

#79

February, 1976

NOTE ON KEY CURRENCY INTERVENTION SYSTEMS

by

Michael P. Dooley

NOTE: International Finance Discussion Papers are preliminary materials circulated to stimulate discussion and critical comment. References in publications to International Finance Discussion Papers (other than an acknowledgement by a writer that he has had access to unpublished material) should be cleared with the author or authors.

Note on Key Currency Intervention Systems

by

Michael P. Dooley*

I. Introduction

One of the U.S. objectives for monetary reform during the C-20 negotiations was to insure that the dollar exchange rate has as much intramarginal flexibility as the maximum permitted other currencies in a system of fixed but adjustable parities. The supposed advantages of intramarginal flexibility have been discussed at length elsewhere and will not be dealt with here. The major purpose of this note is to introduce a countervailing argument into the discussion.

It is argued in this paper that in a key currency intervention system, narrow intervention bands generate a mix of intervention responses which are more nearly neutral with respect to the center country's net reserves and weighted average exchange rate. This attribute of a key currency intervention system remains relevant to current discussions of monetary reform since we now have key currency intervention in a system with no formal intervention bands, that is, a managed float.

The demonstration of the desirability of narrow bands for a key currency rests on the premise that the intervention rules which determine which currencies are sold to and purchased from the public by central banks influence the set of exchange rate changes or net reserve changes that are generated by a shock to the system.^{1/} In particular it is

*/ The views expressed herein are solely those of the author and do not necessarily represent the views of the Federal Reserve System.

^{1/} It is beyond the scope of this paper to consider all of the conditions under which intervention does or does not "matter." It may facilitate understanding of the discussion that follows if the reader accepts the assumption that bonds denominated in different currencies are imperfect substitutes because of risk aversion.

argued that key currency intervention generates changes in net reserves and exchange rates for the center country which are greater than necessary in order to clear the exchange markets. Further it is argued that as intervention bands are widened toward a managed float, the unnecessary exchange rate changes and the unnecessary official settlements imbalances will become greater.

Key Currency Intervention

A useful way to evaluate the importance of this problem is to consider the Bretton Woods system. Why weren't these unnecessary exchange rate changes and official settlements imbalances for the center country perceived as a problem in that system? The answer offered here is that the magnitude of these distortions is directly related to the size of the intervention bands.

Assume in the old system that some shock caused the French franc to fall to its intervention floor with respect to the dollar. The Bank of France was obliged to buy francs from and sell dollars to the market. Initially this transaction generated an increase in U.S. net reserves. If the private sellers of francs to the Bank of France wanted to hold some currency other than dollars there would also have been subsequent changes in the dollar exchange rate with respect to third currencies. Assume, for example, that the sellers of francs wanted to hold some marks in the place of the francs which were sold to the Bank of France and therefore dollars were offered for marks in the exchange market. This would generate an appreciation of the mark relative to the dollar. The appreciation of the

mark was arrested when the mark moved to its intervention ceiling, at which time the Bundesbank supplied marks to the public in exchange for dollars, or when the appreciation of the mark generated speculative purchases of dollars against marks by private market participants. After the mark reached its intervention ceiling further dollar sales by the Bank of France were offset by dollar purchases by the Bundesbank and there were no further changes in U.S. net reserves. Notice that the size of the change in U.S. net reserves depended in part on the change in the stock of dollars which the public absorbed before the mark was pushed to its intervention ceiling with respect to the dollar.

This analysis implies that a center country may not want increased intramarginal flexibility for its currency. If, in our example, the mark could have moved twice as far as the 1% above par which characterized the Bretton Woods system before the Bundesbank was obliged to intervene, intervention by the French would have generated larger changes in U.S. net reserves and wider swings in the exchange rate between the dollar and other currencies.

Relevance to a Managed Float System

Consider in a managed float system the same shock which causes the French franc to depreciate against the mark and the dollar. If France chose to engage in key currency intervention by selling dollars and purchasing francs, the effects on U.S. net reserves and the dollar exchange rate vis-a-vis other currencies should be the same as in the key currency intervention system outlined above. But under the same assumptions about the public's

portfolio preferences, the mark would not quickly move to its intervention ceiling with respect to the dollar. Instead the dollar would depreciate against the mark until the increased supply of dollars was willingly held. Thus in a managed float system the magnitude of the distortions in both the exchange rates and the net reserves of the center country balances due to key currency intervention is considerably increased.

It would also be important in a managed float system to know whether the appreciating or depreciating currency was likely to initiate key currency intervention. If the mark were appreciating against the franc, the Bundesbank might offer to sell marks against dollars. In this case U.S. net reserves would fall. If the public wanted to run down its holdings of both francs and dollars, they would buy dollars in exchange for francs and present the dollars obtained to the Bundesbank. In this instance the dollar would appreciate against the franc until the public was happy with the reduced stock of dollars. Thus the dollar in a managed float system with key currency intervention would not only be subject to net reserve changes and exchange rate movements generated by other central banks' intervention policies, but even the direction of these effects would be arbitrary.

Conclusions

One way out of this dilemma is to insist upon a multicurrency intervention system for a managed float.^{2/} If however it became clear that

^{2/} Such a system is described in M. Dooley and J. Shafer "Rules for Intervention without Fixed Parities" IFDP #77, January 1976.

only a few countries would participate in such a system, thus making key currency intervention by nonparticipants an important part of the system, the above analysis suggests that the United States might intervene to limit the changes in dollar exchange rates with third currencies generated by key currency intervention. For example, if France sold dollars in exchange for francs the United States might purchase the dollars and sell a basket of currencies or perhaps only the most rapidly appreciating currency in the system. There would of course have to be an understanding that these currencies be supplied to the U.S. by the appropriate central banks. Such a system might have some appeal since all exchange market intervention could be in dollars, all countries could participate, and the center country would not lose control over its exchange rate or reserve position.