

What Lies beyond The Current Global Imbalances?

By Peter A. Petri

In the 1960s and 1970s, international capital generally moved from developed to developing countries. This pattern, which is shown in detail in Figs. 1 (capital outflows) and 2 (capital inflows), is consistent with the hypothesis that capital flows from high to low capital/worker economies, since the return on investment is presumably higher in the latter. Until 1983, the basic historical pattern was interrupted only in the mid-1970s and in 1979-1980, due to the extraordinary financing requirements generated by oil price increases. During the years immediately following the oil crises, many developed countries became temporary borrowers, and the oil-exporting developing countries temporary lenders.

In the early 1980s, however, an unusual new pattern emerged. While most other developed countries reestablished capital outflows soon after the second oil crisis, the United States became a major borrower. By 1986 United States imports exceeded exports by around 80%, in large part financed by capital from Japan, where exports exceeded imports by a similar margin. What will happen if the flows return to more normal patterns? In a partial answer to this question, this article presents alternative views of how world production and trade might evolve in the next five years, depending on whether current imbalances persist, or recede to historical levels.

The remarkable capital movements of the 1980s can be attributed to multiple reinforcing developments. First, large fiscal deficits and an improved investment climate in the United States have sharply increased the supply and attractiveness of U.S. assets. Second, declines in Japanese fiscal deficits and rates of investment have generated a large supply of investable funds. Third, the sudden emergence of the "debt overhang" of developing countries has curtailed capital movements from north to south, notwithstanding the fact that high-return investment opportunities continue to exist in many developing countries. The factor conspicuously missing from this list is trade competitiveness. Even if the dubious premise

of a major decline in U.S. competitiveness is accepted, there is simply no sound economic model that would predict simultaneous increases in U.S. trade deficits and exchange rates with this explanation.

The factors behind the current imbalances will not disappear quickly, but they are likely to moderate. For example,

standard macroeconomic models predict that prolonged capital outflows from Japan will expand wealth and reduce saving there, and reduce wealth and increase saving in the U.S. These forces do not work fast, but at present they are being reinforced by large wealth increases in Japan due to the rising price of land and

Fig. 1 Sources of Interregional Capital Flow (% of world exports)

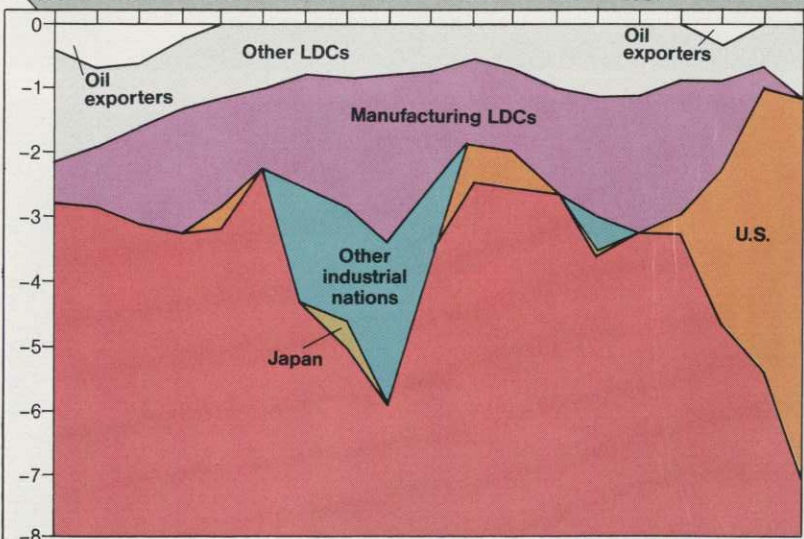
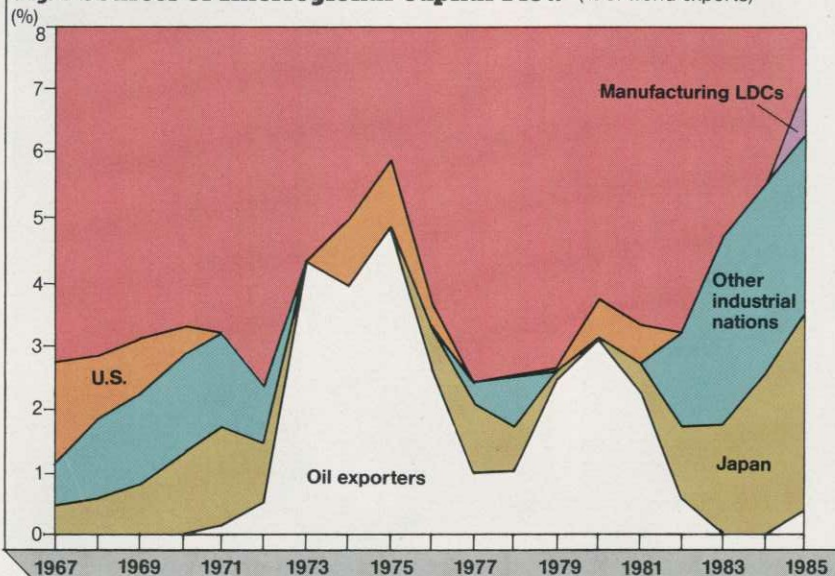


