

# Currency Misalignments

## The Case of the Dollar and the Yen

The dollar's dramatic rise in the last three years has initiated an international debate involving sharply conflicting views. The strong dollar has been largely behind the substantial loss of U.S. competitiveness in world markets, which has importantly contributed to the large and still growing U.S. trade and current account deficits. As a result, many analysts assert that the dollar is "overvalued". By contrast, some analysts focus their attention on the growing U.S. trade deficit with Japan and on the large and rising Japanese current account surplus. They conclude that the yen is "undervalued". Still others argue that terms like overvaluation and undervaluation are meaningless in a floating rate system because exchange rates are basically determined by market forces.

The purpose of this paper is to shed some light on this debate. Theory and empirical evidence both suggest two major conclusions. First, it does make sense to talk about the possible overvaluation or undervaluation of a currency even in a freely floating system. However, these concepts mean different things to different people. Therefore, unqualified use of these terms can lead to confusion and unnecessary argument. Second, empirical evidence on changes in international competitiveness as well as on the behavior of trade and current accounts suggests that the dollar is unusually strong but the yen is not especially weak.

### Some conceptual issues

When is a currency in disequilibrium? To arrive at a sensible and operationally useful answer, it is first necessary to make a distinction between the concepts of *short-run* or temporary equilibrium and *long-run* or what may be called fundamental equilibrium.

A sequence of short-run equilibrium exchange rates is determined by continuously shifting forces of supply and demand in the foreign exchange market. Although trade in goods and services contributes to changes in the balance of supply and demand of foreign exchange, trade in financial assets, often speculative in nature, dominates the short-run dynamics of this market. And market rates change constantly as market participants assess and reassess all relevant new information. Since transaction costs are small and buying and selling go on at all times of the day, the foreign exchange market is in the process of clearing virtually continuously. Thus, for all practical purposes, it is a close approximation to treat market exchange rates as short-run equilibrium exchange rates, although we know that strictly speaking not every rate quoted during a trading day represents an equilibrium.

A long-run equilibrium exchange rate, by contrast, is determined only when the world economy as a whole is in equilibrium and all other economic variables are also in equilibrium. In this kind of general equilibrium, markets for assets, goods, and labor all clear in the sense that supply equals demand. In addition, all expectations are realized and all relative prices remain constant.

The views expressed in this article are those of the author and do not necessarily reflect those of the Federal Reserve Bank of New York

This notion of equilibrium, although useful in theory, does not have a counterpart in the real world. The world economy is continuously adjusting, but often slowly, to new shocks, and therefore it is questionable whether it could ever be in an overall long-run equilibrium. For example, slow and lagged adjustments in the goods markets and in the current account often lead to swings in market exchange rates that may persist over extended periods at times. In addition, the long-run equilibrium values of all economic variables, including exchange rates, are also changing over time, sometimes very sharply. Market exchange rates are, therefore, almost always overshooting or undershooting long-run equilibrium exchange rates which are changing as well.

Thus, deviations from long-run equilibrium represent a normal state of affairs, and they could be persistently large at times. These deviations may simply reflect slow adjustments in other markets rather than any malfunctioning of the exchange market *per se*.

But there are times when some may consider the short-run volatility or even the medium-term swings in market exchange rates as excessive and not consistent with changes in underlying economic and financial conditions (fundamentals). Exchange rate swings may also reflect a relative absence of stabilizing speculation or even the presence of destabilizing speculation. In extreme cases, market exchange rates may behave like speculative "bubbles".<sup>1</sup> Admittedly, it is often difficult to determine whether the market is being driven by destabilizing speculation or is just responding, with some uncertainty, to so-called economic fundamentals. This is so because the foreign exchange market is essentially a speculative market, and there is no consensus, even among economists, which variables represent funda-

mentals, let alone how to assess their linkages with exchange rates.<sup>2</sup>

The distinction between the two concepts of equilibrium helps shed light on a number of aspects of the current currency debate. For example, it appears that those who believe that the dollar cannot be in disequilibrium in the current floating rate system are essentially arguing that the dollar is almost always in short-run equilibrium. They are also expressing the view that the market rate reflects all available information and the market assessment of economic fundamentals is more accurate than that of anyone else.<sup>3</sup>

Those who believe that the dollar is overvalued do not necessarily dispute the view that the dollar is almost always in short-run equilibrium. But they stress the point that the dollar may be severely out of line with the likely range of long-run equilibrium values. Although this concern sometimes focuses on the persistence of deviations from long-run equilibrium *per se*, and some may have misgivings about the market assessment of fundamentals, the real issue is often the macroeconomic and distributional costs that these deviations induce. The focus of the concern and the assessment of the costs involved, however, vary a great deal, and so do the qualitative judgment and quantitative assessment of currency misalignments.

Thus, terms like "overvalued" and "undervalued" in and of themselves are nebulous, but they do reflect someone's judgment that the going rate is undesirable for one reason or another. To some, the dollar is overvalued because it has led to a substantial loss of international competitiveness of U.S. manufacturing. Certainly, the industries that have been adversely affected consider the dollar overvalued. The large and deteriorating trade deficit and the loss of jobs resulting from this erosion of U.S. competitiveness are seen as

<sup>1</sup>Market observers and policy practitioners often voice their concern with bandwagon and other destabilizing speculative behavior in the exchange market. Academic economists have also recognized this possibility long before the advent of the current float. Nurkse, for example, wrote in 1944: "anticipatory purchases of foreign exchange tend to produce or at any rate to hasten the anticipated fall in the exchange value of the national currency, and the actual fall may set up or strengthen expectations of a further fall. Exchange rates in such circumstances are bound to become highly unstable, and the influence of psychological factors may at times be overwhelming." R. Nurkse, *International Currency Experience: Lessons of the Interwar Period* (League of Nations, Princeton, New Jersey, 1944).

Recently, Dornbusch expressed a similar view, "The idea of a bubble is worth recognizing because it emphasizes that there is no tendency for efficient capital markets to force a rate toward its fundamental value. There is no reason to assume that the present value of the dollar does not represent such a speculative trap" (page 7). R. Dornbusch, "U.S. International Monetary Policies," a paper presented to the Board of Governors of the Federal Reserve System, September 30, 1982.

