Dollars and Speculation

Many exchange-market analysts believe that speculators sometimes cause the dollar to deviate from the path it would normally follow based solely on economic developments. Occasionally, since early 1983, analysts have used this argument to explain the behavior of the dollar. Exchange traders use all available information, including expectations of future events and policies, when buying and selling currency. Sometimes when new information becomes available, it is incomplete or partially incorrect, thus traders are slow to form views about its implications. Analysts then may rely solely on recent movements in an exchange rate to indicate market sentiment and future movements in the rate. Traders might then buy an appreciating dollar, reinforcing the rise and expectations. More and more traders might buy the appreciating currency, perpetuating the speculative run. The process continues, and the exchange rate moves further away from its “equilibrium,” as long as participants believe that expectations of further appreciation outweigh possible losses associated with an end to the speculative run. The further the exchange rate deviates from equilibrium, the greater the likelihood that the run will end and that investors will incur losses. Speculative runs probably do not last very long, but they could form and fade away frequently. While they could be influential in the short term, they do not adequately explain long swings in exchange rates.

Recent Trends

The dollar has depreciated about 11 percent on a nominal and a real trade-weighted basis since February 1985. This depreciation is substantial in view of the dollar’s persistent advance in recent years. As yet, however, it has offset only a small portion of the dollar’s appreciation. Unless it continues, the depreciation’s influence on the trade balance and on price levels is likely to be small. The recent depreciation of the dollar, in large part, seems to reflect uncertainty about the future course of U.S. monetary policy. Economic activity appears to be slowing, federal borrowing requirements remain large, and the U.S. banking system is burdened with troubled agricultural and international loans. To exchange-market participants, these developments increase the likelihood that the Federal Reserve System might pursue a more expansionary monetary policy in the future. Such a policy would promote a nominal dollar depreciation by raising prices. As explained earlier, a nominal depreciation of the dollar would do little to enhance the United States’ international competitiveness. A more expansionary monetary policy also could lower the real exchange value of the dollar, because price levels often respond slowly to changes in monetary policy. The real depreciation, however, would only be temporary.

While the factors supporting the dollar’s real appreciation in recent years no longer seem to favor a continued appreciation, it is too soon to argue that these factors favor a sharp dollar depreciation. The recent decline in the dollar’s real exchange value is not much larger than that of early 1984, early 1983, or late 1981. To the dismay of exchange-rate forecasters, all of these depreciations reversed themselves.

The recent experience in exchange markets has shown that, because of the complicated interactions among economic variables and expectations, exchange market analysts cannot forecast accurately the near-term path of exchange rates. Such failure is not uncommon when one is dealing with prices of financial assets.

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ECONOMIC COMMENTARY

The Dollar in the Eighties

by Owen F. Humphage and Nicholas V. Karamouzis

Since mid-1980, the dollar has experienced an unprecedented appreciation in foreign-exchange markets. On a trade-weighted basis, the dollar appreciated 77 percent from its low in mid-1980 to its most recent peak in February 1985. The sharp appreciation of the dollar put U.S. trade-related industries at a competitive disadvantage in world markets and contributed to the record $107 billion trade deficit in 1984. The dollar has since depreciated by approximately 11 percent, but remains high.

The phenomenal appreciation of the dollar was especially puzzling to exchange-market analysts who had widely anticipated a depreciation of the dollar in 1983 and again in 1984. These analysts based their expectations on a limited set of economic variables, such as the growing current-account deficit, which they thought would have a strong and consistent influence over movements in the dollar. The expected depreciation of the dollar, however, failed to materialize.

This Economic Commentary identifies factors that help explain exchange-rate patterns in recent years and concludes that none of these factors provides a complete or consistent explanation of the behavior of the dollar over this period. The review emphasizes the need to exercise caution when attempting to project exchange-rate trends.

The Dollar and Inflation

In part, the unprecedented appreciation of the dollar since mid-1980 was an adjustment to a slower pace of inflation in the United States as compared to the pace of inflation in many other industrialized countries. If this were the only factor underlying the dollar’s movements, the adverse impacts on production and employment would be quite limited.

According to one theory, exchange rates tend to adjust so that a dollar, after conversion to a foreign-currency equivalent, buys as much in a foreign country as in the United States. The currencies of countries with low rates of inflation should appreciate against the dollar, but remain high.

Movements in exchange rates that simply offset inflation-rate differentials among countries are called nominal exchange-rate movements. Nominal exchange-rate movements do not alter the international competitive positions of nations and, therefore, do not contribute to a deterioration in a nation’s trade balance.

