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"The Yen-Dollar Relationship: A Recent Historical Prospective"

Remarks by

Manuel H. Johnson

Member, Board of Governors of the Federal Reserve System

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At the center of the current debate on international economic policy coordination lies the question of how to foster and sustain a configuration of exchange rates that contributes to stability in the world economy. Common to many recommendations for reform of the exchange rate system is the notion that exchange rates should move so as to promote more balanced trade among countries. In this context, the question often raised concerning the yen-dollar relationship is: What level of the yen-dollar exchange rate would be consistent with a substantial reduction in Japan's yawning current account surplus with the United States, which reached a record \$50 billion last year? Posing the problem in this simple manner, however, belies the complexity of determining a more appropriate alignment of exchange rates.

Because the issues of exchange rate alignment and external balance are inextricably linked in public debate, my remarks today will focus on their interaction. I want to stress at the outset that there is no presumption that bilateral exchange rates should move solely to achieve bilateral trade balance. In particular, while promotion of a reduction of Japan's record surplus vis-a-vis the United States is clearly an important, even pivotal, concern with respect to the yen-dollar exchange rate, key structural differences between the Japanese and American economies suggest that balanced trade between them may be improbable and even undesirable.

In looking at the yen-dollar relationship over the 13 years of the floating exchange rate period, five main points emerge. First of all, while day-to-day gyrations in exchange rates may defy explanation in terms of fundamental economic factors, the broad swings in the yen-dollar exchange rate are consistent with our general theories of the relationship between domestic and global economic developments and exchange rate

movements. For example, periods of high Japanese inflation have tended to correspond with episodes of yen weakness.

Second, the steep and rapid appreciation of the yen that has occurred in the past 15 months is not entirely outside the range of historical experience. For example, from the third quarter of 1977 through the fourth quarter of 1978, the yen appreciated about 30 percent. However, such sharp exchange rate movements over relatively short periods do impose considerable burdens of adjustment on Japanese industry.

A third point is that, for Japan, movements in interest differentials began to correlate more closely with exchange rate swings starting in the 1980s after significant liberalization had occurred in Japanese financial markets. Thereafter, short-run movements in the yen's foreign exchange value are probably best viewed as resulting from the rapid equilibration of supply and demand in the markets for foreign exchange. In efficient financial markets, current exchange rates already summarize all known relevant information, so it is primarily unanticipated developments in a wide spectrum of macroeconomic and financial variables that influence changes in exchange rates.

A fourth feature of the floating rate period is the apparently strong positive correlation between Japanese current account surpluses and yen appreciation. Japan has run current account surpluses almost continuously since 1965, except during the years immediately following the two oil shocks of the 1970s. Periods of growing Japanese current account surpluses have tended to be associated with periods of yen strength.

As a fifth and final point, it is worth highlighting the differences between the yen's movements in the past 13 years against the

dollar and against other currencies. While the yen has made net gains of about 140 percent against the French franc and pound sterling over the floating rate period, it has only appreciated 50 percent against the dollar on balance and just 20 percent against the mark. Of course, differences in inflation and other macroeconomic developments across countries account for much of these diverging movements.

The yen has exhibited a tendency over the past 15 years to strengthen on balance against the currencies of all its major trading partners. The question inevitably arises as to what longer-term influences might be generating this secular appreciation of the yen. The remainder of my remarks will be devoted to exploring some of the sources of the yen's remarkable strength over the floating exchange rate period.

Differences in relative prices across countries provide a starting point for evaluating longer-run trends in exchange rates. According to the purchasing-power-parity theory, if consumers have similar tastes across countries, international arbitrage in goods markets will lead prices of identical goods in different countries, expressed in a common currency, to be equalized over time. From a position of initial equilibrium, if the exchange rate exactly followed such a path, it would move in line with shifts in relative prices across countries.

While some degree of arbitrariness is inevitably involved in picking a year to represent equilibrium for the yen-dollar exchange rate, it is evident that the yen has not closely followed relative price movements. However, such observations should not be interpreted as necessarily implying an inappropriate exchange value of the yen: a number

of factors can warrant such sustained deviations from purchasing power parity, and I turn now to an examination of some of these factors.

Since the 1950s, Japanese productivity growth has tended to outpace that of its major trading partners, including the United States. Japan's productivity gains are particularly impressive in its manufacturing sector which generates about 85 percent of Japan's exports. The remarkable double-digit growth in Japanese manufacturing productivity in the 1950s and 1960s reflected in part the fast pace of technological innovation deriving from a backlog of exploitable foreign technologies.