<sup>2</sup>James Tobin has aptly summarized the problem: "no one has any good basis for estimating the equilibrium dollar-mark parity for 1980 or 1985, to which current rates might be related. The parity depends on a host of incalculables—not just the future paths of the two economies and the rest of the world but the future portfolio preferences of the world's wealth owners. In the absence of any consensus on fundamentals, the markets are dominated—like those for gold, rare paintings, and—yes, often equities—by traders in the game of guessing what other traders are going to think." See J. Tobin, "A Proposal for International Monetary Reform" (Cowles Foundation Paper No. 95, Yale University, New Haven, 1980).

<sup>3</sup>A recent expression of this view comes from Treasury Secretary Donald Regan: "In a floating exchange rate system, there can be no correct value to any currency other than the value given to a currency through market transactions" (quoted in *Washington Post*, February 23, 1984). Secretary Regan, however, also believes that "it is confused thinking to describe the dollar as overvalued."

confirmation of the view that the dollar is overvalued even from a national standpoint

Many European analysts and officials consider the dollar overvalued because of the increased import costs and the inflationary impact of the associated depreciation of their currencies. The argument that the dollar deepened the European recession by inducing the authorities to raise interest rates is sometimes advanced as further evidence indicating the overvaluation of the dollar. The heavily indebted less developed countries (LDCs) view the dollar as overvalued because it has increased the burden of debt servicing substantially since most of their debt is denominated in dollars.

Thus, there are many groups at home and abroad that have been adversely affected by the current strength of the dollar, and hence they consider the dollar overvalued. However, significant exchange rate changes—equilibrating and disequilibrating ones—are always going to induce costs for some groups and lead to the complaint that one currency or another is misaligned. In the recent period, the concept of an overvalued dollar, for some, simply expresses the fact that a strong dollar is costly to them in one way or another.

The strong dollar, however, generates not only costs but benefits as well. The main beneficiaries of the strong dollar are consumers in the United States and foreign competitors of U.S. producers. The strong dollar has also significantly contributed to the achievement of one of the major policy objectives in the United States—the reduction of inflation. These examples again illustrate the distributional aspect of changes in exchange rates.

There is, however, a second and quite different way of looking at the concept of currency misalignment. Some analysts may consider the dollar overvalued from the standpoint of resource allocation costs rather than a distributional concern.

In their view, the current strength of the dollar is unsustainable, and hence resource allocations and global adjustments resulting from the strong dollar are temporary and likely to be reversed when the dollar declines. They believe that the strong dollar has been causing hardship in otherwise profitable industries in the United States and perhaps providing incentives for inefficient industries to spring up abroad. These resource allocations and reallocations are, therefore, unnecessarily costly and should be prevented.

An associated theme is the following. If the current levels of the dollar are ultimately unsustainable (because the large and growing U.S. current account deficits cannot be financed indefinitely) but nevertheless persist over the medium term, there may be a protectionist fallout in the United States. A variety of protectionist measures may be sought that would undermine

the progress made over the past three decades toward a liberal global trading environment. Thus, persistent currency misalignments can impose real costs by reducing the economic efficiency that stems from a global expansion of free trade.

If unsustainable exchange rate movements are costly from the standpoint of efficient allocation of international resources, then it is important that these movements be detected and their magnitude be estimated. This is, in fact, the way most economists view the issue of currency misalignments. Although they usually define misalignments in exchange rates as deviations from long-run equilibrium values, many conceptual and practical problems have discouraged the use of general-equilibrium models of the world economy for calculating long-run equilibrium exchange rates. Instead, simple rules of thumb involving the concept of purchasing power parity (PPP) and considerations of current account balance are widely used to detect currency misalignments and sometimes to offer quantitative estimates. These approaches are, however, beset with many conceptual and practical problems as well, especially if they are used mechanically.

#### **Assessment of currency misalignments**

Attempts to detect disequilibrium in current exchange rates through PPP calculations must *assume* that, while the economy is suspected to be in long-run disequilibrium today, it was in long-run equilibrium or at least much closer to it in the chosen base period. In other words, PPP methodology essentially ignores two crucial insights that emerge from theory, namely, (1) observed rates are almost never in long-run equilibrium and (2) long-run equilibrium real exchange rates do change over time. This methodology also requires the use of a price or a cost index, and estimates of misalignments are often very sensitive to this choice.

A second approach is to define an approximately balanced current account, sometimes over a business cycle, as a long-run equilibrium condition. It has some practical appeal because it implies an absence of any net inflow or outflow of savings, and hence an absence of a redistribution of wealth between the country and the rest of the world. However, this notion of long-run equilibrium neither holds up to historical scrutiny, nor is based on first principles of economics. The United Kingdom, for example, ran surpluses in its current account continuously between 1870 and 1914. Between 1946 and 1970, the U.S. current account was in surplus in all but three years. These persistent "imbalances" did not necessarily point to any serious macroeconomic disequilibrium.

In principle, any current account imbalance is sustainable and optimal if it reflects the saving-investment

decisions of rational individuals and profit-maximizing firms. In other words, if current account deficits and surpluses result from or lead to matching and voluntary private trade in assets, then those external "imbalances" are both sustainable and optimal. This implies that there need be no macroeconomic problem if a country with a higher propensity to save or with a lower rate of return on investment at home runs current account surpluses for long periods of time.

Although mechanical applications of PPP and current account considerations can lead to misleading conclusions, judicious use of information on changes in international competitiveness, as well as careful analysis of current account behavior, can prove very useful in assessing currency misalignments. From a practical point of view, it is more tractable to view currency misalignments as deviations from currency values that are *sustainable* over the medium term rather than as deviations from the elusive long-run or fundamental equilibrium exchange rates.

A sustainable exchange rate can be thought of in a very broad manner: it is a rate that can be sustained over the medium term by policies that are appropriate from the point of view of efficient allocation of international resources. It is important to consider the appropriateness of policies. Even if a currency value can be sustained by inappropriate policies, it could be considered unsustainable because inappropriate policies themselves should be viewed as unsustainable.

A sustainable currency value is, therefore, one that can be maintained by government policies that are appropriate and sustainable in the sense of being consistent with such common national goals as stable economic growth, low inflation, and low unemployment. Assessing whether an exchange rate is sustainable from this point of view is not an easy matter, especially if distributional considerations—both intranational and international—are brought to bear on this judgment. For example, policy goals or policy mixes of a large country, even if deemed appropriate by its residents, may well be considered undesirable by its trading partners.

