K.7 (685 in RFD Series)

INTERNATIONAL FINANCE DISCUSSION PAPERS

NOTES ON SOME ASPECTS OF THE EFFECTS OF THE RECENT EXCHANGE RATE CHANGES ON THE U.S. TRADE BALANCE

by

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Discussion Paper No. 12, April 27, 1972

Division of International Finance

Board of Governors of the Federal Reserve System

Notes on Some Aspects of the Effects of the Recent Exchange Rate Changes on the U.S. Trade Balance [1/]

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The seeming abruptness of the policy actions taken last August surprised many people. But to those more familiar with the underlying situation, it had become increasingly clear that the U.S. balance of payments had been in fundamental disequilibrium for quite some time prior to 1971.

Thus, whether something needed to be done really was no longer open to debate, and the specific timing of the action was to all intents and purposes decided by the market. However, the issue of what needed to be done was very much being debated. There was little question at that time that it was the current account balance which had to be improved since the policy options of tightening capital controls or reducing military expenditures really were not open. And, in view of the need to correct a fundamental disequilibrium, it also would not have been useful to tighten monetary policy -- even if domestic policy considerations had allowed -- in order to induce short-term capital inflows.

It is true, there were those who maintained that the current account was likely to improve by itself because long-run trends were working in our favor. In fact, to put the proposition at its most extreme, it was asserted that by the second half of this decade the return flow on U.S. overseas investments would have swelled to such an extent, that we should actively be seeking a trade deficit in order to

1/ Talk given to the International Economists Club, New York, April 27, 1972. I am grateful to my colleagues, in particular to Samuel I. Katz and Sydney Key, for their comments.

help the rest of the world to finance these flows.[2/] I am reminded that this is precisely the argument which toward the end of the 'Fifties led Sir Donald MacDougall to conclude that the world was facing a permanent dollar shortage.[3/] In that case events were to prove how dangerous it is to extrapolate compound interest tables mechanically into the future. As a practical fact, it also became clear that the rest of the world would not be content to wait for this miracle to come to pass. Thus, the argument, at least in official circles, was settled with the decision that deliberate policy measures were needed to bring about a major improvement in the trade accounts.

This left the question of what kind of policy action would be required. Whether exchange rate policy -- the instrument chosen -- is adequate to the task depends upon the causes of the underlying disequilibrium. A number of analysts think that the largest part of the deterioration in the U.S. trade position stems from structural factors. That is, they believe that demand elasticities for U.S. exports are lower than those for U.S. imports, that the U.S. comparative advantage is being eroded because of the quick transfer of technology, and so forth. If

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2/ See for example, Lawrence B. Krause, "The Balance of Payments of the United States and Other Countries: An Equilibrium View" in United States International Economic Policy in an Interdependent World, Papers submitted to the Commission on International Trade and Investment Policy, Vol. I, Washington, D. C., July 1971.

3/ Donald MacDougall, World dollar problem. A Study in International International Economics, Macmillan, London, 1957.

these indeed are the basic forces at work, then one would be forced to conclude that a one-time exchange rate change, even if it were substantial, would not suffice. However, it is my conviction that a major cause for our trade balance troubles was the prolonged period of inflation and excess demand which dominated the second half of the 1960's.[4/] It is true that the structural factors just mentioned did contribute to the erosion of our trade position, but I doubt that they accounted for a major part of the $10 billion swing over the past seven years. If one accepts the hypothesis that inflation and excess demand were a primary cause in the deterioration of our trade balance, it follows that an exchange rate change can have the desired effect.

We must now ask in evaluating what was done: how far do the exchange rate changes agreed upon last December at the Smithsonian meeting go towards correcting the U.S. payments disequilibrium? We are all familiar with the uncertainties surrounding estimates of demand and substitution elasticities in foreign trade, the lack of appropriate date, and other elements which make forecasting of export and import flows so difficult; but in this case we must recognize an additional hard fact, namely that changes of the magnitude and breadth arrived at at the Smithsonian meeting are outside our range of experience. Still, quantification, no matter how hedged with caveats, was needed.

4/ F. Gerard Adams and Helen B. Junz, "The Effect of the Business Cycle on Trade Flows of Industrial Countries," The Journal of Finance, May 1971 and William H. Branson and Helen B. Junz, "Trends in U.S. Trade and Comparative Advantages," Brookings Papers on Economic Activity, 2:1971.

