

This PDF is a selection from a published volume from the National Bureau of Economic Research

Volume Title: Supplement to NBER Report Fifteen

Volume Author/Editor: Raymond F. Mikesell

Volume Publisher: NBER

Volume ISBN:

Volume URL: <http://www.nber.org/books/mike75-1>

Conference Date:

Publication Date: October 1975

Chapter Title: The Eurocurrency Market and the Recycling of Petrodollars

Chapter Author(s): Raymond F. Mikesell

Chapter URL: <http://www.nber.org/chapters/c4216>

Chapter pages in book: (p. 1 - 7)

NATIONAL BUREAU REPORT  
supplement

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Recycling of Petrodollars**

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Raymond F. Mikesell

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and University of Oregon



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# THE EUROCURRENCY MARKET AND THE RECYCLING OF PETRODOLLARS

by

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Following the 1973 quadrupling of oil prices, the oil producing countries began to invest a substantial portion of their surpluses in the Eurocurrency market. As a result new interest was sparked in the role of the Eurocurrency market in international finance. With the annual OPEC (Organization of Petroleum Exporting Countries) current account surpluses expected at around \$50 billion for the next several years (perhaps aggregating some \$250-\$300 billion before leveling off), the Eurocurrency market's capacity to perform a major function in the recycling of petrodollars has been a source of uneasiness in financial markets.

The principal explanation for the development of the Eurocurrency market lies in its ability to surmount various legal barriers to the flow of funds between national capital markets, and in the cost advantage to banks in dealing with liabilities denominated in foreign currencies free of national currency deposit reserve requirements. Multinational firms based in the United States have been able to borrow in the Eurocurrency market from foreign branches of U.S. banks, unrestrained by U.S. capital export controls, and to hold their liquid funds in Eurodollars and other Eurocurrency deposits subject to neither national currency reserve requirements nor U.S. interest payment regulations. Thus, interest rates on loans have been lower and rates paid on deposits higher than they would have been in transactions carried on with U.S. resident banks. Liquid

asset holders throughout the world can adjust their portfolio holdings in a variety of currencies without having to deal with foreign banks, and the U.S. and foreign residents can receive interest on dollar deposits with a maturity of less than thirty days, even on overnight deposits. Finally, the vast worldwide interbank market for Eurocurrencies provides a mechanism which allows banks to adjust their position in various currencies at a minimum transactions cost.

## The Origin of the Eurocurrency Market and Its Growth to 1973

A Eurocurrency deposit is a time deposit denominated in the currency of a country other than the country in which the bank is located. Sources of funds for the Eurodollar market include Eurodollar deposits of nonbank firms and individuals, central bank deposits, and dollars injected into the market by the Eurobanks themselves, either by the conversion of other currencies into dollars or through swap transactions with central banks (i.e., dollars acquired from the central banks in exchange for domestic currencies). About three-fourths of total Eurocurrency deposits are denominated in dollars, with the remainder in German marks, Swiss francs, pounds sterling, guilders, and French francs, in that order.

Demand for Eurocurrency loans, rather than supply of deposits, has proven to be the prime mover behind the past expansion

phases of the Eurocurrency market, and foreign branches of U.S. commercial banks have played a leading role in this expansion. U.S. parent banks increased the number of their foreign branches substantially during the 1960s. They were encouraged in this expansion by the exemption of foreign branches from Regulation Q (which sets ceilings on interest rates paid on deposits made for more than 30 days and prohibits payment of any interest at all on deposits for less than 30 days) and from the Fed's reserve requirements. They were prodded, also, by the credit stringency in the United States and the financing requirements of their corporate customers abroad. Borrowing by the head offices from foreign branches jumped from \$1.2 billion at the end of 1964 to a high of \$14.5 billion at the end of November 1969, an important factor in the rapid expansion of the Eurocurrency market during that period (from a net size of about \$14 billion to an estimated \$50 billion).<sup>1</sup>

The repayment of parent-bank indebtedness to foreign branches (down to \$1.3 billion by the end of 1971) that followed the imposition of reserve requirements by the Federal Reserve authorities late in 1969 failed to hamper the continued growth of the Eurocurrency market. (Until September 1969, Eurodollar borrowings were not subject to reserve requirements. Effective September 1969, a 10% marginal reserve requirement was placed on any increase in Eurodollar borrowing by U.S. banks from foreign branches above the May 1969 level.)

