

Discussion of “The Federal Reserve as an Informed Foreign Exchange Trader: 1973–1995”

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Foreign exchange intervention operations are a controversial policy option for central banks. In one view, intervention policy is not only ineffective in influencing the level or volatility of exchange rates, but the policy is also dangerous, because it can interfere with a central bank’s monetary policy objectives. Another view is that intervention is an additional policy tool that central banks can use to influence exchange rates in some market conditions, including “calming disorderly markets” in times of foreign exchange market upheaval. One’s view on the appropriateness of foreign exchange intervention policy, unsurprisingly, depends importantly on one’s view of the efficiency of foreign exchange markets. If currencies are always appropriately priced, interventions can at best lead to temporary market distortions.

This ambitious paper by Michael Bordo, Owen Humpage, and Anna Schwartz examines the efficacy of U.S. intervention operations in the dollar market over the period 1973 through 1997. Their approach is to count the number of daily instances when interventions lead to policy-consistent movements in the dollar exchange rate over the course of a day. For example, a U.S. dollar-strengthening intervention is deemed successful if it leads either to an appreciation of the dollar relative to the mark or yen, or a moderation of a depreciating trend in the dollar in the next twenty-four hours. Their statistical criterion is that the number of “successful” operations should exceed the number that might occur randomly given the near-martingale nature of daily exchange rate changes. Their main finding that only 60 percent of intervention operations over the twenty-two-year period led to successful daily movements in the

dollar exchange rate is taken as evidence in favor of the view that intervention is ineffective.

In thinking about how to interpret the results in this paper, it is worth reviewing the role of intervention policy in the United States. During the period in which countries adhered to the Bretton Woods fixed exchange rate system, the United States was never obliged to intervene. Intervention operations were required of all other member countries whenever their exchange rates exceeded their parity bands around the dollar. After the breakdown of the system in 1973, intervention policy was left to the discretion of individual countries. In 1977 the International Monetary Fund Executive Board provided its member countries with three guiding principles for intervention policy: (i) countries should not manipulate exchange rates in order to prevent balance-of-payments adjustment or to gain unfair competitive advantage over others; (ii) countries should intervene to counter disorderly market conditions; and (iii) countries should take into account the exchange rate interests of others. These principles implicitly assume that intervention policy can effectively influence exchange rates, and explicitly state that countries should only use intervention policy in certain market conditions.

The foreign exchange market was quite volatile in the years immediately after the collapse of Bretton Woods, and most countries, including the United States, actively engaged in foreign exchange intervention in the 1970s. The data from this period, summarized in table 2 of the paper, indicate that the United States intervened frequently in both directions by small amounts. Indeed, of the 998 daily operations studied in this paper, 739 (or 74 percent) occurred between March 1973 and April 1981. The United States abandoned intervention policy altogether during the first four years of the Reagan administration; the official U.S. view during that period was that the dollar should be solely determined by market forces. Between April 1981 and early 1985, the dollar appreciated by over 40 percent against the mark and yen, and the U.S. trade deficit widened to nearly 3 percent of GDP. The view that the dollar should be left to market forces was abruptly abandoned in the autumn of 1985 when the United States and the rest of the G-5 engaged in an unprecedented number of large and coordinated intervention operations to weaken the dollar as part of the Plaza Agreement. These operations coincided with a dramatic reversal in the value

of the dollar. The G-5 countries continued to intervene episodically throughout the rest of the 1980s and early 1990s. It is also worth noting that the scale of central bank intervention operations increased dramatically in the post-1985 period relative to earlier operations. The average daily intervention dollar sale was five times larger in the period after 1985 (the average sale was \$35 million in the period 1973–81 and \$199 million after 1985), while the average intervention dollar purchase was three times larger (the average dollar purchase was \$77 million in the period 1973–81 and \$256 million after 1985).