Movements in exchange rates that either exceed or fall short of the adjustments for inflation-rate differentials represent real exchange-rate movements. Real exchange-rate movements alter the relative prices of traded goods among countries and, therefore, can have important influences on real worldwide economic activity.

Movements in the trade-weighted dollar do correspond to movements in the differential between the inflation rate in the United States and the trade-weighted inflation rate of our major trading partners (see chart 1). The dollar depreciated sharply between 1977 and 1980, as inflation in the United States accelerated relative to that in other industrialized nations. As Federal Reserve System monetary managers lost confidence in the resolve of U.S. policymakers to adopt and maintain a credible anti-inflation policy.

Federal Reserve Bank of Cleveland

September 1, 1985

1. The trade-weighted dollar is an index constructed as the weighted sum of the dollar’s exchange rate relative to the currencies of 10 important trading partners. The weights are based on each country’s worldwide trade share.

2. The U.S. current account measures imports and exports of goods and services and unilateral transfers.
Economists have identified numerous factors that help explain the behavior of real exchange rates. These “fundamentals” include inflation-adjusted interest-rate differentials, unsustainability of inflation differentials in productivity growth, and risk factors. Unfortunately, none of these factors, or even combinations of them, explains the exchange-rate movements with a satisfactory degree of precision. The impact of each, while continuous, is frequently diluted or completely overwhelmed by other market influences, including such unquantifiable factors as political events and expectations.3

Exchange-rate analysts have offered three major explanations for the rapid, real appreciation of the dollar since 1982. One argument is that inflation, or “real” interest-rate differentials favored holding dollar-denominated assets over foreign-currency-denominated assets. A second suggestion is that threats of instability in other countries have enhanced the demand for some classes of dollar-denominated assets. A third explanation attributes some of the dollar's recent strength to a shift in risk rather than to basic economic factors. Each of these arguments is explored below.

Real Interest-Rate Differentials

Interest rates are determined by the supply of and demand for loanable funds. In the United States, households are the single most important source of loanable funds. The corporate and government sectors use these funds to finance their respective investments and deficit spending. The Federal Reserve System influences the supply of funds by regulating the creation of credit through the banking system. If the demand for loanable funds exceeds the supply, real interest rates will rise, thus raising the demand for long-term investment, to encourage saving, and to clear the loanable-funds market.

In an international setting, the rise in real interest rates on dollar-denominated assets tends to increase demand for foreign-denominated assets. Foreigners, however, first must obtain dollars to buy dollar-denominated assets and, in doing so, raise the dollar's exchange value. The increased demand for dollar-denominated assets will continue as long as the expected return on dollar assets exceeds the expected return on foreign assets.

International investors receive a two-part return from holding dollar assets. They earn interest from the investments, plus any gains or losses from expected exchange-rate movements. The increased demand for dollar-denominated assets in response to higher interest-rate differentials causes an immediate appreciation of the dollar above its long-term value. Investors, therefore, expect the dollar to depreciate in the future. In fact, the expected dollar depreciation should exactly offset the real interest-rate differential and equalize international rates of return.4 As long as domestic real interest rates exceed foreign rates, the exchange rate should exceed its long-run expected value.

The immediate dollar appreciation, however, weakens exports and encourages imports, causing a gradual deterioration in the current-account balance. This deterioration provides foreign investors with the increased supply of dollars required to purchase additional dollar-denominated assets. Thus, a deterioration in the current-account balance is necessary if the United States is to gain additional foreign savings.

In recent years, U.S. real interest rates frequently have exceeded historic levels. As chart 2 shows, interest rates here and abroad seem to have risen faster than interest rates in most other industrialized countries. While many analysts believe that the United States has been a net saver for the past three years, some analysts expect the deficit to remain roughly equal to 5 percent of GNP throughout the decade. During the 1970s, the federal budget deficit averaged approximately 2 percent of GNP; during the 1980s, it rarely exceeded 1 percent.

The relationship between the deficit and interest rates is not simple; it depends on how fiscal policies and the Safe-Haven View

The dollar's real appreciation could result from the perception of the United States as a “safe-haven” for investments. If Americans and foreigners believe that the dollar is more reliable than investments in the United States, they will invest more here that abroad, even when foreign assets offer a higher yield than dollar assets. Such perceived risks reflect confidence in the dollar's prospects. For example, if the dollar appreciates, foreign investors might confiscate assets, restrict the free flow of capital, tax foreign investments excessively, or fail to earn enough foreign exchange to meet external obligations.

