely on *a priori* grounds, in view of the huge aggregate stock of domestic and foreign securities outstanding in private portfolios, it is hard to see how any realistic magnitudes of exchange intervention by major central banks, either in isolation or as a coordinated group, can have a lasting effect on exchange rates.

This inference has been borne out at least in part by empirical investigations. At the Versailles Economic Summit in 1982, the heads of state of major industrial nations ordered a joint study by their central banks on the effects of exchange intervention on the exchange market. In the report that was issued in April 1983, the Working Group stated after extensive statistical studies that there was little evidence of a significant *lasting* impact during normal times. More specifically, the report found that during episodes of great turmoil in the exchange market—for instance, in October 1978—coordinated intervention by major central banks was able to restore orderly market conditions. However, for the longer period since the beginning of floating exchange rates in 1973, there was little evidence of a systematic relationship between sterilized exchange interventions and exchange-rate changes, despite the many episodes of heavy interventions by the major central banks.

Monetary policy

The monetary dimension of exchange intervention, or "unsterilized" intervention, is likely to have a larger effect on the exchange rate, however. In the aforementioned case, if the Federal Reserve purchase of German marks is allowed to increase U.S. bank reserves, the effect on the money supply is similar to that of domestic open-market securities purchases.

A monetary stimulus is likely to depreciate the value of the dollar quite significantly through two channels: prices and real interest rates. Because prices adjust slowly, real liquidity in the economy initially expands in proportion to the rise in money growth. This causes real interest rates to fall and leads to dollar depreciation as dollar investments become less attractive compared to investments abroad.

The initial fall of the dollar takes place in both nominal and real (adjusted for domestic and foreign relative prices) terms, and therefore translates into a rise in the international competitiveness of U.S. exports. The second round of adjustment begins to eliminate the improvement in the U.S. competitive position, however. As prices begin to rise in response to more rapid money growth, real liquidity falls. The fall in real liquidity, in turn, puts upward pressure on real interest rates and the *real* value of the dollar. Higher real rates again make the dollar an attractive investment.

Most empirical work suggests that a rise in the rate of money growth is fully reflected in a higher domestic price level after approximately two years. Moreover, even the temporary dollar depreciation in real terms only improves the U.S. trade balance with a considerable lag. Empirical studies find that the trade balance improves about six months after a dollar depreciation and keeps on improving for up to two years. As the real value of the dollar gradually appreciates back to its initial level, however, the trade-improvement effect also wears off—largely by the end of the third year following the initial monetary stimulus.

This suggests that although a monetary expansion could bring about a dollar depreciation fairly quickly, its intended effects would be transitory. Against this short-term gain, one must weigh the costs to society of a potential rekindling of infla-

tion caused by the substantial acceleration of money-growth rates that would be needed to bring about a significant depreciation of the dollar exchange rate. Considering the hard-won gains in bringing down the public's "inflation psychology" in recent years, taking this risk is difficult to justify. Moreover, past experience both in this country and abroad shows that repeated attempts at exploiting this short-term gain would soon see it disappear.

Finally, many analysts believe that at the heart of the dollar's rise, at least over the past two years, is a "real side" phenomenon that is associated with the rise in the federal government budget deficit and that is not monetary in nature. A long-run solution to the problem, therefore, lies outside the realm of Federal Reserve policies, and must be sought in a resolution of the federal budget deficit problem.

Hang-Sheng Cheng and Michael Hutchison

MONETARY POLICY OBJECTIVES FOR 1985

Federal Reserve Chairman Paul Volcker presented a report to the Congress on the Federal Reserve's monetary policy objectives for 1985 on February 20. The report includes a summary of the Federal Reserve's monetary policy plans along with a review of economic and financial developments in 1984 and the economic outlook in 1985. Single or multiple copies of the report can be obtained upon request from the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco, CA 94120; phone (415) 974-2246.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding	Change from	Change from	
	02/13/85	02/06/85	Dollar	Percent ⁷
Loans, Leases and Investments ^{1 2}	187,541	- 628	12,177	6.9
Loans and Leases ^{1 6}	169,340	- 717	14,230	9.2
Commercial and Industrial	52,070	- 208	5,894	12.8
Real estate	62,163	148	2,567	4.3
Loans to Individuals	32,494	24	5,666	21.1
Leases	5,292	3	282	5.6
U.S. Treasury and Agency Securities ²	11,116	79	- 1,194	- 9.7
Other Securities ²	7,085	10	- 857	- 10.8
Total Deposits	192,818	- 930	7,499	4.0
Demand Deposits	44,182	- 782	130	0.3
Demand Deposits Adjusted ³	30,246	547	469	1.6
Other Transaction Balances ⁴	12,903	- 323	888	7.4
Total Non-Transaction Balances ⁶	135,733	176	6,481	5.0
Money Market Deposit Accounts—Total	43,628	195	3,527	8.7
Time Deposits in Amounts of \$100,000 or more	39,114	- 69	1,219	3.2
Other Liabilities for Borrowed Money ⁵	20,371	757	- 249	- 1.2
Two Week Averages of Daily Figures	Period ended	Period ended		
	02/11/85	01/28/85		
Reserve Position, All Reporting Banks				
Excess Reserves (+)/Deficiency (-)	31	123		
Borrowings	21	57		
Net free reserves (+)/Net borrowed(-)	10	66		

¹ Includes loss reserves, unearned income, excludes interbank loans

² Excludes trading account securities

³ Excludes U.S. government and depository institution deposits and cash items

⁴ ATS, NOW, Super NOW and savings accounts with telephone transfers

⁵ Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

⁶ Includes items not shown separately

⁷ Annualized percent change