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<sup>1</sup> The *net* size of the Eurocurrency market is measured by total Eurocurrency deposits of Eurobanks for which reports are available less interbank balances. The *gross* size of the Eurocurrency market as of mid-May 1974 was estimated at \$360 billion (*World Financial Markets*, Morgan Guaranty Trust Company, New York, July 16, 1974, p. 4). Figures given by the Morgan Guaranty Trust Company are somewhat higher than those reported by the Bank for International Settlements because of the wider coverage of the former. The Eurobanking system includes banks outside of Europe.

The repayments, together with additional Eurodollar deposits, were used for loans to U.S. firms operating abroad and to other foreign businesses and governments. In fact, between the end of 1969 and the end of 1972, the Eurocurrency market more than doubled in size, to an estimated \$105 billion. Demand for such Eurocurrency loans was stimulated by U.S. government controls, both on loans by banks and other financial institutions to foreign residents, including U.S. subsidiaries, and on direct investments abroad,<sup>2</sup> which drove parent firms in the United States to finance their foreign capital expenditures by borrowing from the Eurodollar and Eurobond markets.

The growing weakness of the dollar in 1970 and 1971 also contributed to an increase in the demand for Eurodollar loans. With a view to speculating against the dollar, borrowers converted their dollar credits into currencies such as German marks and Swiss francs. The introduction of floating exchange rates in March 1973, however, tended to reduce Eurodollar borrowing of a speculative nature.

The relative importance of the various sources of Eurodollar deposits has undergone considerable shifts over the past decade. Prior to 1970, the major source of Eurocurrency funds was private nonbank deposits, including those of multinational firms. Federal Reserve controls on the interest rates that U.S. banks could pay to depositors played an important part here. Both U.S. residents and residents of foreign countries (including subsidiaries of U.S. firms) were induced by the higher interest rates paid abroad to hold their dollar deposits in the form of Eurodollar deposits. During the 1971-1973 period, central banks' dollar deposits in Eurobanks provided a major source of the increase in Eurodollar funds.

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<sup>2</sup> Effective January 1, 1968, mandatory ceilings were placed on U.S. direct foreign investments with either dollars exported from the United States or with foreign earnings. No controls were placed on U.S. corporate investments abroad financed by funds borrowed abroad.

Finally, in 1974 the oil-exporting countries became the most important single source of Eurocurrency funds, while their borrowing from the Eurocurrency market simultaneously plummeted.

With the growing apprehension over the exchange value of the dollar in 1970–1971, changes occurred in the makeup as well as in the sources of Eurocurrency holdings. Foreign private nonbank holdings of Eurodollar deposits tended to decline, while holdings of nondollar Eurocurrency deposits grew significantly, indicating a preference of portfolio holders for nondollar currencies. After December 1971, however, foreign private nonbank holdings of Eurodollar deposits resumed their growth, although the growth rate of nondollar Eurocurrency deposits was somewhat higher, at least up to December 1971.

### The Inflationary Impact of the Eurocurrency Market

The Eurocurrency market has been subject to criticism on various fronts, partly on the grounds that it has contributed to worldwide inflation and partly on the grounds that the system has led to improper banking practices exempt from national and international controls on the quantity and quality of credit. The question of its inflationary impact hinges on the analyst's focus—whether one is concerned with the creation of additional means of payment, or whether one regards the operation of an international financial intermediary per se as inflationary. Some argue, for example, that the creation of financial intermediaries whose obligations constitute liquid assets increases the demand for goods and services by economizing on money or increasing its velocity.<sup>3</sup> But whatever its validity, this argument must be separated from the position that the operation of the Eurocurrency market involves an expansion of direct means of payment

<sup>3</sup> See J. G. Gurley and E. S. Shaw, "Financial Aspects of Economic Development," *American Economic Review*, September 1955, pp. 515–538.

through the creation of additional bank credit.

