Research Department
Federal Reserve
Bank of
San Francisco

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FRBSF Weekly Letter

Money, Stocks and Exchange Rates

Strong cross currents have developed in recent economic data. On the one hand, the U.S. inflation problem has worsened, with the consumer index rising at a 9.3-percent annual rate in the first quarter of the year—almost twice the rate recorded during the second half of last year. On the other hand, both the stock market and the foreign-exchange market strengthened considerably during April, with U.S. stock averages rising about 8 percent and the dollar-deutschemark exchange rate rising about 2½ percent. These apparent contradictions may perhaps be reconciled, however, within the context of a monetary theory of exchange rates.

According to this theory, a sustained and systematic acceleration of money growth leads over time to a rise in inflation expectations. The theory may be illustrated with reference to the activities of the three major trading nations—the U.S., West Germany and Japan. Over the last three years, the U.S. concentrated on curbing its serious unemployment problem, while Germany and Japan concentrated on anti-inflation measures. These contrasting policy actions could be seen in an acceleration of money growth in this country and a deceleration of money growth in Germany and Japan.

Money and prices
Between the third quarter of 1976 and the third quarter of 1977, for example, the year-over-year growth of the M_2 money supply increased from 9 to 11 percent in the U.S., but decreased from 11 to 9 percent in Germany and from 15 to 11 percent in Japan. Over that same time-span, the year-over-year increase in wholesale prices increased from 4 to 6 percent in the U.S., but decreased from 7 to a minus 1 percent in Germany and from 7 to 1 percent in Japan. Consequently, inflation expectations tended to rise in the U.S. but to decline in Germany and Japan.

International investors wishing to preserve the real value of their portfolios responded to this widening inflation-expectations gap by shifting their assets out of dollars and into deutschemarks and yen. Their actions consequently reduced the value of U.S. securities, as they sold off some of their dollar-denominated assets. Their actions also tended to depreciate the dollar relative to the D.M. and yen, as these dollar assets were converted into D.M. assets and yen assets. And again, their actions tended to raise the value of German and Japanese securities due to increased demand.

These expectations-fed portfolio shifts could lead to movements in the dollar's exchange value which would be disproportionate to actual differences in inflation rates. This would happen whenever investors expected the inflation gap to widen over the period in which they were planning to hold their securities. Thus, they would sell dollars not only on the basis of the current inflation rate, but also on the basis of the expected inflation rate

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over the next several years. This would make the dollar undervalued in terms of *current* purchasing power against the D.M. and yen, but not undervalued in terms of *expected* purchasing power in future periods.

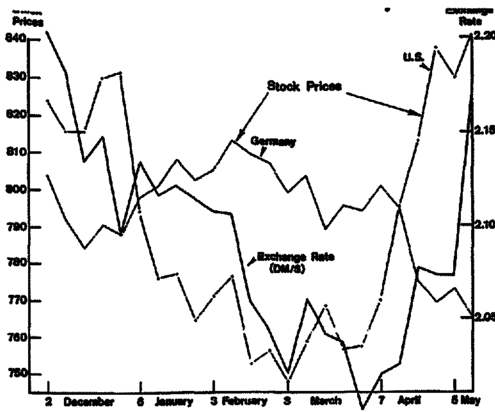
The monetary analysis would attach only secondary importance to real factors in the determination of exchange rates. For example, massive oil imports would affect the international value of the dollar, only to the extent that the oil-exporting countries stopped investing in dollar assets because of an upward revision in their inflation expectations regarding the dollar. Again, rising non-oil trade deficits would tend to be a result rather than a cause of dollar weakness; a faster growth of U.S. imports over exports would reflect a relatively more stimulative U.S. policy, and hence a relatively faster rate of growth of income and output in this country.

Shift in policy?

At this stage, we may be witnessing a shift in policy, and thus a shift in policy consequences, in the three major trading countries. The Germans and the Japanese have effectively achieved their goals of eliminating domestic inflation. In late 1977 and early 1978, as noted above, both countries recorded slight declines in wholesale prices in relation to year-ago levels. Meanwhile, the U.S. has effectively achieved its goal of full employment. Over a strong three-year-long business expansion, the U.S. has created almost 10 million new jobs – about as many as in the eight preceding years put together. The number of jobless now account for about 6 percent of the labor force, but this apparently reflects effective full employment, given a changing labor-force structure and other factors which tend to boost the reported jobless figures.

We might thus expect the Germans and Japanese to begin more stimulative policies, and the U.S. to focus more on its inflation problem. In the Japanese case, there is little evidence of such a shift, but the U.S. and German data suggest that we may be witnessing policy shifts in those two countries. U.S. M_2 growth, on a year-over-year basis, has decelerated from 11 to 8 percent over the past two quarters. In contrast, German M_2 growth reached a low point of 8 percent in the second quarter of 1977, but then rose to 10 percent in the first quarter of this year.

