

Research Department
Federal Reserve
Bank of
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Banks and Foreign Exchange Markets

In 1974, losses from foreign exchange trading led to the insolvency of two banks—Franklin National in the United States and Bankhaus I.D. Herstatt in West Germany. Several years later, between the summer of 1977 and November of 1978, the dollar fell in value against the German mark, the Japanese yen and the Swiss franc.

These seemingly unrelated events crystallize the concerns of policymakers about commercial bank foreign exchange trading. One concern has been that such trading involves undue risk that might be a source of bank insolvency. A second has been that banks engaging in foreign exchange trading for speculative purposes may influence exchange rates.

These concerns have prompted a number of studies by economists. Early studies, done at the Federal Reserve Board, focused on the priorities of regulatory agencies and committees. More recently, economists have been freed from the constraints of congressionally mandated studies and with increased institutional knowledge about the workings of foreign exchange markets, have begun to focus on different issues. The various studies of bank participation in foreign exchange markets will be examined here.

Causes for concern

The initial concern about commercial bank foreign exchange trading was sparked by the problems of four banking institutions around the world. In early May of 1974, Franklin National, then the twentieth largest bank in this country in terms of assets, announced that it had lost \$12 million because of unauthorized foreign exchange trading.

The bank's losses were apparently caused by forward transactions. In a forward contract, the buyer agrees to purchase a specified amount of currency on a specified date, usually several months in the future. This

contrasts with a "spot" contract in which a buyer receives the currency two days later. The rate at which the currencies are exchanged, the forward or spot rate, is determined at the time the parties enter into the contract. In Franklin's case the currencies were worth less than their purchase price when the forward contracts matured.

Federal officials declared Franklin insolvent on October 8, 1974. While details of the Franklin story were still unfolding, the Bundesbank, West Germany's central bank, announced the liquidation of one of its most active trading banks, Bankhaus I.D. Herstatt KG. The reason given for closing the bank was heavy foreign exchange trading losses, although the precise nature of the transactions was not revealed. In the same year, Wesdeutsche Landesbank Gironzentral of West Germany and Union Bank of Switzerland both sustained "hefty" losses related to foreign exchange.

Policy responses

The immediate official response varied. In 1974, German bank regulators moved to limit banks' net open positions—the difference between bank foreign currency assets and liabilities—to twenty percent of bank capital. The United States considered similar regulation while strengthening its supervisory efforts. The FDIC, for example, revised questionnaires for its examiners' use in investigating foreign exchange trading operations, and the Federal Financial Institution Examination Council (FFIEC) published guidelines for the conduct of trading operations. One guideline recommended that banks set their own close-of-day position limits.

Earlier, in response to the dollar devaluation in 1973, the U.S. Treasury had begun to collect weekly data on the close-of-day foreign currency net positions of the most active trading banks in this country. In 1975,

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it began to publish this data monthly in the *Treasury Bulletin*. The dollar depreciation between 1977 and 1978 brought renewed interest in official circles about the influence of bank foreign exchange trading on exchange rates. The Senate committee on Banking, Housing and Urban Affairs conducted inquiries into the operation of foreign exchange markets in both 1978 and 1979. Senator Proxmire voiced the Committee's primary concern:

"There have been accusations made... Some banks are so huge that a few working together perhaps could push the rates in a chosen direction... we owe the public as well as the banks... a thorough and careful inquiry..."

The studies prompted by the policymakers' concerns over potential bank insolvency and the influence of banks on exchange rates were conducted at the Board of Governors of the Federal Reserve System.

Federal Reserve Board studies

Robert Bradshaw's study, "Foreign Exchange Operations of U.S. Banks," was undertaken because regulatory reforms that "might be implemented to limit bank's exposure to foreign exchange losses" were being considered. Bradshaw was primarily trying to determine whether net open positions were so large that the associated exchange rate risk threatened bank solvency. Whenever an open position or exposure exists, exchange rate fluctuations will change its value and cause a profit or loss.

Bradshaw attempted to measure "net open position exposure" by using the limits 35 banks had imposed on their own net open positions. He totalled the limits in several currencies and calculated the ratio of this total to bank equity capital. Bradshaw found this ratio to be "in the 10 to 20 percent range" for most major money center banks. He observed that a bank rarely uses its limits in all currencies simultaneously and that a bank is not likely to suffer a 100 percent loss

on its open position when exchange rates move counter to expectations. Bradshaw concluded that net open exposure *in practice* is likely to be a much smaller percentage of capital than the 10 to 20 percent figure mentioned above. The small size of net positions relative to equity capital also led Bradshaw to the conclusion that net open exposure would be an unlikely source of future bank insolvency.

In their 1980 study, "U.S. Banks, Exchange Markets, and the Dollar, Sept.-Nov. 1978," Board Economists Ralph Smith, Jr. and Barbara Lowrey examined data collected in a survey of bank foreign exchange trading and position taking activity: "The Survey was requested in hopes of shedding additional light on allegations that the speculative activities of large trading banks were responsible for the severe selling pressure on the dollar in October 1978." They found "no indication that changes in U.S. banks' positions 'drove' exchange rates in one way or the other" during the period.