Productivity growth in Japanese manufacturing has slowed considerably since the 1970s, and in the 1980s is only slightly more rapid than in the United States. This slowdown in Japanese productivity growth reflects in part the elimination of ready opportunities to adopt foreign technologies and in part structural changes in the composition of investment. As Japan became a more mature industrial economy in the 1970s, a greater share of investment was geared towards the service sector (where productivity was lower), social welfare, anti-pollution and other activities. Still, Japan has maintained faster productivity growth in manufacturing than the average of its major trading partners. These productivity gains are one of the primary factors contributing to continuing improvements in Japanese competitiveness.

An important impetus to Japan's rapid productivity gains in manufacturing has been a need to develop a surplus in manufacturing trade to offset a persistent deficit on trade in energy and raw materials. Given an extreme dependence on imported raw materials, Japan typically has run trade deficits vis-a-vis countries classified as developed primary

producers and vis-a-vis oil exporting nations. In contrast, Japan's dramatic gains in productivity in manufacturing have helped foster a substantial surplus on its trade in manufactured goods. Thus, Japan's longer-run tendency towards a manufacturing trade surplus with the United States and her European trading partners is in part the counterpart of her deficit on raw materials. Still, Japan's gains in competitiveness appear to have surpassed those required just to achieve balance between its deficit on primary commodities and its surplus on manufactures. The result has been persistent current account surpluses and associated upward pressure on the yen.

Another factor that, combined with rapid productivity growth, has resulted in improved cost-competitiveness of Japanese exports is that real wage growth in the Japanese manufacturing sector has tended to lag behind labor's productivity gains in recent years, except following the first oil shock. This relatively slow growth of real wages is related to the system of industrial relations that prevails in the large Japanese firms. As is well-known, lifetime employment, seniority wage setting, bonuses linked to profits, and company-based unions are key factors contributing to real wage flexibility in Japan. This system appears to strengthen employees' commitment to the company and its long-run vitality, leading to wage settlements that are relatively compatible with company interests. However, while slow real wage growth helps export competitiveness, it can also inhibit the expansion of domestic demand and hence limit the derived demand for imports.

Japan's terms of trade -- measured as the ratio of export to import unit values -- have declined substantially since the 1960s. Of

course, some of the movement in the terms of trade reflects exchange rate changes, but price developments also play a role. A sizable share of Japan's imports consists of raw materials that are purchased in relatively competitive world markets, oil being an important exception. In contrast, the pricing strategy of Japanese exporters has tended to enhance Japan's competitiveness. Japanese exporters have tended to accept lower profit margins rather than to resort to sharp increases in export prices during periods of rapid yen appreciation. These pricing responses have helped improve Japan's competitive position and preserve or increase the global market share of Japan's exporters.

In addition to these factors that have influenced Japan's international competitiveness, secular developments in Japanese savings and investment have contributed to the tendency towards persistent current account surpluses and associated upward pressure on the yen. A country that saves more than it invests domestically must have, ex post, a net capital outflow and a corresponding current account surplus.

The Japanese savings rate is impressively high by comparison with most other countries. In 1985, the Japanese personal savings ratio was 22 percent, while in the United States it was only 5 percent. Japanese private investment, on the other hand, has not kept pace with private savings in the past 15 years. Public sector borrowing in the 1970s absorbed some of the funds previously invested in domestic industry. However, since 1979 Japanese fiscal policy has been oriented towards reducing the level of the fiscal deficit. The gap between total savings and total domestic investment in Japan has produced a net capital outflow

and corresponding current account surplus in recent years. The prospect that this gap will be completely eliminated in the near future is small.

Should we be concerned that Japan is a net capital exporter? Are measures to reduce savings in Japan really desirable from the standpoint of world welfare? Forcing a reduction in Japanese savings would tend to reduce Japanese net foreign investment and hence to raise the level of interest rates abroad. Instead the focus should be on encouraging the most efficient and equitable global redistribution of Japanese savings. If relative real returns in the United States continue to decline and the fiscal deficit narrows, it is likely that Japanese foreign investment will gradually diversify away from U.S. investments. Ideally, Japanese funds could be drawn to the Third World as these countries adopt more coherent macroeconomic policies to help attain sustained lower inflation and enhance their use of market pricing which in turn promotes more attractive investment opportunities.