A careful analysis of changes in international competitiveness and the behavior of relative current accounts, however, can help detect extreme deviations from sustainable exchange rates. In less obvious situations, these types of information can contribute importantly to public discussion of, and private negotiations on, currency misalignments even if noneconomic considerations ultimately determine the nature of government policies. For example, if currency appreciation leads to substantial losses in a country's international competitiveness, it may suggest that the current value of the currency is unsustainable.

A narrow focus on conventional measures of inter-

national competitiveness, however, could be misleading. Changes in competitiveness may reflect structural shifts in the economy and hence may not indicate that the going exchange rate is unsustainable. Thus, it is necessary to supplement this type of information with a more comprehensive analysis of the country's "underlying" external payments position.

This requires a judgment on how large a current account surplus or deficit can be considered sustainable, given the medium-term saving/investment behavior of the country in relation to its trading partners. It is also necessary to take into account temporary and cyclical factors that may be influencing the present and prospective behavior of the current account and the capital account of the country's balance of payments. If the present and future current account balance of the country appears unsustainable over the medium term, even after accounting for factors other than the exchange rate, then the going exchange rate can be considered unsustainable.

Again, a thorough analysis of this type, especially if it is to be consistent on a multilateral basis, requires modeling the linkages among major economic variables as well as a great deal of judgment. However, less formal analysis can prove useful in extreme cases. For example, a rapidly deteriorating current account deficit is unsustainable if it points to a rising foreign debt/GNP ratio that the country will be unable or unwilling to maintain after a certain point. Or, if a large and deteriorating current account deficit reflects policies that are inappropriate and unsustainable from the standpoint of the medium-term objectives of the country and/or the international community, then the external imbalances can be viewed as unsustainable.

The rest of the paper is devoted to an assessment of the current exchange rates of the dollar and the yen along these lines. Particular attention is paid to the view that the yen is undervalued. Our assessment relies on an examination of various available measures of international price and cost competitiveness supplemented by an informal, albeit careful, analysis of the behavior of the current accounts of Japan and the United States.

### **The yen problem**

There are two versions of the argument that there is a yen problem. One version simply claims that the yen is undervalued. The other version is more specific; it holds that the dollar is more overvalued against the yen than any other major currency. That is, there is a special yen-dollar imbalance that cannot be explained solely by the dollar's overall strength.

Japan's large and rising trade and current account surpluses are seen as *prima facie* evidence for an undervalued yen. Japan's gains in international com-

petitiveness against the United States as well as the large and growing U S trade deficit with Japan are interpreted as evidence suggesting a special yen-dollar imbalance.

For example, in April 1983, Fred Bergsten of the Institute of International Economics (IIE) stated,

Quantitatively the dollar-yen misalignment is more severe than the misalignment between the dollar and any other major currency . . . U.S international price competitiveness deteriorated against Japan by over 70 percent in four years. Is it any wonder that the U S.-Japan trade imbalance has soared to record levels and that a major crisis exists in economic relations between the two countries? . . . the dollar is overvalued against a number of important currencies, but it is more overvalued against the yen than against the others <sup>4</sup>

More recently, *The Economist* (December 3, 1983, page 15) expressed its view in this way

Overprotected farmers and an undervalued yen both anger Japan's trading partners, especially the Americans. . . This cheapness of the Japanese currency and dearness of the American one can go a long way towards explaining why Japan is headed for a current-account surplus of \$25 billion this year and America a deficit of \$40 billion.

In what follows, these views on the dollar and the yen exchange rates are assessed on the basis of the data on changes in competitiveness and on movements in the current account. The major conclusion is that the dollar appears to be unusually strong, but the yen is not particularly weak Japan's recent gains in competitiveness against the United States have resulted from an overall strength of the dollar, and not from any overall weakness of the yen.

#### *Changes in competitiveness*

Changes in international competitiveness are examined in a number of different ways. These changes are estimated for both the economy as a whole and for the manufacturing sector Data on both price competitive-

ness and cost competitiveness are used The calculations are performed for the United States, Japan, and to facilitate comparison Germany and France Changes in competitiveness are computed on a trade-weighted (effective) basis for all four countries as well as *vis-à-vis* the United States for the other three countries

The nominal trade-weighted dollar started its current upward swing in late 1980. But the average trade-weighted value of the dollar did not rise in 1980 from its level in 1979. Rather than choosing 1980 as a reference period, we take a long-run view and compare recent levels of exchange rates and competitiveness with their corresponding averages for the entire 1974-80 period. This averaging minimizes the effects of peculiarities of particular years on the broad conclusions of this analysis

The year 1983 is chosen as the terminal period for the aggregate economy. For manufacturing, data availability dictates that we use 1983-II as the terminal period Later we argue that our principal qualitative conclusions are essentially invariant with respect to any reasonable choice of these base and terminal periods

Chart 1 presents some preliminary evidence in support of the view that the yen is not weak but that the dollar is strong. The appreciation of the inflation-adjusted trade-weighted dollar that began in late 1980 continued through 1983 and the value of the dollar in 1983 was much higher than its 1974-80 average level (top panel).<sup>5</sup> By contrast, the inflation-adjusted trade-weighted yen appreciated sharply in 1980 and then more than offset this appreciation by depreciating until late 1982. The substantial depreciation of 1981-82 has been partly responsible for the international concern on the weakness of the yen The yen, however, appreciated sharply in late 1982 and, in contrast to the dollar, remained in 1983 near its average during 1974-80