Fig. 2 Destination of Interregional Capital

other assets. In the U.S., the natural equilibrating mechanisms could get a big lift from tough policy measures to reduce the budgetary deficit.

Simulating alternative future capital flows

The individual contributions of the different causes of the existing imbalances are not known with precision and there is great uncertainty about future policy and other developments. Thus, there is plenty of room for speculation about future capital flows. To keep this analysis compact, we restrict our attention to two simple but reasonable extremes: the "status quo," which maintains the ratios of current account surpluses (deficits) to GDP at 1985 levels, and the "turnaround," which steadily returns current account/GDP ratios to their "typical values" (the average of the years 1966-1982, excluding 1974-1975 and 1980) by 1990. These alternatives are assumptions and not predictions; they are adopted because they are easy to conceptualize and because most economic forecasts fall between them.

A multiregional, general equilibrium model has been used to evaluate the implications of these capital flow scenarios on production and trade relationships in the world economy. The technical details of the model are described in Petri (1984, 1987); briefly, it determines demand, output, trade and price changes for each of five product groups in the U.S., Japan and four other world regions. Since the model does not predict how much inflation there will be in each regional economy, it cannot predict such nominal magnitudes as the yen/dollar exchange rate. It does provide results, however, on the "real exchange rate"—the relative prices of goods within a region and between different regions. The economic changes described are similar to those discussed in the famous "transfer problem" debate by John Maynard Keynes and Bertil Ohlin in the 1920s. At that time, the problem was not large international capital flows, but large international reparations payments after the end of World War I.

In the present applications the model's equations simulate how a decline in capital flows into the U.S. would reduce U.S. absorption (that is, the sum of consumption and investment spending) and therefore also the demand for U.S. services (nontradables) as well as imports. The model's Japanese equations, in turn, show how higher absorption in Japan would increase demand for U.S. exports. Overall, these changing demand conditions imply less spending and demand in

Table 1 International Indicators (1966-1990)

	U.S.	Japan	Other industrial nations	Manufacturing LDCs	Oil exporters	Other LDCs
Net capital outflows (% of GDP)						
1966-1973	0.2	1.2	0.3	-1.9	-0.3	-1.5
1974-1982	0.2	0.4	-0.2	-3.8	5.6	-2.0
1985	-2.7	4.3	1.4	1.7	0.7	-2.6
1990						
Status quo	-2.9	4.1	1.3	1.6	0.7	-2.8
Turnaround	0.2	1.0	0.2	-2.6	1.3	-1.7
Trade balance (% of GDP)						
1966-1973	-0.1	1.1	0.0	-2.6	4.6	-1.3
1974-1982	-0.8	0.4	-0.1	-2.9	8.7	-3.7
1985	-3.2	3.5	1.7	4.3	3.5	-6.7
1990						
Status quo	-2.1	2.1	1.0	2.9	1.5	-3.8
Turnaround	0.5	-0.3	0.1	-1.0	2.1	-3.0
Net external assets (% of GDP)						
1966	9.4	-1.2	-0.9	-11.2	-14.0	-11.7
1973	6.1	4.1	1.1	-13.6	-5.3	-13.9
1982	3.8	5.3	-0.2	-29.8	27.1	-19.8
1985	-3.0	14.0	4.2	-31.6	27.8	-24.2
1990						
Status quo	-15.9	28.8	9.7	-14.9	26.8	-33.1
Turnaround	-7.3	17.3	5.8	-23.0	26.9	-28.3