The dollar's safe-haven role derives from the high level of political stability in the United States, from its large, diversified economy, and from the 1970s, when U.S. inflation was relatively stable economic growth. Dollar-denominated assets are widely held and used in international transactions not directly involving Americans. Broad liquid markets exist for dollar-denominated assets, so investors can easily trade dollar assets without fear that their individual trades will affect prices adversely. At times during 1981, dollar accelerated, the attractiveness of dollar assets waned. The recent success


4. We assume here that holding both securities involves similar risks.


In October 1979, however, the Federal Reserve made a more concerted effort to reduce inflation. By the early 1980s, the "safe-haven role" of the dollar in the United States slowed considerably. This, in turn, lowered the inflation rate in the United States compared to inflation rates in most other industrial countries and contributed to the sharp appreciation of the dollar. Chart 1 also indicates that the dollar appreciation exceeded that dictated by inflation-rate differentials. By the early 1980s, the inflation-rate differential no longer favored a further dollar appreciation. While the dollar remains the world's reserve currency, its exchange rate remains below inflation rates in most other major developed countries, the differential has narrowed over the past two years. The dollar, however, has appreciated 31 percent on a real trade-weighted basis since 1982.

Determinants of Exchange Rates

Economists have identified numerous factors that help explain the behavior of real exchange rates. These "fundamentals" include inflation-adjusted interest-rate differentials, unsustainability of exchange rates, differences in productivity growth, and risk factors. Unfortunately, none of these factors, or even combinations of them, reliably explain exchange-rate movements with a satisfactory degree of precision. The impact of each, while explained by exchange-rate movements with a satisfactory degree of precision.

Real Interest-Rate Differentials

Interest rates are determined by the supply of and demand for loanable funds. In the United States, households are the single most important source of loanable funds. The corporate and government sectors use these funds to finance their respective investments and deficit spending. The Federal Reserve System influences the supply of loanable funds by regulating the creation of credit through the banking system. If the demand for loanable funds exceeds the supply, real interest rates increase, thereby attracting long-term investment, to encourage savings, and to clear the loanable-funds market.

In an international setting, the real interest rate on dollar-denominated assets tends to attract foreign savings. Foreigners, however, first must invest in dollar-denominated assets and, in doing so, raise the dollar's exchange value. The increased demand for dollar-denominated assets will continue as long as the expected return on dollar assets exceeds the expected return on foreign assets.

International investors receive a two-part return from holding dollar assets. They earn interest from the investments, plus any gains or losses from expected exchange-rate movements. The increased demand for dollar-denominated assets in response to an interest-rate differential causes an immediate appreciation of the dollar above its long-term value. Investors then frequently lower U.S. inflation to depreciate the future. In fact, the expected dollar depreciation should exactly offset the real interest-rate differential and equalize international rates of return. As long as domestic real interest rates exceed foreign rates, the exchange rate should exceed its long-run expected value.

The immediate dollar appreciation, however, weakens exports and encourages imports, causing a gradual depreciation in the current-account balance. This deterioration provides foreign investors with the increased supply of dollars required to purchase additional dollar-denominated assets. Thus, a deterioration in the current account is necessary if the United States is to gain additional foreign savings.

In recent years, U.S. real interest rates frequently have exceeded historical levels. As chart 2 shows, interest rates here and abroad should be roughly equal, and federal deficits certainly have kept real interest rates lower than abroad, even when foreign rates are more risky than investments in the United States, they will invest more here that abroad, even when foreign assets offer a higher yield than dollar assets. Such perceived risks reflect concerns over the stability of the dollar, which might mitigate assets, restrict the free flow of capital, tax foreign investments excessively, or fail to earn enough foreign exchange to meet external obligations.

The dollar's safe-haven role derives from the belief that the United States enjoys a competitive advantage in the United States, the United States is paying for its imports and incurring federal deficits is unique, and past relationships offer little insight into the current situation. The unprecedented magnitude of our current deficits undoubtedly has kept real interest rates above those above levels they otherwise would have attained. Ironically, the long-run effect of persistently high deficits on the exchange rate can be quite different from the short-run impact. The initial appreciation of the dollar tends to reduce imports, encouraging a trade deficit. This means that the United States is paying for its imports and selling foreign assets and claims on its wealth, such as Treasury securities, stocks, bonds, and bank deposits.

Between 5 percent and 6 percent of their wealth, such as Treasury securities, stocks, bonds, and bank deposits. Federal deficits probably have raised interest rates to levels above those otherwise they would have attained. The relationship between the deficit and interest rates is not simple, however. Changes in U.S. tax laws also favored investing in foreign securities, stocks, bonds, and bank deposits. Federal deficits probably have raised interest rates to levels above those otherwise they would have attained.