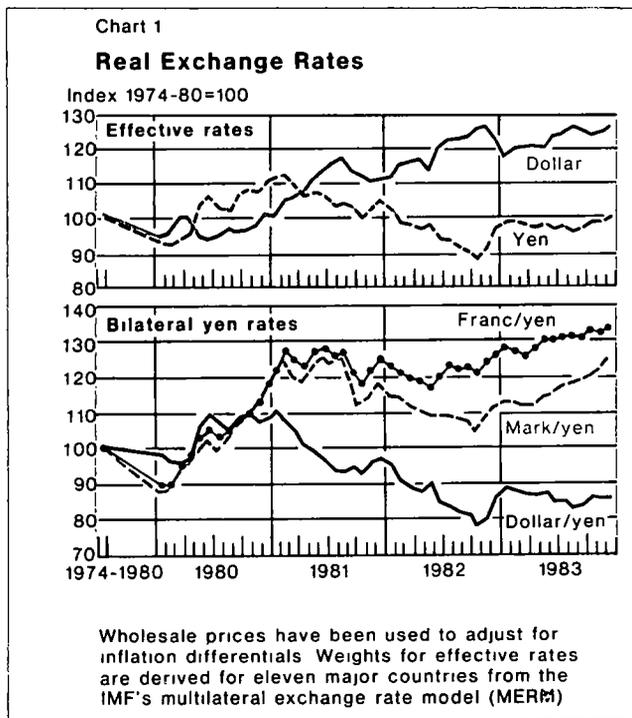
The bottom panel of the chart points to the overall strength of the dollar rather than to any overall weakness of the yen as a source of Japan's recent gains in competitiveness against the United States. The chart shows that, when compared with 1974-80 averages, the yen is significantly weak in inflation-adjusted terms *vis-à-vis* the dollar (because of the overall dollar appreciation), but it is very strong against the German mark and the French franc These observations are confirmed and further elaborated by additional evidence summarized in the table

***Bilateral competitiveness*** The major observations on bilateral exchange rates and bilateral competitiveness

<sup>4</sup>Testimony before the Senate Foreign Relations Committee, pages 6-7 However, John Williamson, also of the IIE, did not identify the yen as particularly weak in the subsequent monograph, "The Exchange Rate System" (October 1983)

The Organization for Economic Cooperation and Development (OECD), in its December 1983 *Economic Outlook* (page 8), comes close to identifying a separate yen problem "Exchange rates, assessed on the basis of current account prospects, have seemed out of line, with the dollar high and the yen, in particular, low"

<sup>5</sup>This index uses weights from the IMF's multilateral exchange rate model (MERM) for 11 major countries Wholesale price indexes (WPI) are used in measuring inflation



of Japan *vis-à-vis* the United States can be summarized as follows.

In 1983, the yen was 4 percent *higher* against the dollar than in 1974-80 on average. The German mark, however, was 15 percent lower and the French franc was 40 percent lower.

When adjusted for wholesale price inflation differentials, the yen does show a depreciation of 13 percent against the dollar. The mark, however, depreciated over 25 percent and the franc over 30 percent. Thus, Japan's gain in overall price competitiveness against the United States has been substantially less than that of Germany and France.

In manufacturing, Japan and Germany made substantial, but similar, gains against the United States both in terms of export price competitiveness (30 percent) and labor cost competitiveness (20 percent). France's gains have been even greater. But note that, while France's and to a lesser extent Germany's competitive advantage against the United States can be attributed to the depreciation of their currencies, Japan's advantage is more than accounted for by the relatively slow growth of its prices and costs. For example, if currency values remained at their 1974-80 averages, Japan's gains in export price competitiveness would have been even greater than 30 percent, whereas Germany's and France's gains would have been a great deal less.

**Effective competitiveness** The evidence on changes in exchange rates and competitiveness on a trade-weighted basis (table) can be summarized as follows:

Relative to 1974-80 averages, the yen was, in fact, as strong as the dollar in 1983. Both currencies had appreciated around 23 percent. By contrast, the mark was over 10 percent stronger and the franc was around 27 percent weaker. As far as nominal rates are concerned, it is the strength of the yen rather than its widely perceived weakness that clearly emerges from the data.

When the relatively low inflation in Japan is taken into consideration, Japan's gains in aggregate price competitiveness in 1983 turn out to be negligible (1 percent). During the same period, the United States incurred a loss of 23 percent in overall price competitiveness. Germany and France, on the other hand, show substantial gains in competitiveness, about 8 percent and 20 percent, respectively.

The comparisons above refer to price competitiveness for the aggregate economies. But what about manufacturing competitiveness on a trade-weighted basis? According to the IMF index on manufacturing price competitiveness, Japan in 1983-II was where it was on average during 1974-80, while Germany had gained 5 percent and France 9 percent. According to the Morgan Guaranty index,<sup>6</sup> however, the manufacturing sectors of all three countries appear to have made similar gains (between 6 to 8 percent) in price competitiveness. By contrast, manufacturing price competitiveness in the United States declined by over 20 percent.

Finally, as regards changes in labor cost competitiveness in manufacturing, Germany and especially France again come way ahead of Japan, whose gains in competitiveness turn out to be minor. Again, the United States shows a dramatic loss, over 25 percent.

**Sensitivity of the results to the choice of the base and terminal periods.** It could be argued that the base period 1974-80 goes too far back in the past, that it biases the conclusions by including information of little relevance today. Instead, it would be more instructive to see how competitiveness has changed since the dollar began its rise in 1980. Further investigation, however, suggests that the principal qualitative conclusions of the above analysis do not depend on the choice of 1974-80 as the base period although the quantitative estimates are sensitive to such a choice.

<sup>6</sup>Of the two Morgan Guaranty indexes, this one takes into account competition in third markets (*World Financial Markets*, August 1983). Morgan Guaranty regularly publishes another index which shows Japan to be slightly more competitive than Germany. This latter index does not take into account competition in third markets.

