Research Department
Federal Reserve
Bank of
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FRBSF Weekly Letter

A Yen for Yen

With the yen/dollar exchange rate falling below the magic 200 mark, many analysts are asking why the Japanese should be so "lucky" as to have their currency valued so highly in the foreign-exchange markets. Frequently they ask, "What are the Japanese monetary authorities doing to make their currency appreciate?" The answer is that the yen/dollar exchange rate clearly reflects the different courses followed by the U.S. and Japanese economies following the 1974-75 recession. To quote the annual report of the Bank for International Settlements, "In brief, the upswing in the United States followed quite traditional cyclical lines... In Japan, fiscal conservatism and a rising exchange rate, against a background of radically changed growth prospects, ...resulted in the persistence of very weak effective demand."

In 1973, both the U.S. and Japan recorded small current-account deficits in their balance of payments. But four years later, in 1977, the U.S. found itself with a $20-billion current-account deficit while Japan posted an $11-billion surplus. Some analysts claim that these differential figures are the *causes* of the improved position of the yen and the deteriorating position of the dollar. Perhaps more likely, however, both figures can be seen as the *results* of the same phenomenon—the differential inflation rates resulting from different growth policies.

Other factors must be involved to help explain why the yen has appreciated 37 percent against the dollar in the past year and a half—especially since Japanese inflation rates until recently were significantly higher than U.S. rates. Certain structural shifts may be involved, such as those that have occurred in response to the "oil shock" of the 1973-74 period. Still, a large portion of the recent movement in exchange rates reflects the differential movements in money, prices and output of the past several years.

Different growth patterns

Japan, by its historical standards, pursued a relatively cautious policy during this period. The M_1 money supply, which had grown at a 19.1-percent average annual rate over the 1960-73 period, gradually decelerated thereafter, reaching 12.5 percent in 1976 and 8.2 percent in 1977 (see chart). Not surprisingly, economic growth mostly decelerated during this period as well. Real GNP, which had increased at a 10.3-percent annual rate over the 1960-73 period, grew by 5.1 percent in 1976 and 5.3 percent in 1977. And consumer-price inflation also showed signs of deceleration from the early 1970's peak, with prices rising 9.4 percent in 1976 and 6.2 percent in 1977—about the same as the average rate of the 1960-73 period.

The U.S. by its standards followed a somewhat more liberal policy. The M_1 money supply, which had grown at only a 5.0-percent annual rate over the 1960-73 period, increased 6.0 percent in 1976 and 7.8 percent in 1977. Real GNP, which had grown at a 4.0-percent rate between 1960 and 1973, grew by 4.7 percent in 1976 and

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5.7 percent in 1977. Again, consumer prices accelerated in the past several years; in contrast to the 3.2-percent average growth of the 1960-73 period, CPI inflation reached 5.0 percent in 1976 and 6.7 percent in 1977. (All annual figures are computed on a fourth-quarter to fourth-quarter basis.)

Clearly, then, the U.S. and Japan did not follow similar patterns of cyclical recovery over the past several years. The U.S. grew faster than its long-run growth trend, while Japan fell below its long-run trend. One consequence, as indicated, was a differential pattern of inflation, with prices decelerating in Japan but accelerating in this country. In 1977, consumer prices rose faster (0.5 percentage points) in this country than in Japan, and the difference was considerably wider (6.7 percentage points) in the wholesale-price series.

Different foreign-exchange patterns

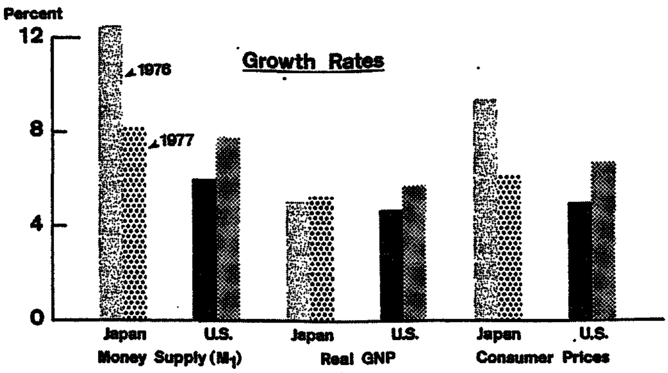
The foreign-exchange markets clearly reflected these differences in growth policies and in inflation rates. Thus, beginning about a year and a half ago, the yen/dollar exchange rate began to fall at a rather steady pace. By July 1978, the rate was 37 percent below the rate at the end of 1976.

This decline probably also reflected anticipated exchange-rate behavior. This can be seen by considering developments in the forward market—that is, the market which allows buying or selling foreign exchange for delivery at some specified future date. Between July 1977 and June 1978, the three-month "forward premium or discount"—the difference between the forward rate and the spot rate, divided by the spot rate—went from practically zero to a 5.1-percent premium on the yen. Over this period, then, the foreign-exchange markets more and more came to anticipate a further appreciation of the yen. To the extent that exchange rates reflect differential inflation rates, the forward market was signalling an anticipated widening in inflation rates. And as it turned out, the forward market proved correct; between the third quarter of 1977 and the first quarter of 1978, the differential inflation rate (U.S. less Japan) widened from 4.4 to 5.1 percentage points for consumer prices, and from 2.2 to 11.7 percentage points for wholesale prices.