In retrospect, as one reviews the work done by economists in U.S. and international agencies (such as the IMF and the OECD), it is surprising how closely the various estimates cluster. The consensus seems to be that the potential shift in the U.S. trade balance, on basis of the change in central rates agreed to last December, would amount to somewhere between $7-8 billion. This improvement may not seem so impressive against the fact that we currently are running a trade deficit of about that amount -- the deficit for February-March was $7-1/2 billion at annual rate. However, in assessing the adequacy of any adjustment one has to try to isolate the underlying trends: when the current deficit is adjusted for all sorts of special influences -- such as strikes, effects of currency speculation, and most important, the effects of differences in cyclical positions among industrial countries -- it becomes evident that the estimated potential improvement would go a long way towards eliminating the fundamental disequilibrium.

Whether or not the potential change will be achieved depends in the first instance upon demand management policies here and abroad. Clearly, if we follow policies that continue to erode our relative cost position, the actual adjustment would fall short of potential. Similarly, there would also be a short-fall if other countries took policy actions offsetting some -- or all -- of the exchange rate change effects.

Apart from this rather commonplace observation, however, there are a number of factors that could retard -- or hasten -- the adjustment process, which need to be brought out. In the first place, there is a question what effect the introduction of the wider bands within which currencies are traded may have on the adjustment process. The fact that a 2-1/4 per cent swing on either side of central rates is now possible means that effective exchange rate changes could be substantially larger, or smaller, than the negotiated changes in central rates. Thus, changes in the market rates within the wider band might add to or subtract about $2 billion from the potential $7-1/2 billion adjustment. And there are reasons to believe that with a successful adjustment the likelihood that this would be a subtraction is rather great.

This is so because a successful adjustment path implies a greater than average improvement in the U.S. payments balance at a relatively early stage in the process. First, as the trade adjustment actually takes place, the rate at which the dollar is traded will begin to move towards the central rate. And as this proceeds, reflows of speculative funds are likely to push the rate towards the ceiling. This would occur even if interest rate policies were neutral. But, there is an additional factor which will tend to push the dollar rate upward: the relative cyclical positions among industrial countries. At this time the U.S. economy appears to be around twelve months or so ahead in the cycle as compared with other countries. This would argue that interest rate differentials are likely to move in favor of the United States, as in fact they already have begun to do.

This reasoning leads one to conclude that the introduction of the wider band in a situation of disequilibrium, of itself, could impede the adjustment process. This is so, simply, because restoration of confidence would produce capital flows which tend to push market rates for the dollar above the level which the underlying payments situation warrants. In doing this the effective exchange rate change is reduced and the basic adjustment process lengthened. Conversely, if confidence were lagging and the dollar were traded at the lower limit of the band, the trade adjustment would be speeded. Thus, ironically, success in this case implies some delay. I do not mean to question the desirability of the wider band in helping equilibrate short-term fluctuations in financing flows, but it is important to recognize the possible side effects of the timing of the introduction of wider margins on the adjustment process.

The value of the dollar within the band -- that is the actual size of the effective exchange rate change during the adjustment period -- depends importantly upon the confidence people put in the adequacy of the recent rate adjustments. This leads to the second point I wanted to discuss: it is most important to be clear about the time dimensions of the adjustment path. Some people have tended to expect a virtually immediate response of trade flows to devaluations and revaluations. This, of course, is not realistic because it takes time to achieve the shifts in resource allocation which would correct a fundamental disequilibrium.

In recognition of this fact, most public statements have pointed out that the full adjustment would take some time; probably somewhere between eighteen months or two years. However, the hypothesis of a two-year time-lag for the adjustment process was advanced chiefly to make clear that it would be erroneous to expect that the effects would be immediately visible. It was important that such misconception not gain credence because misjudgment of the time-lags might weaken confidence in the effectiveness of the adjustment measures and could, in fact, abort the entire process.

The two-year time estimate, thus, was mainly based on common-sense and not on any empirical evidence. Most of the models used to estimate changes in trade flows do not incorporate any time-lags at all and the few that do, use only lags of a few quarters. Therefore, it seemed useful to investigate the lag question somewhat more thoroughly.

