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# FRBSF WEEKLY LETTER

January 23, 1987

## Euromarkets and Monetary Policy

The rapid growth of euromarkets in the 1960s and 1970s generated extensive discussion about the implications of euromarkets for domestic monetary policy. Euromarket deposits held by United States residents totaled \$94 billion at the end of 1985 compared to \$8 billion in 1975.

This rapid growth may be partly explained by the fact that euromarkets are a largely unregulated environment which facilitates international banking. Traditionally, this has meant that banks offer deposits and provide loans in U.S. dollars outside the United States, or under international banking facilities not subject to U.S. banking regulations. In recent years, however, banks in euromarkets have reduced the extent to which they accept deposits or issue loans on their own account, and have instead facilitated the placement of private credit instruments by underwriting their issue.

These innovations in international banking are believed to have made the United States economy more vulnerable to external influences and to have weakened the effectiveness of monetary policy. This *Letter* discusses the implications of euromarkets and recent innovations in international banking for monetary policy.

### **Effectiveness of monetary policy**

While monetary policy is concerned with the behavior of a number of economic variables (such as prices, interest rates, and exchange rates), this *Letter* will focus on monetary policy's impact on interest rates, which in turn have a direct impact on investment and economic activity. In particular, we will examine how euromarkets may weaken the ability of monetary policy to influence interest rates. To do so, it is useful first to understand why people hold money and how monetary policy works.

Businesses and households hold money to pay their bills on time. Because of its usefulness in transactions, the public is willing to hold money (specifically currency and checkable deposits) even though money typically pays no interest or it pays interest below that paid by other assets. The market, in turn, ensures that the returns on

assets that are alternatives to money are such that the amounts of money and other assets outstanding are all willingly held. For example, if the public would like to hold more money than is available at the prevailing interest rate (i.e., there is an "excess" demand for money), the public will try to cash in other assets for money. This exchange will raise the yield on assets that are alternatives to money, making money more costly to hold, until the excess demand for money is eliminated.

Monetary policy affects interest rates by changing the supply of money, thereby bringing about changes in the relative yields of other assets that will induce the public to accept the changed money supply. A policy that shrinks bank reserves forces banks to reduce their deposit liabilities, or the money held by the public. The result is an excess demand for money that will tend to raise interest rates. Conversely, a policy that expands bank reserves will tend to lower interest rates.

The extent to which interest rates will respond to monetary policy depends primarily on the existence of good substitutes for money. If other assets that are good substitutes for money exist, a small increase in their yield will suffice to eliminate the excess demand for money. The effect of monetary policy on interest rates in that case will be small. Financial intermediaries, including banks operating at home and in euromarkets, may weaken the effectiveness of monetary policy by creating deposits that are relatively close substitutes for money.

### **Euromarkets**

While the ability of domestic financial intermediaries to offset monetary policy by creating substitutes for money is ultimately limited by reserve requirements, euromarkets do not face this constraint. Euromarkets may offset monetary policy in two ways: (1) euromarket deposits held by domestic residents may partly substitute for domestic money (specifically M1), and (2) euromarket lending to domestic residents may offset the effects of monetary policy on the credit market.

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As an example, consider a monetary policy that aims to tighten the money supply, and therefore, domestic liquidity. The increase in interest rates that results from tighter monetary policy would encourage an increase in deposits created in euromarkets. If those deposits were good substitutes for domestic money, such deposit creation in euromarkets would offset the intention of the contractionary monetary policy.

At the same time, higher interest rates may encourage euromarkets to increase lending to domestic residents. Increased lending, if it offset the reduced availability of domestic loans, would weaken a contractionary monetary policy by lessening the tendency for interest rates to rise.

Euromarket activity may contribute to interest rate volatility, and affect monetary policy, by changes in the demand for euromarket deposits as well by variations in their supply. For example, a shift in the preferences of asset holders in favor of euromarkets could raise domestic interest rates, and require offsetting action on the part of monetary authorities.