Since Eurocurrency deposits are time deposits, they are not ordinarily used as a direct means of payment. The creation of a Eurodollar deposit as a result of the deposit of a foreign currency by an individual or nonbank firm does not create new purchasing power. It is analogous to the deposit in a savings bank of a check drawn on a demand deposit. (Much of the debate regarding multiple expansion of the Eurocurrency deposits arises, however, from the identification of such deposits with direct means of payment.) The existence of nonbank Eurocurrency deposits ultimately depends on the willingness of individuals and firms to hold them. When the collective demand for Eurocurrency deposits declines, they must first be converted into money before they can be exchanged for other assets, and in the process their volume shrinks. By contrast, the volume of money is not reduced when a decline in collective demand occurs. In fact, while trying to reduce their collective holdings of money, individuals bid up the prices of nonmonetary assets, or cause production and employment to expand to the point where the demand for money just equals supply. As a result, interest rates may also change.<sup>4</sup>

The direct inflationary impact of the Eurocurrency market results from events that expand the means of payment in the hands of the nonbank public. A prime example is central bank deposits of reserve currencies in Eurobanks. (Central banks usually deposit reserve currencies in Eurobanks of other countries rather than in resident banks.) Such deposits do not involve a shift of private funds from one liquid asset to another. Neither do they reduce central bank reserves: not only are these Eurodollar deposits counted as part of central bank reserves, but to the extent that they are used by the Eurobanks to make

<sup>4</sup> This analysis is based on L. B. Yeager, "Essential Properties of the Medium of Exchange," *Kyklos*, 21, no. 1, 1968, pp. 45–68.

Eurodollar loans which are then converted into national currencies, they eventually return to the central banks, thus increasing foreign currency reserves. The direct inflationary impact results from the dollar payments to the Eurobanks, which proceed to make dollar loans to nonbank customers in their own or some other country and thereby increase the supply of money in the hands of the public. Thus, when borrowers of Eurodollars deposited by a central bank sell dollars in the exchange market for national currencies, the volume of money increases abroad. When borrowed dollars are used for purchasing goods or services from the United States or for making investments in this country, the volume of money expands in the hands of U.S. residents, not abroad.

Eurobanks themselves may also generate Eurodollar loans by converting national currencies into dollars, and lending the dollars in the Eurodollar market—but they must have excess reserves for this purpose. If the loans are made to residents who convert the dollars into national currency deposits, the supply of money in the hands of the public will increase. If they are made abroad through the Eurodollar market, the expansion of bank reserves and national money supply occurs in other countries, while reserves of the lending country's banking system contract. Another way to generate funds for the Eurodollar market is arranging swap transactions with the central bank of the country in which the Eurobanks are located. Such transactions involve the same type of credit expansion as that resulting from central bank deposits in Eurobanks described above. Thus, the factors that lead to an increase in the means of payment are expansion of bank reserves as a consequence of central bank activities and credit expansion by banks on the basis of their excess reserves—not simply the shifting of nonbank currency balances in Eurodollar deposits.

During 1971 the volume of Eurodollar loans expanded, while the volume of private nonbank deposits declined. There is evi-

dence, moreover, that in 1972 private nonbank Eurodollar deposits rose only moderately compared with the rise in Eurodollar loans to nonbank customers. Thus in considerable measure the credits extended through the Eurodollar market have been provided directly or indirectly by the central banks rather than by private nonbank Eurodollar deposits, and such credit expansion is clearly inflationary in the sense that there occurs a net expansion in the means of payment in the hands of the nonbank public. For the most part this expansion has affected national currencies outside the United States, although some of the dollars channeled into Eurobanks by foreign central banks contributed to the increase in money circulation in the United States as well.

#### **Petrodollar Recycling in 1974 and the Future of the Eurocurrency Market**

During the first half of 1974 the Eurocurrency market grew at an annual rate of about 50 percent, slightly ahead of the 1973 growth rate. The 1974 expansion was dominated by the OPEC oil surpluses, both on the supply and the demand side—the large increase in Eurocurrency deposits by the OPEC countries was matched by heavier borrowing by the oil importing countries to finance their oil deficits. The largest borrowers were the developed countries—France, Italy, Japan, and the United Kingdom—but substantial amounts were also borrowed by Argentina, Brazil, Greece, Mexico, Peru, and the Philippines. In addition to their Eurocurrency borrowings, Western European countries borrowed substantial amounts from U.S. banks.