Preliminary results of work I am doing jointly with Rhomberg at the IMF, indeed, confirm the hypothesis that lags might be quite a bit longer than those generally postulated.[5/] We found that, for industrial countries, reaction lags seem to stretch well into the third or fourth year after a relative price change has taken place. Furthermore, the elasticities of substitution increase over time, implying a gradual building up of the adjustment path with the largest effects concentrated in the third year and a tapering off thereafter.

5/ Helen B. Junz and Rudolf R. Rhomberg, "Effects of Price Changes on Export Shares of Industrial Countries," forthcoming.

If this longer-lag hypothesis holds true -- and the British experience seems to lend support to it -- it would be unfortunate if a shorter time path were to be widely accepted and expected. For, if by the second year there was no large visible effect, it might be concluded that exchange rate changes really are not the answer to the U.S. trade balance problem and, therefore, that something else would need to be done. It would follow that the something else might well be a resort to trade restrictions.

The reason why it is not at all startling to find that responses to relative price changes take rather long to work themselves out and become strongest after what seems quite a long period of time -- namely, three years or so -- leads into my third point. The observed price changes, which are the basis of all elasticity estimates, are just the tip of the iceberg. They normally indicate a change in relative costs, part of which -- depending upon market conditions -- is absorbed in profit margins. The estimated elasticities, thus, incorporate the effects of the response of consumers to the observed price changes as well as that of producers to changed profit margins -- with the latter probably taking somewhat longer to work through. If it were possible, in addition to improving our price data, also to develop a data base for relative cost changes, one could disentangle the various effects. But given the sorry state of our data base, estimated price elasticities tend to reflect the reaction of consumers as well as that of producers to relative cost changes.

Failure to recognize this fact has led not only to underestimation of the time needed to complete the adjustment process, but also to an erroneous conclusion of perhaps even greater importance: namely, the assumption that the effectiveness of an exchange rate change depends very much upon the promptness with which that change is passed through into final prices. It is in part for this reason, I believe, that anti-dumping actions are variously being recommended against exporters who fail to make a full adjustment for the exchange rate changes in their dollar prices.

Let me repeat, there is no basis for believing that the potential adjustment that can be expected from a given set of exchange rate changes will depend upon how the resulting relative cost changes are divided between producers and consumers: the adjustment path may be somewhat different, but the effect in the long-run will be exactly the same. For example, if a devaluation works through a rise in prices in the devaluing country, the consequent shift in resource allocation will be accomplished through new entry into the market by domestic producers; if however devaluation works through absorption by the foreign producer into profit margins, shifts in resource allocation will be accomplished through the withdrawal of the foreign producer from the market of the devaluing country. The net effect, in the end, being the same.

It might be argued to some extent, that adjustment by way of withdrawal of foreign participants from the domestic market might lead to a somewhat smoother transition period. This is so because the initial effect of a devaluation, if it works through price changes, is to put pressure on the price and wage levels of the devaluing country. This, in turn, reduces the effective change in exchange rates and, consequently, the effective change in relative costs. This effect would be mitigated to the extent that the adjustment process works through the profit margins of foreign suppliers. In addition, depending upon the state of the markets and the relative speed with which producers and consumers in various countries react to profit and price changes, the adjustment period may not necessarily be longer if the profit stimulus rather than the relative price deterrent is employed. It might, in some circumstances, even be shorter. Most of this argument has been made with reference to import flows into a devaluing country. It is clear that the same reasoning also applies to export flows.

To sum up: I have presented the following three propositions:

1) That the introduction of the wider band around central exchange rates at a time of disequilibrium might possibly retard the full achievement of the trade potential that could be expected from the negotiated changes in central rates. This leads to the conclusion that, especially during the transition period, interest rate policies -- as well as other demand management policies -- must be sensitive to trade and exchange rate policy goals;

2) that the adjustment process might take somewhat longer than is traditionally thought, making it important that this is well understood in order to avoid unnecessary and erroneous policy actions springing from impatience; and

3) that the full potential shift in trade flows can be achieved whether this occurs through price changes or through profit changes; thus, attempts to force the price changes to take place are unnecessary and might be counterproductive to the extent that certain measures could produce retaliatory actions on the part of other countries, but even more because the transition period might be less smooth.