Classical explanation

Classical economists, such as David Hume and David Ricardo, could help explain the plight of the dollar vis-a-vis the yen. In what is now a classic statement, Ricardo wrote in 1809, "The temptation to export money in exchange for goods, or what is termed an unfavorable balance of trade, never arises but from a redundant currency." More recent economists have echoed Ricardo's statement. For example, R. G. Hawtrey said in 1927, "An expansion of credit *causes* an unfavorable balance of payments."

As Ricardo's and Hawtrey's statements suggest, the balance of payments and



the exchange rate represent the avenue by which a country restores equilibrium between the demand for, and supply of, its money. In the case of an excess supply, equilibrium may result from a quantity adjustment—represented by the exchange of domestic money for foreign goods—and/or a price adjustment—represented by a depreciation of the domestic currency.

In the past two years, the U.S. and Japan have exhibited divergent money-growth rates. Between 1976 and 1977, both the M_1 and the M_2 measures accelerated in this country but decelerated in Japan. Recent price movements have been consistent with these divergent money-growth rates. In the U.S., both consumer and wholesale prices have risen at an accelerated pace, reaching double-digit levels in 1978. But in Japan, by early 1978, consumer prices were almost stable, and wholesale prices were actually declining. That situation of course reflected the sharp appreciation of the yen rather than domestic developments, because of the reduction of import prices brought about by the improving exchange rate.

Japan's future

Japan has recently begun to stimulate its economy through increased central-government expenditures, but little reflection of this has yet been seen in money-supply growth. To the extent that the balance of payments reflects excess money demand, this development would be consistent with a continued payments surplus.

According to a recent O.E.C.D. economic-outlook publication, "The current balance may show a surplus in 1978 of $15–20 billion. A progressive reduction is forecast in the course of the coming twelve months but, by the first half of 1979, the surplus could still be rather large." Will this surplus (if it continues) mean a continued appreciation of the yen vis-a-vis the dollar? That would depend on market expectations of differential U.S.-Japan inflation rates, and on the attempts by both countries to restore equilibrium between the domestic demand for, and supply of, their respective currencies.

The model presented here is essentially a competitive-market model, and Japan doesn't fit neatly into that model. Recent price changes certainly don't warrant the 37-percent appreciation of the yen against the dollar that has occurred since early 1977. (For that matter, the yen has also appreciated against the deutschemark, despite an inflation rate that is twice the German rate.) That shift in exchange rates goes far beyond what would be expected from the traditional "purchasing power parity" relationship of prices and exchange rates. Yet despite the unique structural characteristics of the Japanese economy, a large part of the explanation for differing exchange rates still reflects differing rates of change of money, output and prices.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 8/2/78	Change from 7/26/78	Change from year ago Dollars	Change from year ago Percent
Loans (gross, adjusted) and investments*	114,653	− 341	+ 15,405	+ 15.52
Loans (gross, adjusted)—total	92,555	− 381	+ 16,004	+ 20.91
Security loans	1,838	− 713	− 30	− 1.61
Commercial and industrial	27,875	+ 198	+ 4,125	+ 17.37
Real estate	31,668	+ 201	+ 6,676	+ 26.71
Consumer instalment	16,725	+ 109	+ 3,648	+ 27.90
U.S. Treasury securities	8,133	− 7	− 731	− 8.25
Other securities	13,965	+ 47	+ 132	+ 0.95
Deposits (less cash items)—total*	110,388	− 111	+ 12,560	+ 12.84
Demand deposits (adjusted)	30,373	− 211	+ 2,674	+ 9.65
U.S. Government deposits	307	− 185	− 179	− 36.83
Time deposits—total*	77,798	+ 157	+ 10,148	+ 15.00
States and political subdivisions	6,652	+ 57	+ 1,233	+ 22.75
Savings deposits	31,529	− 76	− 396	− 1.24
Other time deposits‡	36,863	+ 140	+ 8,534	+ 30.12
Large negotiable CD's	17,415	+ 36	+ 6,671	+ 62.09

Weekly Averages of Daily Figures	Week ended 8/2/78	Week ended 7/26/78	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves(+)/Deficiency (−)	+ 77	− 14	+ 97
Borrowings	82	74	15
Net free(+)/Net borrowed (−)	− 5	− 88	+ 82
Federal Funds—Seven Large Banks			
Interbank Federal fund transactions			
Net purchases (+)/Net sales(−)	+ 366	+ 3	+ 195
Transactions with U.S. security dealers			
Net loans (+)/Net borrowings (−)	+ 346	+ 718	+ 196

*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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