For the part of the Japanese current account surplus that is not attributable to structural differences between the economies of Japan and its major trading partners, the issue remains of how best to encourage rapid adjustment. Both yen appreciation and stimulation of Japanese income growth can promote more balanced trade between countries. An idea of the relative importance of income and relative price influences on Japan's trade balance can be gained from estimates of the Federal Reserve Board staff's Multi-Country Model -- the MCM.

According to the parameters of the MCM, the price elasticities for Japanese trade indicate that Japanese exports are highly responsive to relative price changes, while Japanese imports are much less responsive to

relative price movements. This would suggest that the recent sharp yen appreciation, if allowed to be fully reflected in prices, will result over time in a sizable reduction in Japanese exports but a less substantial increase in imports.

The relatively weak estimated response of Japanese imports to exchange rate-induced changes in relative prices is probably related to the commodity composition of those imports: 60 percent of total imports are fuel and raw materials that are relatively difficult to substitute away from in the production process when their relative prices rise. In contrast, about 85 percent of Japan's exports are manufactured goods for which relatively close substitutes exist in the world market. As a result, importers of Japanese goods can more easily switch to cheaper alternative sources of manufactured goods.

What impact will the 35 percent appreciation of the yen against the dollar in the past 15 months have on Japan's bilateral trade surplus with the United States? A very rough calculation based on the MCM equations suggests that the yen's recent 35 percent rise against the dollar could over time result in as much as a \$20 billion reduction in Japan's current \$50 billion trade surplus with the United States. So-called J-curve effects lasting up to one year, according to MCM simulations, would prevent this improvement from becoming apparent immediately. Of course, any estimates based on historical experience provide only a rough guide to the current situation; we may well be in uncharted territory. Still, this calculation illustrates that the yen's recent rise could make an important contribution towards reducing Japan's current account surplus.

Efforts to stimulate income growth in Japan and thereby to induce an increased demand for imports could also help foster external adjustment. However, the effect of Japanese income expansion may have differential effects on Japan's imports from different countries. In particular, the MCM results suggest that the responsiveness of Japan's imports from developing countries to increases in Japanese real income is substantial, roughly twice that for imports from the United States.

On the export side, Japan's exports to the United States are highly responsive to changes in U.S. income. However, one would hardly want to recommend a recession in the United States to improve our bilateral trade balance with Japan. Still, these results may help explain why Japan's trade surplus with the United States soared in recent years as the United States economy expanded rapidly.

The interaction between the exchange rate and the current account has served as a unifying thread in my remarks today. The yen's exchange value appears to have played a potent role in fostering current account adjustment in Japan, but exchange rate movements have not sufficed to maintain external balance. Another theme I have stressed is that developments affecting Japan's current account also have had an important influence on the longer-run course of the yen-dollar exchange rate. The sizable gains in competitiveness and the tendency for savings to exceed domestic investment have contributed to a tendency towards persistent Japanese current account surpluses and an associated tendency for the value of the yen to rise, except in the wake of major disruptions such as the oil price shocks of the 1970s.

The tendencies in Japan towards growing trade surpluses and insufficient domestic absorption were already apparent in the early 1970s. Although the subsequent decade was punctuated by periods of prolonged adjustment to the two oil price shocks, those same tendencies have now resurfaced. Despite the initial hopes of some proponents of floating exchange rates, the move to flexible rates has not resulted on average in a reduction in external imbalances between Japan and her major trading partners, although sizable adjustments have tended to occur with rather long lags.

All of this points to the need to rely on factors other than just exchange rates to bring about better balance in the world economy. Measures to stimulate income growth in Japan could make an important contribution to improved external balance. The more income expansion the Japanese authorities encourage, the less yen appreciation is required to foster more balanced trade. In light of the strains already imposed on Japan's industries by the yen's appreciation to date, expansion represents an important potential impetus to further external adjustment.

From my perspective, Japan appears to have scope for both monetary and fiscal actions. Given the recent strength of the yen, further reductions in the Japanese discount rate could probably have a salutary influence on the domestic economy without adverse exchange market effects. Also, fiscal stimulus could be provided without severely compromising Japan's longer-run commitment to reducing the central government's budget deficit, since the fiscal measures could help set in train a self-sustaining recovery in domestic investment and spending. Whatever the medicine, it is clear that actions to stimulate the domestic economy would

provide some boost to imports and help lift Japan's economy from its current doldrums.