## Changes in Exchange Rates and Competitiveness: Aggregate Economy (1983) and Manufacturing (1983-II)

In percent, (+) indicates a loss of competitiveness

Measure of competitiveness	Changes from 1974-80 period				Changes from 1979-80 period			
	United States	Japan	Germany	France	United States	Japan	Germany	France
<b>Bilateral competitiveness</b>								
Aggregate economy								
Nominal exchange rate (dollar price of the currency)	—	6.3	-14.7	-40.5	—	-6.5	-28.5	-44.2
*Real exchange rate	—	-13.4	-25.7	-33.6	—	-16.7	-30.2	-35.3
Manufacturing sector								
†Export price competitiveness	—	-29.6	-31.9	-35.3	—	-27.8	-35.4	-37.5
‡Labor cost competitiveness	—	-20.6	-21.7	-28.1	—	-16.2	-29.1	-34.1
<b>Effective competitiveness</b>								
Aggregate economy								
§Nominal exchange rate	22.7	23.5	11.0	-27.2	30.9	12.8	-2.0	-26.9
Real exchange rate	23.0	-1.2	-7.8	-19.5	27.3	-2.7	-9.9	-18.1
Manufacturing sector								
Price competitiveness								
IMF index	21.2	-0.6	-5.2	-8.5	26.9	2.4	-5.2	-11.7
¶Morgan Guaranty index	23.8	-5.8	-7.2	-7.5	27.5	-4.1	-6.9	-7.9
**Labor cost competitiveness	27.5	-2.5	-9.7	-13.2	35.7	3.3	-12.3	-14.8

Bilateral competitiveness refers to competitiveness of the country in question *vis-à-vis* the United States, while effective competitiveness measures the competitiveness of a country against its major trading partners

\*Wholesale price indexes (WPI) are used as deflators

†Organization for Economic Cooperation and Development (OECD) data on export unit values are used

‡OECD data on unit labor costs are used

§Weights are derived from the International Monetary Fund (IMF) multilateral exchange rate model (MERM) for eleven major countries

||Changes in trade-weighted wholesale dollar prices for manufactures

¶This index is weighted by 1980 bilateral manufacturing trade weights, adjusted for supplier competition in third markets. Wholesale prices of nonfood manufactures are used as deflators

\*\*This index of relative normalized unit labor costs for manufacturing represents the ratio of the indicator for the country to a weighted geometric average of corresponding indicators for thirteen other industrial countries, all expressed in a common currency (dollar). The country indicator is calculated by dividing an index of actual hourly compensation per worker by an index of output per man-hour adjusted so as to eliminate estimated cyclical swings

The table summarizes the data taking 1979-80 (the period immediately preceding the rise of the dollar) as the base period. This change in the base period does not affect any of the above qualitative conclusions. The loss of U.S. competitiveness now looks even more dramatic, and Japan's gains in competitiveness appear even less significant. Germany and France continue to show substantial gains in competitiveness.

To provide a sense of the robustness of these conclusions, two other sets of computations were carried out by using period intervals unfavorable to our principal conclusions. First, an attempt was made to see how weak the yen was *vis-à-vis* the dollar in 1982-III, compared with the 1974-80 average. The 1982-III quarter was characterized by the weakest yen against the dollar

since 1980. We find that the real exchange rate of the yen was 18 percent lower in 1982-III than the 1974-80 average, whereas the mark and the franc were around 28 percent lower.

On a trade-weighted basis, the pattern is the same—the yen shows a depreciation of 8 percent in real terms against a depreciation of 12 to 14 percent for the other two currencies. Thus, even when the yen hit its low of the recent period, Japan's gain in overall price competitiveness against the United States and on a trade-weighted basis was smaller than that of Germany and France.

The other computation involves measuring the extent of depreciation of the yen since 1978-III, the quarter characterized by the strongest real effective exchange

rate of the yen during the last decade. Between 1978-III and 1983, the yen depreciated around 28 percent against the dollar in real terms. The corresponding figure is about the same for the mark and is around 33 percent for the franc

In real effective terms, however, the yen depreciated around 13 percent—slightly less than the franc (15 percent) but slightly more than the mark (10 percent). So, measuring from the yen's peak in the floating period, the yen is somewhat weaker in real terms than the mark on a trade-weighted basis but not *vis-à-vis* the dollar. However, it would be misleading to use this evidence from a period as brief as one quarter to argue that the yen has become a relatively weak currency. It is especially unwarranted in this case because the yen was unusually strong in the third quarter of 1978, a period of great speculative instability in the exchange markets.

Evidence on competitiveness, therefore, does not support the view that there is any overall weakness of the yen or that the yen is undervalued. It does, however, suggest the dollar is unusually strong. This implies that the yen's weakness against the dollar (or, more precisely, Japan's gains in competitiveness against the United States) reflects the overall strength of the dollar rather than any overall weakness of the yen.

This assessment implicitly assumes that the yen was not seriously undervalued on average during 1974-80. It could be argued, however, that the yen was already undervalued during the broad sweep of 1974-80.

When the base period is shifted to the sixties, evidence on competitiveness does not point to any undervaluation of the yen during 1974-80. In fact, conventional measures point to an overall loss of competitiveness for Japan during the seventies. It is possible that the available measures of competitiveness are faulty and do not capture the "true" changes in competitiveness. Besides, as argued earlier, changes in competitiveness—manufacturing or economywide—do not tell the whole story about currency misalignments. A broader macroeconomic perspective on the yen can be obtained from considering the behavior of the Japanese current account.

#### *Current account considerations*

As explained earlier, current account imbalances by themselves are, at best, an imperfect guide to detecting the presence of currency misalignments. One needs a judgment as to how large an external surplus or deficit can be considered normal or sustainable, given the pattern of the country's saving and investment as well as policy objectives over the medium term.

Thus, a persistent surplus in the Japanese current account *per se* does not suggest any undervaluation of the yen. In fact, many argue that by the early seventies

Japan became a natural capital-exporting country, and a persistent underlying, if not actual, current account surplus is normal for such a country.<sup>7</sup>

Although a current account surplus in and of itself may not point to an undervalued currency, a rapidly growing and/or persistently large surplus may. This was, however, not the case in Japan during the seventies. Japan's current account was neither persistently in surplus nor growing every year but went through wide swings between surpluses and deficits. During 1974-80, Japan had surpluses in three years and deficits in four years.

Moreover, the average size of the Japanese surplus was not very large. Japan had an average surplus in its current account of only 0.13 percent of GNP during 1974-80. This was moderately higher than the U.S. figure (0.03 percent) and substantially less than that of Germany (0.57 percent) and that of the United States during the sixties (0.73 percent).

Thus, the behavior of Japan's current account during 1974-80 does not suggest that the yen was undervalued during that period.

Does the yen appear undervalued now if viewed in light of the current and future path of the Japanese current account? Since the Japanese current account surplus is expected to be much larger than that of any other industrial country in 1983-84, it could be argued that the yen is now more undervalued relative to other major nondollar currencies in the sense that its current account surplus is large, it is growing, and it is unsustainable.