A number of factors limit the extent to which euromarkets reduce the effectiveness of domestic monetary policy. Transaction costs and considerations of liquidity and risk limit the total amount of euromarket deposits created by the banking system, even though the absence of reserve requirements in euromarkets is an incentive for banks to create such deposits. In particular, banks doing business in euromarkets hold deposits with banks in the U.S. as a form of "reserves" to satisfy their requirements for liquidity and to settle accounts. The volume of these deposits will tend to be affected by the availability of reserves for domestic banks.

Finally, the effect of euromarkets on the domestic loan market would depend on the extent to which banks use euromarkets as channels for lending abroad rather than at home. Since subsidiaries of U.S. banks account for the bulk of euromarket lending to domestic residents, reserve requirements on domestic borrowing from euromarkets since 1969 have restricted U.S. borrowing from the euromarket. At present, a 3 percent reserve requirement applies on the net balances owed by U.S. banks to their non-

U.S. offices and international banking facilities, and on credit extended by foreign affiliates of U.S. banks or international banking facilities to U.S. residents.

## **Recent financial innovation**

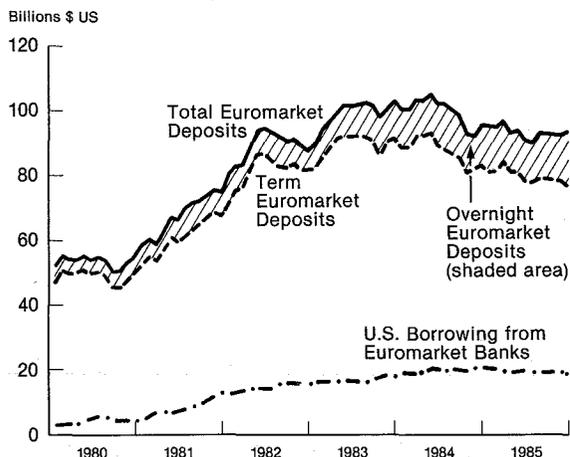
Since the 1982 debt crisis, international investors have shown a preference for direct credit (such as holding commercial paper) rather than for euromarket deposits. At the same time, pressures on the capital position of international banks and a desire to increase the return on assets have stimulated the creation of financial instruments that would accommodate investor demand for direct credit instruments while leaving bank balance sheets unaffected.

As a result, in recent years, banks have facilitated the placement of private credit instruments by underwriting their issue in international capital markets and providing guarantees rather than by accepting deposits and issuing loans on their own account. Other innovations (such as currency swaps, interest rate swaps, options and futures) have enabled borrowers and lenders to shift risk and to structure contracts to suit their requirements more readily, and thus facilitated direct acquisition and exchange of international assets.

The net effect of these developments has been a sharp decline in the amount of international credit for which banks act as intermediaries. The implications for domestic monetary policy of this new direction are ambiguous. On the one hand, the decline in euromarket deposit creation would tend to enhance the effectiveness of monetary policy. On the other, the new role of banks in bringing together lenders and borrowers implies that U.S. residents may find it easier to hold foreign bonds and foreign residents may find it easier to hold domestic bonds.

This development would weaken the ability of domestic monetary authorities to influence interest rates. In particular, because the new financial instruments do not directly affect bank balance sheets, reserve requirements would not be as effective in restricting U.S. borrowing from euromarkets. As a result, borrowing from international capital markets would have greater consequences for U.S. monetary policy.

## Euromarket Growth has Slowed



### Euromarkets and U.S. residents

Of the two channels — deposit creation and loan supply — through which the euromarkets could affect U.S. monetary policy, euromarket deposit creation has historically been more important. That is, euromarkets have served largely as an outlet for deposits for U.S. residents rather than as a source of loans to them, probably because of reserve requirements on borrowing from euromarkets.

The chart illustrates the growth of euromarket deposits held by U.S. residents in foreign branches of U.S. banks in the 1980s. Euromarket deposits grew from less than \$60 billion in 1980 to \$94 billion at the end of 1985. While the bulk of this amount is in the form of euromarket deposits with a fixed term to maturity, the share of overnight euromarket deposits has grown significantly in recent years. In contrast, direct bank lending to U.S. residents increased over the same period from \$3 billion to \$18 billion.