In the third quarter of 1974 both the supply of Eurocurrency deposits and the effective demand for loans declined sharply. The failure of the Bankhaus I. D. Herstatt in Cologne in June 1974 along with a few other bank failures in the United States and Europe, plus heavy losses by a number of

banks on Eurocurrency credits, both lowered the confidence of Eurocurrency depositors and made the Eurobanks more cautious in granting credits. Until recently, a few large international banks (the banks where the Arab oil governments typically make their Eurocurrency deposits) have been able to place their excess funds in the interbank market at the London interbank offer (LIBO) rate. This rate is normally slightly higher (about one-eighth of a point) than the rate paid to Eurobank depositors and one and a half points lower than the rate for prime borrowers. Hundreds of banks throughout the world participate in the interbank market; the deposited funds might go through several banks before they are lent to a nonbank borrower. But the viability of the system depends upon the solvency of each link in the chain. Bank failures, though few in number, have reduced confidence in the interbank system, with the result that banks with surplus funds now are unwilling to redeposit in any but the largest and strongest banks in the international system. As a result, in the second half of 1974 the LIBO rate at which banks borrow from the market varied significantly with the class and reputation of the borrowing bank. These developments have undoubtedly reduced the efficiency of the interbank market for enabling Eurobanks to adjust their Eurocurrency positions, and have increased costs in reflection of the risk.

The demand for Eurocurrency loans was curtailed by the deepening recession in the latter part of 1974 which probably reduced the credit demand of industrial firms with a high credit rating. The decrease in Eurobank lending was accompanied by a drop in U.S.-bank-reported capital outflow from \$7.5 billion in the second quarter of 1974 to \$1.5 billion in the third quarter.<sup>5</sup>

Some Eurobanks have been reluctant to accept large OPEC deposits because of the

inability of the banks to place funds profitably and safely either in loans to nonbank borrowers or in the interbank market or because of the decline in the ratio of bank equity to bank liabilities. As a result, many have voiced concern about the Eurocurrency market's role in the recycling of petrodollars. It is important to note here, however, that total growth of the Eurocurrency market resumed in the final quarter of 1974, continued, and became more expansionary in the first quarter of 1975.

Can Eurobanks continue to finance a large volume of intermediate- and long-term investments with relatively short-term Eurocurrency deposits held by a few OPEC governments or their agencies? This is one of the major question marks in the petrodollar picture. Initially the fluctuation of worldwide interest rates inhibited the extension of Eurocurrency loans for long periods of time. The extension of medium- and long-term Eurocurrency credit of three to five years' and occasionally up to ten years' maturity was made possible, however, by the introduction of revolving Eurocurrency credits, with interest rates subject to adjustment every six months on the basis of prevailing market rates. Even large projects, such as hydroelectric dams and mines, requiring loans of \$100 million or more can now be financed by banking consortia organized for this purpose. In some cases the loans are denominated in several currencies—Eurosterling and Euro-Deutsche marks along with Eurodollars. Beginning in 1971, an increasing proportion of Eurocurrency loans was made to developing countries. In 1972 and 1973 the latter accounted for nearly half of the publicly announced medium- and long-term Eurocurrency credits, with substantial amounts going to oil-exporting countries. The expansion of Eurocurrency credits in the first half of 1974 reflected both the growing deficits of oil-importing countries and a continued uptrend in medium- and long-term industrial credits (including sizable borrowing by U.S. companies). Although Eurobanks are alleged

<sup>5</sup> *Survey of Current Business*, December 1974, p. 30.



reluctant to accept short-term deposits and use the proceeds for making long-term loans, this type of financial intermediation has been taking place right along and is considered normal practice. The Eurobanks do need assurance that the large OPEC depositors will only withdraw their deposits gradually, however, and will do so over a long period of time. It would be highly desirable if the OPEC governments could be induced to accept deposits with longer maturities—say, up to two years or more—either on a fixed or on a variable interest rate basis. In addition, machinery could be established for consultation and coordination between representatives of the Eurobanks and the money managers of the OPEC countries.