A number of facts may help put this view in proper perspective. First, the Japanese current account surplus was around 0.5 percent of its gross domestic product (GDP) in 1981-82, and it rose to around 2 percent of its GDP in 1983. In 1984, the surplus is likely to rise somewhat in dollar terms, but not significantly as a percentage of GDP. The perception that the recent increase in the Japanese surplus results from a boom in Japan's exports helped by an overall weakness of the yen is, however, incorrect.

The dollar value of Japan's exports increased 18 percent in 1981 (without a matching increase in

<sup>7</sup>After the midsixties, Japan turned from being a capital importer to being a capital exporter in its long-term capital account. In addition, since the first oil shock, the private investment rate as well as overall economic growth has declined significantly in Japan. The decline in the private saving rate, however, has been much smaller. For fuller discussions, see R. I. McKinnon, "Exchange Rate Instability, Trade Imbalances, and Monetary Policies in Japan and the United States", in P. Oppenheimer (ed.), *Issues in International Economics* (Stocksfield, England: Orill Press Ltd., 1980), and M. Yoshitomi, "An Analysis of Current Account Surpluses in the Japanese Economy", in E. R. Fried, P. H. Trezise, and S. Yoshida (eds.), *The Future Course of U.S.-Japan Economic Relations* (The Brookings Institution, Washington, D.C., 1983).

imports), turning the 1980 current account deficit of over \$10 billion into a surplus of \$5 billion. But in 1982, a year in which the global criticism of Japanese trade practices as well as its financial and exchange rate policies became intense, Japan's exports declined 8 percent in dollar terms, leading to a slight shrinkage of its trade surplus. Both global recession and growing protectionism appear to have contributed to this drop in Japanese exports.

In 1983, exports recovered sharply, in both volume and dollar terms. But the dollar value of Japanese exports was still lower in 1983 than it was in 1981. Viewed in light of Japanese trade performance in 1981 and 1982, what appears remarkable about the 1983 bulge in Japanese trade surplus is not a surge in exports but an unusually low level of dollar imports. This decline in import value appears to have resulted from cyclical weakness of the Japanese economy, lower oil prices, and pure valuation effects of exchange rate changes. Volume of imports was slightly higher in 1983 than in 1981, but the dollar value of imports was, in fact, \$17 billion lower in 1983 than in 1981.

Second, Japan's 1983-84 surplus can also be viewed as partly resulting from substantial liberalization of international capital flows in Japan at the end of 1980 and hence may reflect a one-shot but slow portfolio adjustment to an increase in capital mobility at a time when U.S. yields have been very high. The sharp rise in capital outflows resulting from this portfolio adjustment was partly responsible for the 1981-82 depreciation of the yen and appears to be counteracting upward pressure on the yen that may have come from large current account surpluses of Japan in 1983-84.

Some have suggested that Japan still maintains capital controls that depress the value of the yen by discouraging capital inflows. It is true that capital inflows into Japan are still not completely free. For example, foreign ownership of Japanese companies is still constrained by many regulations. But there are regulations that deter capital outflows as well. On balance, it is difficult to establish that the remaining capital controls significantly bias capital flows in the outward direction.<sup>a</sup>

Third, a shift has been taking place in the fiscal position of Japan relative to the United States during 1982-84 (Chart 2). A measure of this relative fiscal shift can be obtained from estimates of discretionary changes in general government budget balances. According to the December 1983 *Economic Outlook* of the OECD, the

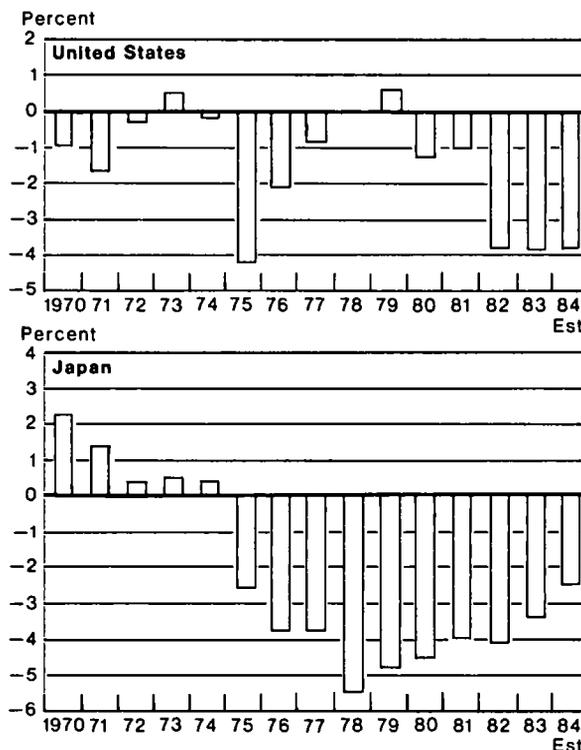
<sup>a</sup>Many argue that the elimination of all remaining capital controls may, in fact, encourage further net capital outflows and weaken the yen in the short run. See, for example, W. A. Niskanen, "Issues and Nonissues", in E. R. Fried, P. H. Trezise, and S. Yoshida (eds.), *The Future Course of U.S.-Japan Economic Relations*.

Chart 2

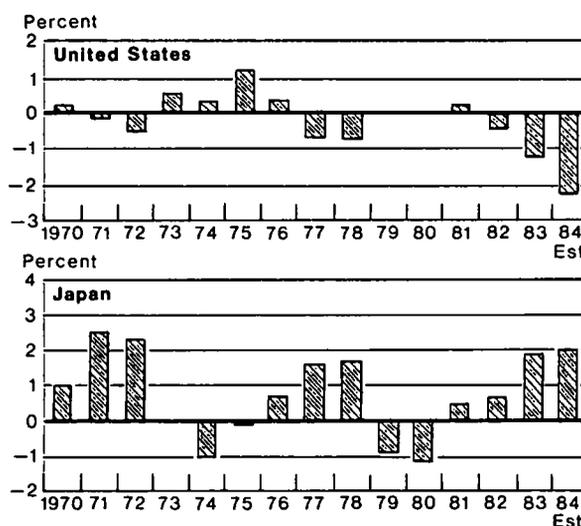
### Budget Deficit and the Current Account: 1970-84

In percentage of gross domestic product

#### General government financial balance



#### Current account balance



United States is expected to provide a fiscal stimulus of 2.5 percent of GDP over 1982-84 while Japan is likely to contract fiscally by a similar magnitude.