the U.S. and therefore lower relative prices—that is, real depreciation—for U.S. products compared to other regions'. The magnitude of the relative price change differs from product to product and region to region.

Implications of alternative capital flow assumptions

The first important result of the analysis is that the trade balance consequences of the two alternatives differ much less than the capital flow assumptions behind them. This and other key results are summarized in Table 1. Even if the present status quo capital flow/GDP ratios are maintained, the U.S. trade deficit will shrink substantially as a larger part of the capital inflow into the U.S. will be "returned" abroad in the form of interest payments on U.S. debt. Thus, some large real output and trade adjustments will be required even if capital flows continue their present unusual pattern. This, in turn, requires a sizable depreciation of the dollar against the currencies of all regions, except the other LDC region.

The continuation of status quo capital

flows implies an exchange rate of ¥184 per dollar by 1990 (down sharply from the ¥239 rate of 1985, the model's base year) assuming current rates of inflation continue. Turnaround assumptions imply much steeper depreciation to ¥151. These results must be treated with care as they depend on the empirical estimates built into the model's supply and demand equations. Reasonable alternative specifications can generate turnaround exchange rates ranging from ¥120 to ¥175.

Overall, the results for the yen/dollar rate show that a reversal of capital flows requires a large depreciation relative to rates that existed in 1985, but a much smaller adjustment from present yen exchange rates. However, while the yen rate already reflects much of the change predicted by the model under turnaround assumptions, other exchange rates, and in particular those of manufacturing LDCs, have not yet moved significantly toward turnaround values. If these adjustments do not occur, a correspondingly larger burden of appreciation will be required in the yen and the currencies of other developed countries.

Table 2 Consequences of Adjustment Paths (indexes, 1985=100)

Alternative	U.S.	Japan	Other industrial nations	Manufacturing LDCs	Oil exporters	Other LDCs
	Real exchange rate relative to U.S. dollar					
1990						
Status quo	100.0	116.8	107.0	103.2	107.4	92.9
Turnaround	100.0	143.1	121.7	123.4	114.8	102.3
Real absorption (consumption plus investment)						
1990						
Status quo	114.6	120.5	118.1	143.9	98.5	121.6
Turnaround	110.8	124.4	119.6	151.1	94.5	120.5

The most important part of the story lies in changes in absorption, as reported in Table 2. Even though real output in the United States, Japan and other industrial countries is assumed to grow at the same 3% rate between 1985 and 1990, real absorption will grow at 2.0%, 4.5% and 3.6% rates, respectively. The model does not explain what factors would motivate such shifts in absorption—e.g., whether policy changes, investment reactions to interest rate changes or consumption reactions due to changes in wealth will be ultimately responsible for reducing U.S. spending and increasing spending elsewhere. But it does show that a turnaround requires a dramatic shift in the pattern of absorption from the United States and oil-exporting countries toward the rest of the world, and in particular toward Japan and the manufacturing LDCs.

The global pattern of absorption determines what goods need to be produced, and where they need to be marketed. Most importantly, the U.S. becomes a far less important market—its share in other regions' exports typically shrinks by three percentage points, or by nearly a third of the 1985 share. For Japan, the importance of the U.S. market is projected to decline by nearly seven percentage points, from 34.4% to 27.8%. The greatest increases come in the markets of manufacturing LDCs. Viewed from a Japanese perspective, manufacturing LDCs markets are only about half as large as U.S. markets today, but would become nearly equally important in the turnaround scenario.