The chart also reveals that U.S. nonbank holdings of euromarket deposits stabilized and then fell after rising steadily through 1982, reflecting the tendency for bank intermediation to decline since the 1982 debt crisis.

On the other hand, U.S. borrowing from international capital markets (both bank and nonbank) increased. Thus, while the euromarket deposits held by U.S. residents in U.S. bank subsidiaries declined by over \$7 billion in 1984, total lending (including direct credit underwritten by banks in euromarkets) to U.S. residents in international capital markets increased \$19.7 billion. In 1985, 35 percent of the international note-issuance facilities were for U.S. residents, making the U.S. the largest borrower in this new market. Financial innovations have provided a means for avoiding the reserve requirements on direct borrowing from U.S. bank subsidiaries in the euromarket.

### Conclusions

The use of euromarkets may weaken the effectiveness of domestic monetary policy in two ways: (1) by creating substitutes for domestic money and (2) by acting as an additional source of lending to U.S. residents. Indeed, euromarkets have traditionally been a deposit outlet for U.S. residents, providing an alternative asset that could weaken the impact of domestic monetary policy. The importance to domestic monetary policy of U.S. borrowing from the euromarket has been limited since, until recently, such borrowing was very small.

More recently, the channel through which the euromarkets affect domestic monetary policy appears to be shifting away from being a deposit outlet for U.S. residents. Recent innovations in international banking and growing U.S. external borrowing appear to be increasing the importance of euromarkets as a source of funds, and their role in facilitating the exchange of domestic and foreign interest-bearing assets.

Since the decline in euromarket deposit creation tends to enhance the effectiveness of monetary policy, whereas the increased borrowing facilitated by banks in the euromarket may weaken it, the implications of recent developments in international banking for monetary policy remain to be fully explored.

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# Research Department Federal Reserve Bank of San Francisco

## BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount	Change	Change from 1/1/86	
	Outstanding 12/31/86	from 12/24/86	Dollar	Percent <sup>7</sup>
Loans, Leases and Investments <sup>1 2</sup>	212,036	3,679	7,820	3.8
Loans and Leases <sup>1 6</sup>	191,575	3,841	6,824	3.6
Commercial and Industrial	56,400	2,238	2,951	5.5
Real estate	67,600	142	1,584	2.3
Loans to Individuals	40,662	304	2,011	5.2
Leases	5,618	32	— 45	— 0.7
U.S. Treasury and Agency Securities <sup>2</sup>	13,206	125	2,345	21.5
Other Securities <sup>2</sup>	7,255	— 287	— 1,349	— 15.6
Total Deposits	223,182	10,774	12,864	6.1
Demand Deposits	68,700	9,214	11,260	19.6
Demand Deposits Adjusted <sup>3</sup>	42,374	2,395	— 10,314	— 19.5
Other Transaction Balances <sup>4</sup>	20,097	1,125	4,919	32.4
Total Non-Transaction Balances <sup>6</sup>	134,385	435	— 3,315	— 2.4
Money Market Deposit Accounts—Total	47,070	388	1,115	2.4
Time Deposits in Amounts of \$100,000 or more	31,799	— 313	— 6,250	— 16.4
Other Liabilities for Borrowed Money <sup>5</sup>	27,153	1,926	304	1.1
<b>Two Week Averages of Daily Figures</b>	Period ended 12/29/86	Period ended 12/15/86		
<b>Reserve Position, All Reporting Banks</b>				
Excess Reserves (+)/Deficiency (—)	10,277	10,054		
Borrowings	11	4		
Net free reserves (+)/Net borrowed(—)	10,266	10,050		

<sup>1</sup> Includes loss reserves, unearned income, excludes interbank loans

<sup>2</sup> Excludes trading account securities

<sup>3</sup> Excludes U.S. government and depository institution deposits and cash items

<sup>4</sup> ATS, NOW, Super NOW and savings accounts with telephone transfers

<sup>5</sup> Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

<sup>6</sup> Includes items not shown separately

<sup>7</sup> Annualized percent change