In light of this information, it does not seem unusual that over the same period the current account would deteriorate by 2 percentage points of GDP in the United States while improving by 1.5 percent of GDP in Japan.

Fourth, the relative cyclical position of Japan and the United States may also have temporarily aggravated their current account imbalances. While the U.S. economy is experiencing a rapid homegrown recovery, Japanese growth has been modest and appears to have been led by the pickup in export demand.

Finally, if the overall strength of the dollar is partly responsible for the deterioration of the U.S. current account deficit, then the improvement in Japan's external surplus can be traced partly to the same factor as well. Japan is the second largest trading partner of the United States which itself happens to be the largest trading partner of Japan.

This close trade relationship dictates that some of the U.S. deficit will show up as the Japanese surplus. Between 1982 and 1983, the U.S. trade balance deteriorated by \$25 billion. Japan picked up less than \$3 billion of this directly in the form of an increase in its bilateral trade surplus with the United States. However, the strength of the dollar may also have enabled Japan to outcompete the United States in some third markets, such as Western Europe and East Asia.

When these various special and cyclical factors are considered together in assessing the behavior of the Japanese current account, Japan's large and growing current account surplus does not point to any overall weakness of the yen. A significant part of the surplus appears to be resulting from temporary factors and from the overall strength of the dollar.

Indeed, once these factors are taken into account, Japan's underlying current account surplus does not appear to be very large or to be growing rapidly. A persistent surplus in the Japanese current account may or may not lead to an overall appreciation of the real exchange rate of the yen. That will depend on the joint future interaction between the private portfolio preferences of international investors and the public policy choices of national governments. But the recent behavior of the Japanese current account does not suggest that the yen is particularly weak.

The dollar appears too strong, however, if the behavior of the U.S. current account is analyzed. Whereas the Japanese current account surplus as a share of its GDP is not likely to rise appreciably in 1984, the U.S. current account deficit is expected to rise from over 1 percent of its GDP in 1983 to over 2 percent in 1984.

Although a significant part of the deterioration of the

U.S. deficit can be accounted for by the relative cyclical position of the United States and the decline in demand for U.S. goods from the heavily indebted countries, especially those in Latin America, the strength of the dollar is still the single most important factor.<sup>9</sup> If the dollar remains at the current level, the U.S. current account is expected to continue to deteriorate. By end-1985, according to recorded statistics, the United States is likely to turn from a net creditor country to a net debtor country.

One implication of this shift in U.S. wealth will be a gradual change in the composition of the U.S. current account. Net investment income, which peaked at \$33 billion in 1981, has already started declining and will continue to do so in the foreseeable future. Thus, the large service account surplus of the seventies will continue to shrink in the eighties. To achieve a balanced current account, the U.S. merchandise trade deficit must be significantly smaller during the eighties than it was in the seventies. Because of this dynamic effect, the longer the current account deficit persists, the larger is the depreciation of the real exchange rate of the dollar required to eliminate the deficit.

But what is of greater concern about the present situation is the fact that such large current account deficits are unprecedented in recent U.S. history, and there is a great deal of uncertainty as to how the dollar, and more generally the world financial markets, will react as the United States continues to demand a greater proportion of world savings.

Because of the current high return and the relatively low political and economic risk that characterize U.S. assets, international investors have so far financed the growing U.S. current account deficit. However, as the U.S. current account deficit grows bigger, the perceived exchange rate risk of holding financial dollar assets may begin to dominate the attraction of high U.S. yields, and market assessment may increasingly turn against the dollar. The weakening of the dollar since mid-January may be reflecting such a change, but how far the dollar will fall and how fast depends on how international investors and speculators will assess and reassess their expectations of the future course of the dollar in light of new events and new information.

To sum up, an assessment of the behavior of the U.S. current account supports the view that the current strength of the dollar may not be sustainable indefinitely but the precise dynamics of the dollar decline is still impossible to predict.

<sup>9</sup>According to staff estimates, if the real effective exchange of the dollar were held constant from 1980 to 1983 at its average 1973-80 level, the U.S. merchandise trade deficit would have been over \$30 billion lower in 1983, all other things remaining the same.