Lowrey and Smith attributed the lack of a statistically significant influence of bank changes in positions on exchange rates to the small size of variations in bank's positions "relative to the variation in other market participants' positions."

New York Fed studies

In 1977, and again in 1980 and 1983, the Federal Reserve Bank of New York conducted surveys of foreign exchange market turnover that have provided information about the magnitude of the market and about different types of market transactions. In the New York Fed's Autumn 1981 *Quarterly Review*, Patricia Revey made extensive use of the turnover surveys in an article entitled "Evolution and Growth of the U.S. Foreign Exchange Market." In 1978, a monograph by Roger Kubarych entitled *Foreign Exchange Markets in the United States* tried to explain how the market works and how banks operate in it.

Both studies discussed the nature of bank net positions by examining the extent to which they are deliberately assumed. It is clear that banks must take positions to serve their customers. For example, if a customer sells DM, the bank becomes a buyer and has a positive or "long" net position. A bank wishing to avoid as much risk as possible can have its traders enter the market "only when they have commercial orders to cover," that is, the bank can follow a "sequential approach." In this example, the bank would "cover" the position created by the customer deal by going into the market to sell the same amount of DM it had purchased.

Kubarych observes that it is virtually impossible for an active bank to take a "sequential" approach. Similarly, Revey argues that the \$385 billion increase in foreign exchange turnover between the 1977 and 1980 surveys cannot be attributed solely to attempts by banks to cover an increased amount of customer transactions. She estimates that half of the increase was due to banks that entered into transactions in the hopes of profiting from exchange or interest rate movements. Her finding suggests that a significant amount of foreign exchange activity is due to banks that deliberately take a net open position.

Revey and Kubarych agree that banks do more than merely respond to the open position thrust upon them by customer service. They contend that banks have desired net open positions based on anticipated rate movements and that they use the market to reconcile their desired positions with the ones dictated by customer transactions.

Revey also suggests that commercial bank positions may play the role of inventories in the market. In her view, the willingness of banks to hold net open positions may influence exchange rate variability: when bank holdings of foreign exchange adjust to accommodate excesses of supply and demand in the foreign exchange market,

they may diminish the need for exchange rate adjustments to correct the imbalance.

Conclusion

The initial studies on commercial bank participation in foreign exchange markets necessarily focused on the size of bank net positions and the potential of banks for influencing exchange rates. Although these studies concluded that U.S. bank positions were not likely to cause insolvency or to influence exchange rates, it would be a mistake to infer that bank participation does not affect the operation of foreign exchange markets. Revey's work suggests that the potential bank influence on exchange rate variability must also be considered. Stanford University Professor Ronald McKinnon has argued that a lack of commercial bank position-taking can actually be a source of instability in the foreign exchanges.

The feverish concern about foreign exchange trading caused by the bank failures and exchange market turmoil of the seventies has subsided, but the subject is still of more than academic interest. All major central banks want to keep track of and, at times, influence exchange market conditions. For this reason, they need to understand how the market operates. Perceptions of the effects of bank exchange trading also are likely to influence the policies of regulatory authorities in the future. For example, as recently as March of 1983, the Australian central bank ordered its commercial banks to stop all trading not directly related to customer orders. Traders have asked for a reconsideration of this directive. How the Australian central bank, for one, views the role of the banks in the foreign exchange markets is sure to influence its ultimate decision.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities	Amount Outstanding	Change from	Change from	
			Dollar	Percent
Large Commercial Banks	7/6/83	6/29/83		
Loans (gross, adjusted) and investments*	163,112	— 24	1,912	1.2
Loans (gross, adjusted) — total#	141,676	— 29	1,294	0.9
Commercial and industrial	44,262	— 76	102	0.2
Real estate	56,063	— 170	— 1,273	— 2.2
Loans to individuals	23,919	— 19	581	2.5
Securities loans	2,612	8	428	19.6
U.S. Treasury securities*	8,375	109	1,778	27.0
Other securities*	13,060	— 161	— 1,161	— 8.2
Demand deposits — total#	45,985	4,598	3,705	8.8
Demand deposits — adjusted	29,901	1,344	1,821	6.5
Savings deposits — total†	67,268	1,089	36,002	115.1
Time deposits — total#	65,298	— 426	— 31,198	— 32.3
Individuals, part. & corp.	59,589	— 111	— 27,557	— 31.6
(Large negotiable CD's)	19,147	229	— 16,572	— 46.4
Weekly Averages of Daily Figures	Week ended 7/6/83	Week ended 6/29/83	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (—)	141	108		97
Borrowings	807	812		50
Net free reserves (+)/Net borrowed(—)	— 666	— 705		46

* Excludes trading account securities.

Includes items not shown separately.

† Includes Money Market Deposit Accounts, Super-NOW accounts, and NOW accounts.

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