The question may also be raised whether the channeling of petrodollars through the Eurocurrency market is more inflationary than, say, direct investment by the OPEC countries in the oil-importing countries. As already indicated above, depositing dollars in the Eurodollar market is not in itself inflationary since it does not create additional means of payment. If, for example, national currencies are exchanged for dollars by the central banks for making payments to the OPEC countries and thereby money supply in the hands of the public is reduced by a like amount, the redepositing of the dollars in the Eurodollar market by the OPEC countries simply restores the national money supply to its former volume as the dollars loaned to nonbank borrowers are converted back into national currencies at the central banks. (Actually, the acquisition of dollars with demand deposits in the hands of the public should reduce Eurobank reserves, while redepositing of these dollars in the Eurodollar market restores Eurobank reserves.) If there is an injection of central bank credit into the system in the process of financing the oil deficits, however, a net expansion of national money supply in the oil-importing countries will result. This would be true, for example, if the central banks provided the dollars for making pay-

ments to the OPEC countries without allowing a reduction in reserves of the banking system, and then permitted bank reserves to rise as the recycled petrodollars are converted into national currencies for loans and investments in the domestic economy.

One of the most notable aspects of recycling petrodollars via the Eurocurrency market is the wide distribution this affords the OPEC funds—a far wider distribution than they would receive as investments in national currency deposits or in the short-term securities of a few countries with well-developed money markets. Without the worldwide intermediation of the Eurocurrency market, oil deficit countries not receiving direct OPEC investments would have to resort to direct intergovernmental borrowing or to the proposed Organization for Economic Cooperation and Development (OECD) "Financial Support Fund," (the U.S. government has proposed the establishment of a \$25 billion Financial Support Fund to be contributed by the members of the OECD) out of which loans would be issued to OECD countries cooperating in the International Energy Program. These loans would be made under specified conditions for dealing with temporary balance of payments deficits arising out of the oil crisis. Deficits of developing countries with lower credit standing can be covered either by direct assistance from the OPEC countries or through the International Monetary Fund Oil Facility. The OPEC countries reap benefits, too, from the Eurocurrency market's operation: their returns on Eurocurrency deposits are generally higher than those on time deposits and other assets of similar maturity acquired in national money markets.

It is, therefore, premature to conclude that the Eurocurrency market will no longer play an important role in intermediating the OPEC surpluses. Confidence in the market has been strengthened by recent assurances from leading central banks, including the Federal Reserve, that they would support the Eurocurrency market in the event of an

abrupt withdrawal of petrodollars or other deposits. A narrowing of the differential between interbank rates charged to different classes of Eurobanks in early 1975 has also been observed. Lower short-term rates should induce OPEC countries to accept longer maturities, a stabilizing factor. At the end of 1974, in fact, it was reported that Arab funds were being committed for somewhat longer periods. Also, an increase in the spread between deposit rates and rates charged to borrowers will increase the profitability of Eurocurrency operations and thus attract more equity into the Eurobanking business as well as provide funds for re-invested earnings.

Nevertheless, the foreign exchange risk faced by the OPEC depositors in the Eurocurrency market does present a problem. Undoubtedly these countries would like to have their assets denominated in SDRs (special drawing rights), but Eurobanks would probably find it very difficult to make a substantial volume of loans denominated in SDRs. In time, however, we are likely to see an increasing amount of private international transactions made in those terms.

Both from the borrower's and the lender's point of view, the dollar remains the optimum currency for international debt transactions. Despite the depreciation of the dollar in terms of certain Western European currencies since September 1974, the effective (trade-weighted) exchange value of the dollar has been relatively stable since March 1973; at mid-April 1975, the effective exchange value of the dollar was the same as its average value in March 1973, and recently it has been creeping upward. For a variety of reasons the predominant interna-

tional role of the dollar appears secure, and its position in the Eurocurrency market is not likely to change substantially in the foreseeable future.

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