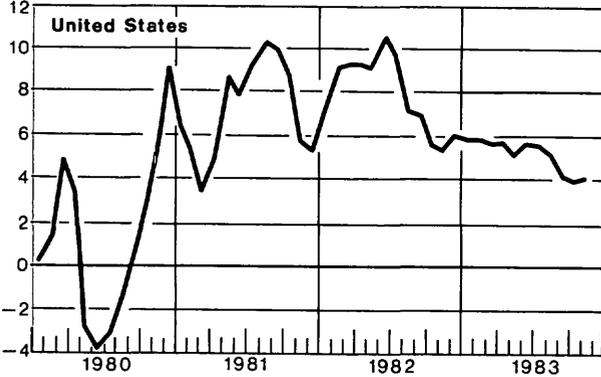
Chart 3

### Real Short-term Interest Rates\*

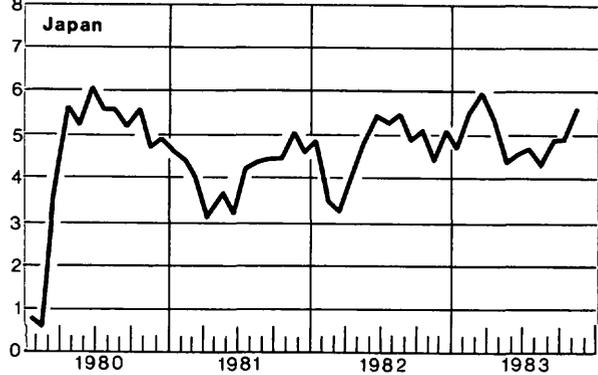
January 1980—November 1983

#### Real interest rates

Percent per annum

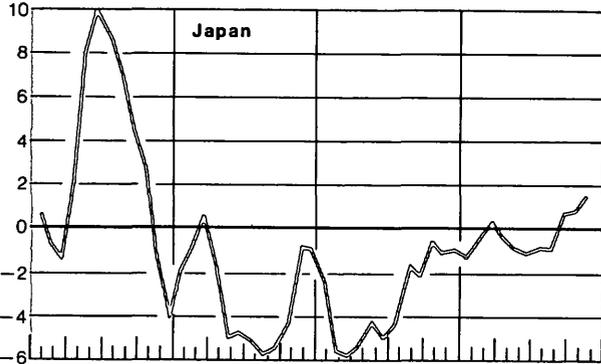


Percent per annum

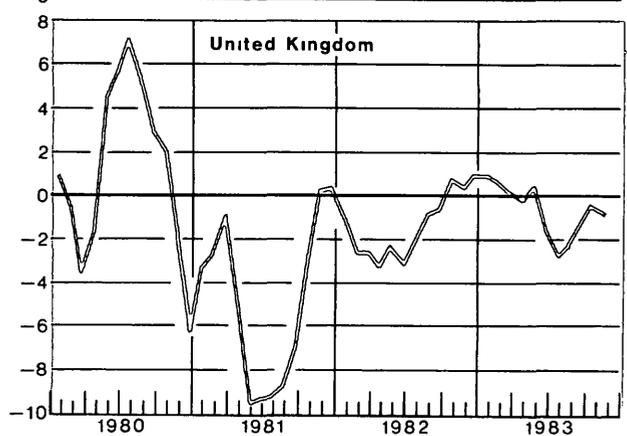
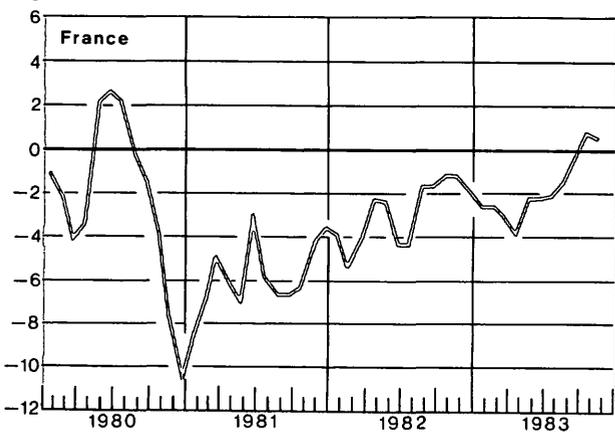
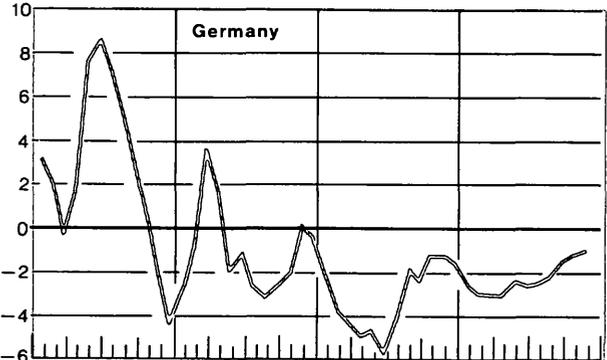


#### Real differentials: local minus U.S. real interest rate

Percent per annum



Percent per annum



\* The rates shown are monthly averages of daily rates on money market instruments of about ninety days' maturity adjusted by an estimate of expected inflation. The rate for Japan is the discount rate on two-month (private) bills.

### **Interest rates**

Another factor often cited in support of the view that the yen is undervalued is the low level of Japanese interest rates.<sup>10</sup>

A closer look at the facts, however, reveals that Japanese interest rates were not particularly low in 1983. For example, throughout 1983, the three-month Euroyen deposit rate (as reported in Morgan Guaranty's *World Financial Markets*) remained somewhat higher than the comparable Euromark rate. Chart 3 provides additional evidence by taking into account differential inflation rates. Throughout 1983 the United States clearly emerges as the country with the highest level of short-term real interest rates, but Japan's short-term real interest rates were higher than those of most major industrial countries.<sup>11</sup> An examination of long-term real rates suggest the same conclusion.

There could be disagreements on the details of the measurement of these real interest rates, but the central conclusion is clear: the United States has very high interest rates but Japan does not have very low interest rates. Therefore, the weakness of the yen *vis-à-vis* the dollar cannot be attributed to low Japanese interest rates but appears to be partly a result of high U.S. interest rates.

### **Concluding remarks**

The central conclusion of this article is that, from a macroeconomic and trade point of view, the dollar is too strong but the yen is not particularly weak. Japan's recent gains in competitiveness against the United States have resulted from an overall strength of the

dollar and not from any overall weakness of the yen. In other words, there is no special yen-dollar imbalance. Evidence on changes in international competitiveness as well as an assessment of the present and prospective current account movements both point to such a conclusion.

The conclusion that Japan's present and prospective current account surpluses are not excessively large once temporary and cyclical factors are taken into account can, however, be criticized from an international point of view. Since Japan is the world's second largest economy, a current account surplus that may not be large from its national point of view may be considered to be unduly large by the rest of the world. Japan's trading partners may not wish to incur matching current account deficits for economic or political reasons.

If this is the issue, it needs to be clearly spelled out. This will open an international debate on how large a Japanese current account surplus is considered undesirable by her trading partners and why. Is a Japanese current account surplus on the order of 1.0 percent of its GDP on average too large from the point of the view of Japan's trading partners? Should Japan run a balanced current account on average? Why is a small Japanese surplus desirable? Is it to keep the forces of protectionism in the United States and in Europe on a leash?

Similar questions can be raised about the size of the U.S. current account deficit. Since the dollar is the major international currency and the United States is the world's largest and richest economy, a large and growing U.S. demand on world savings may create unique adjustment problems for the international financial system.

These are important questions. But they do not focus narrowly on exchange rates. Rather they direct public attention to the broader issue of the international implications of different mixes of monetary, fiscal, financial, and trade policies. Ultimately, the question of what constitutes correct values of exchange rates can be understood only in that broader context.

Shafiqul Islam

<sup>10</sup>A recent expression of this view can be found in the October 19, 1983 issue of *The Economist* (page 77). An article entitled "How Japan Cheapens the Yen" maintains that Japan "contributes to the yen's weakness by still rigging interest rates"

<sup>11</sup>The rates used are monthly averages of daily rates on money market instruments with maturity of about three months. Expected inflation in month  $t$  is proxied by the twelve-month rate of CPI inflation in month  $t+6$