These developments, if continued, could eventually cause a narrowing of the inflation-rate gap between the two countries. To the extent that investors forecast future inflation on the basis of current money growth, inflation *expectations* may already have been affected. Such a shift in expectations, by inducing a shift in desired portfolios away from D.M. assets and toward dollar assets, could help ac-



count for the recent Wall Street rally and the concurrent turnaround in the foreign-exchange market.

During April, the German stock-market index fell from 800 to 769, while the U.S. (Dow Jones) index rose from 769 to 837. At the same time, the dollar rose about 2½ percent relative to the D.M., from 2.019 to 2.073 D.M. (see chart). These movements stood out strikingly in contrast to the trends of the December-March period. In that earlier period, investors reduced their demand for U.S. assets, depressing the U.S. stock market; they then converted their proceeds into D.M., depressing the dollar-D.M. exchange rate; and then they purchased German stocks, leading to a small rise in those stock values.

Japanese statistics would show somewhat similar results. The latest data show no change in a relatively restrictive monetary policy, and hence no shift in inflation expectations. International investors thus have exhibited no desire to shift their portfolios out of yen. As a result, the Japanese stock market has continued to rise over the past four months—although at a decelerated pace—and the exchange rate has stabilized at around ¥225 per dollar in April after falling in previous months.

U.S. policy and inflation

Why did the dollar-D.M. portfolio shift occur in April and not at some other time? Perhaps because investors perceived a shift in economic priorities on the part of the U.S. Administration. Previously, the reduction of unemployment had appeared to be the major target of policy, but the fight against inflation took center stage during April, as reflected in the strong statements made by both President Carter and Federal Reserve Chairman Miller. This development, along with the observed deceleration in money growth, could convince investors of the reality of the policy turnaround, and thus lead them to expect future developments along the same line.

None of this lessens the severity of this country's current inflation problem. The monetary data suggest, however, that the U.S. inflation will not worsen in 1979, and that the gap between U.S. and German inflation rates will then begin to narrow. The crucial point is that, given the increased sensitivity of market participants to inflation—both actual and expected—monetary policy is likely to become more influential than ever before. Investors throughout the world now appear to base their inflation forecasts not only on actual inflation, but also on observed money-supply trends. In the present context, this suggests that if the major trading nations continue with their present policies, conditions will be set for an improved U.S. inflation performance and for a permanent recovery in the value of the dollar.

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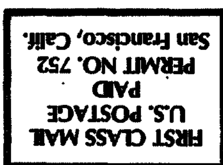

BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 5/3/78	Change from 4/26/78	Change from year ago Dollar	Percent
Loans (gross, adjusted) and investments*	110,779	+ 892	+ 14,950	+ 15.60
Loans (gross, adjusted) – total	88,036	+ 667	+ 14,334	+ 19.45
Security loans	1,999	+ 102	+ 249	+ 14.23
Commercial and industrial	27,165	+ 171	+ 3,315	+ 13.90
Real estate	29,410	+ 177	+ 6,336	+ 27.46
Consumer instalment	15,547	+ 61	+ 2,921	+ 23.13
U.S. Treasury securities	8,335	+ 313	– 433	– 4.94
Other securities	14,408	– 88	+ 1,049	+ 7.85
Deposits (less cash items) – total*	106,538	– 71	+ 12,723	+ 13.56
Demand deposits (adjusted)	28,643	– 1,019	+ 2,504	+ 9.58
U.S. Government deposits	725	+ 257	+ 170	+ 30.63
Time deposits – total*	75,419	+ 910	+ 9,987	+ 15.26
States and political subdivisions	7,251	+ 158	+ 1,600	+ 28.31
Savings deposits	31,475	– 4	– 631	– 1.97
Other time deposits‡	34,003	+ 738	+ 8,123	+ 31.39
Large negotiable CD's	15,762	+ 751	+ 6,746	+ 74.82

Weekly Averages of Daily Figures	Week ended 5/3/78	Week ended 4/26/78	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves(+)/Deficiency (–)	+ 22	– 58	+ 19
Borrowings	66	51	3
Net free(+)/Net borrowed (–)	– 44	– 109	+ 16
Federal Funds—Seven Large Banks			
Interbank Federal fund transactions			
Net purchases (+)/Net sales(–)	+ 1,695	+ 1,532	– 248
Transactions with U.S. security dealers			
Net loans (+)/Net borrowings (–)	– 63	+ 76	+ 214

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

Editorial comments may be addressed to the editor (William Burke) or to the author. . . .
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