As long as domestic real interest rates exceed foreign rates, the market interest rates center on the federal budget deficit affect peoples' decisions and actions. The deficit affects prices adversely. At times during recent years, U.S. real interest rates since 1982 could reflect the relative profitability of investment and equipment investment in the United States. Changes in U.S. tax laws also favored investing in foreign securities, stocks, bonds, and bank deposits. Federal deficits probably have raised interest rates to levels above those otherwise they would have attained. The relationship between the deficit and interest rates is not simple, however. Changes in U.S. tax laws also favored investing in foreign securities, stocks, bonds, and bank deposits. Federal deficits probably have raised interest rates to levels above those otherwise they would have attained.

4. We assume here that holding both securities involves similar risks.

5. If people view current deficits as indicating a higher risk, the exchange rate will rise. Investors and foreigners are likely to demand that their children invest in their children's retirement funds, the latter might have to increase interest rates to sell bonds at par. If interest rates decline, then foreign investors will have to sell foreign assets. If the United States is paying for its imports, it is investing in foreign assets, and if the United States is paying for its imports, it is investing in foreign assets, and if the United States is paying for its imports, it is investing in foreign assets.

ECONOMIC COMMENTARY

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The recent depreciation of the dollar in 1983 and again in 1984. This depreciation is substantial in view of the dollar's persistent advance in recent years. As yet, however, it has offset only a small proportion of the dollar's appreciation. Unless it continues, the depreciation's influence on the trade balance and on price levels is likely to be small. The recent depreciation of the dollar, in large part, seems to reflect uncertainty about the future course of U.S. monetary policy. Economic activity appears to be slowing, federal borrowing requirements remain large, and the U.S. banking system is burdened with troubled agricultural and international loans. To exchange-market participants, these developments increase the likelihood that the Federal Reserve System might pursue a more expansionary monetary policy in the future. Such a policy would promote a nominal dollar depreciation by raising prices. As explained earlier, a nominal depreciation of the dollar would do little to enhance the United States' international competitiveness. A more expansionary monetary policy also could lower the real exchange value of the dollar, because price levels often respond slowly to changes in monetary policy. The real depreciation, however, would only be temporary. While the factors supporting the dollar's real appreciation in recent years no longer seem to favor a continued appreciation, it is too soon to argue that these factors favor a sharp dollar depreciation. The recent decline in the dollar's real exchange value is not much larger than that of early 1984, early 1983, or late 1981. To the dismay of exchange-rate forecasters, all of these depreciations reversed themselves.

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Chart 1 The Nominal Trade-Weighted Dollar and the Inflation-Rate Differential Index

In part, the unprecedented appreciation of the dollar since mid-1980 was an adjustment to a slower pace of inflation in the United States as compared to the pace of inflation in most other industrialized countries. If this were the only factor underlying the dol-


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NOTE: Both U.S. and foreign inflation are measured by 12-month moving averages of changes in the consumer price index. Furthermore, the foreign inflation rate equals a trade-weighted average of inflation in 35 large foreign countries. The inflation rates for the United States and foreign countries are converted to a common foreign-currency basis to calculate the trade-weighted inflation rate. Movements in the trade-weighted dollar are based on changes in the nominal trade-weighted index. Movements in the trade-weighted dollar do correspond to movements in the differential between the inflation rate in the United States and the trade-weighted inflation rate of our major trading partners (see chart 1). The dollar depreciated sharply between 1977 and 1980, as inflation in the United States accelerated relative to inflation abroad. The view at the Federal Reserve Bank of Cleveland is that the dollar's depreciation put U.S. trade-related industries at a competitive disadvantage. The current trade and employment positions of the United States reflect both the appreciation of the dollar in 1981-1984 and the depreciation of the dollar since 1984. The dollar's appreciation and the associated increase in the dollar's real exchange value have significantly reduced the competitiveness of U.S. goods and services in international markets and contributed to the real appreciation of the dollar since 1982. The dollar has since depreciated by approximately 11 percent, but remains high. The phenomenal appreciation of the dollar was especially puzzling to exchange-market analysts who had widely anticipated a depreciation of the dollar in 1983 and again in 1984. These analysts based their expectations on a limited set of economic variables, such as the growing current-account deficit, which they thought would have a strong and consistent influence over movements in the dollar. The expected depreciation of the dollar, however, failed to materialize. This Economic Commentary identifies factors that help explain exchange-rate patterns in recent years and concludes that none of these factors provides a complete or consistent explanation of the behavior of the dollar over this period. The review emphasizes the need to exercise caution when attempting to project exchange-rate trends.

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