The U.S. approach to intervention in the foreign exchange market, and presumably its objectives for those operations, changed over the twenty-two-year period covered in the Bordo, Humpage, and Schwartz study. The way in which the authors allow for the possibility that the efficacy of intervention also changed over time is to divide the sample in April 1981 and then further divide the pre- and post-1981 samples into shorter subperiods. Their table 2 summarizes the daily success counts for U.S. interventions in the mark and yen markets across the full time period as well as the various subperiods according to three alternative criteria: (i) intervention-consistent dollar movements, (ii) intervention-consistent dollar trend moderation, and (iii) intervention-consistent dollar movement or trend moderation. The main result from table 2 that the authors emphasize is that intervention operations were not more successful than would occur randomly under criteria (i) and (iii) in the full sample or any of the defined subperiods. Interestingly, the results also indicate that U.S. interventions were successful (relative to what would be expected randomly) according to the second criteria over the full and various subperiods, suggesting that operations generally “leaned against the wind” by moderating exchange rate trends.

The count analysis reported in table 2 measures the unconditional probability of intervention “success” under each of the three criteria, taking each day on which the United States intervened as an independent observation. It seems unlikely that either policymakers or market participants view intervention operations in this way. Interventions are often episodic and generally occur during time periods when exchange rate movements are unusually volatile or at odds with other policy objectives. The authors examine whether the probability of intervention success might be influenced by the way in which operations take place, or the circumstances surrounding

operations, using a series of probit analyses of U.S. intervention days. The dependent variable in these regressions is the outcome of the third success criteria (a variable which takes the value of one when dollar movements are intervention consistent, or when intervention successfully leans against the wind, and is zero otherwise), and the independent variables (included one at a time) include the size of the operation, whether an operation occurred on the previous day, the number of consecutive intervention days, the number of days since the last intervention, whether the operation was coordinated with another central bank, and whether there was a compatible change in the federal funds or discount rate. These probit results are reported for the full sample period (or for the yen market after 1991 when Japanese operations are also available). The one variable that is found to consistently explain the likelihood of intervention success is the dollar amount of U.S. intervention. The reported estimates suggest that a U.S. intervention of more than \$300 million is sufficient to virtually guarantee success against the mark, while for the yen market the estimated threshold is \$400 million. One way to interpret these findings is as follows: if you are going to intervene, intervene on a large scale. Interestingly, this is exactly what the United States seems to be doing; recent interventions are less frequent and much larger than they were in the past.

In assessing the efficacy of U.S. intervention policy since 1973, the authors conclude that interventions are “more of a hit-or-miss phenomenon than a sure bet” and that the scale of operations was too small. It is worth focusing on each of these aspects of intervention in turn. The three criteria used to measure intervention’s success in the paper are based on the assumption that intervention operations are effective if they convey relevant private information about exchange rates to the market. This will be the case if interventions help to forecast subsequent exchange rate movements. This is a tall order. Early work by Meese and Rogoff (1983) found that standard models of exchange rate determination failed to outperform a random walk. Flood and Rose (1995) found that macro fundamentals, including variables that reflect changes in monetary policy, don’t systematically explain or predict exchange rate movements. Put another way, intervention operations join a long list of macroeconomic and policy variables that do not systematically forecast daily exchange rates.

The second key result in the paper, that scale matters, is also in keeping with more general results in the empirical exchange rate literature. While monetary policy changes reflected in interest rate differentials are generally not found to systematically influence daily exchange rates, large changes in interest rates are quickly reflected in exchange rate movements. An example is that the monetary model perfectly predicts exchange rate movements during hyperinflations.

While the main conclusion of the paper is that U.S. intervention since 1973 has been largely unsuccessful, the authors caution against a return to active intervention policy. Their concern is that interventions might “interfere with the FOMC’s domestic policy objectives.” If interventions are truly ineffective, this concern seems unwarranted. On the other hand, if the evidence indicates intervention *can* be effective, which is another way to interpret the empirical results in the paper, the question of how intervention policy should best be used is more compelling. Interestingly, the reported probit results indicate that there is no statistical relationship between the efficacy of intervention and changes in monetary policy. The contribution of the paper, therefore, is less in its lessons for policy and more in its documentation of the changing nature of intervention operations in the United States since the early 1970s.

References

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