These changes carry large production implications. In 1985, manufactures made up 29.4% of Japanese GDP—nearly half again as high as the 21.0% of manufacturing in the U.S. Under turnaround assumptions, however, these ratios converge to 24.6% and 24.4%, respectively. On the other side, the share of nontradables rises from 67.2% to 71.9% in Japan and falls from 73.7% to 70.7% in

the U.S. These changes, in both cases, partially reverse opposite movements in the early 1980s. Thus, at least in terms of these value-added aggregates, the economic structures of the two countries become nearly identical under turnaround assumptions.

Conclusions

Even if present capital flow-GDP relationships continue unchanged, trade balances will have to shift significantly by 1990 to finance a rapidly changing pattern of interest payments on external debt. Moreover, if present imbalances give way to more typical patterns of flows, much larger trade and relative price changes will be needed.

The most striking implication of such changes is a sharp reversal of the role of U.S. markets in world demand. Between 1981 and 1985, total world imports declined while U.S. imports increased by nearly \$100 billion. U.S. markets accounted for as much as 70% of the export gains of manufacturing exporters during this period. Between 1985 and 1990, however, U.S. import increases will amount to at best a small positive, and more likely a sizable negative, share of the expansion in world trade. Markets in Japan, other industrial countries and in manufacturing LDCs will be expanding instead. These trends imply fundamental shifts in export strategy and in the composition of output for all but the most isolated economies of the world.

The output changes associated with a turnaround would retrace some of the large output changes that occurred in the 1981-1985 period. In the U.S., these changes were described as "deindustrialization" by somewhat myopic writers. Even under the status quo scenario, but especially under turnaround assumptions, resources will now shift back toward tradables in the United States and

toward nontradables in major surplus countries such as Japan. The adjustments required will sometimes be painful, especially in appreciating countries, and of the same type that the United States experienced during its appreciation in the early 1980s.

The size of the real exchange rate, trade and output adjustments that may be required in the future may itself help to reduce present imbalances. The point is not that the United States will amass unsustainable debt by 1990: Although U.S. external debt and Japanese external assets under the turnaround scenario will be unprecedented, they will still be manageable in relation to the large GNPs of these economies. The point is rather that the longer the present imbalances persist, the greater will be the eventual reversal in the trade balance, since each additional year of lending leads to larger subsequent interest obligations. This, in turn, will imply a larger future depreciation of the dollar.

Investors anticipating a trade balance turnaround, accompanied by large dollar depreciation, become increasingly reluctant to place funds in dollar-denominated assets. Indeed, the large dollar depreciation that has already occurred probably reflects these concerns. Krugman (1987) and Feldstein (1987), citing similar arguments, believe that further depreciation is required. A lot depends on how sensitively the U.S. trade balance responds to exchange rate changes, and how the dollar depreciates relative to currencies whose values have not yet significantly changed. These days, exchange markets are very quick to react to any new evidence on these issues.

The years ahead will present a crucial experiment in how economies and policymakers respond to large shifts in international investment and absorption. It is essential that world trade flows be left open, and that the adjustment needed occur, to the maximum possible extent, through the expansion of imports rather than the contraction of exports. ●

References:

- Martin Feldstein, "The Dollar Must Keep Falling." *Wall Street Journal*, Feb. 18, 1987.
- Paul Krugman, "Has the Dollar Fallen Enough?" Paper presented at the Japan-U.S. Symposium, MITI, Jan. 29-30, 1987, Tokyo.
- Peter A. Petri, "Looking Behind the Current Account: World Capital and Trade Flows in the Intermediate Term." Paper presented at the Japan-U.S. Symposium, MITI, Jan. 29-30, 1987, Tokyo.
- Peter A. Petri, *Modelling Japanese-American Trade: A Study of Asymmetric Interdependence*, Cambridge: Harvard University Press, 1984.