

BUREAU OF BUSINESS RESEARCH WORKING PAPER  
NO. 12

GLOBAL CAPITAL MARKETS

by

Merwin H. Waterman  
Professor of Finance  
University of Michigan

Copyright © 1970

by

The University of Michigan

*Printed in the United States of America  
All rights reserved*

18-70

C 4 1970

#### BACKGROUND OF THIS PAPER

This paper originated in response to a request by a multinational corporation for a position paper relating to the Eurobond market. Management wanted an outside point of view of the components of the market and of the factors which might affect it.

Further thought and work may develop the ideas to the level of a short monograph. Suggestions, criticisms, and conversations on the subject are invited by the author.

23 352442 015 XL  
90 2 3

0872

## GLOBAL CAPITAL MARKETS

Since World War II, and with particular acceleration beginning in the sixties, business and finance have achieved a significant new dimension--not just an international dimension but a world-wide one. Market objectives (for both products and securities) have tended, or at least tried, to ignore political boundaries within the free world. Quotas and tariffs pertaining to goods and services have not been eliminated, but direct investments in various market areas have helped to surmount them. In the finance field, political impediments to international flows of capital have also been surmounted by the development of what is really a free-world capital market.

It is necessary that an American business know about this relatively new phenomenon of a world-wide capital market whether it requires funds to finance overseas operations or domestic ones. It is almost essential to use some overseas source to finance any substantial overseas operations in the so-called developed countries because of the United States' restrictions on such investments by U.S. companies. The possibilities of using the global market for financing domestic operations instead of, or in addition to, the normal U.S. capital markets have already been exploited and present interesting future possibilities.

This free-world capital market has achieved the various labels of Eurodollar, Eurobond, or Eurosecurity market because most of the business is done in Europe. But such labels are no more indicative of

the real scope of this market than is the label "New York stock market" in measuring the scope of the capital flows centered in that city.

Therefore, no matter what we may call it, this free-world capital market (excluding the communist countries) is the object of this examination. This analysis seeks to characterize and to develop an understanding of the anatomy of the Eurosecurity market. The sources and characteristics of capital supply, the sources and characteristics of demand, the significant environmental factors affecting each, and the financial institutions and instruments involved in the workings of this capital market are matters which are particularly pertinent to the study.

#### Supply Characteristics

Quantitative data regarding the Eurobond and Eurodollar markets are practically nonexistent, particularly with respect to supply. Records of sorts are compiled on demand which show most public offers of securities and some of the private placements which dip into the supply pool. The relation of these records to special features of the supply side will be dealt with later.

#### Eurodollars

It is customary and reasonable to distinguish between money markets and security markets; we do it here in this country. It has generally been done in other national markets, and the distinction has naturally carried over into the global market. Eurodollars (or Euro-marks or Euroguilders) represent short-term funds available in the global market in the respective currencies. Generally Eurodollars are funds from commercial banks or other institutions having deposits or short-term investments. They can be dollars deposited in European

banks or U.S. bank branches overseas, deutschmarks deposited in other than German banks, guilders deposited in other than Dutch banks, and so forth. British pounds and French francs do not enter the picture anywhere because of government restrictions on freedom of transfer; lira are likewise under wraps, and Swiss francs are insulated from the world markets by government fiat.

Thus we have short-term funds available in this world market of convertible currencies. According to the Bank for International Settlement (BIS):

In 1969 the Euro-currency market continued to show remarkable growth. The foreign currency liabilities vis-à-vis non-residents of the banks of the eight reporting European countries shot up by \$22.8 to 56.7 milliard and their assets by \$20.2 to 58.2 milliard. Net of redeposits, the total amount of credit extended through the Euro-currency market, may be estimated to have increased from about \$30 milliard to nearly \$45 milliard and its dollar component from \$25 to 37.5 milliard.<sup>1/</sup>

The dominance of the dollar is evident in this picture at 85 per cent of the total. The BIS analysis of the Eurocurrency market points out characteristics of capital flow and, for our purposes, indicates that since 1967 there has been a steady expansion in Eurodollars quite aside from the U.S. credit squeeze of high interest rates which boosted Euro-dollar rates to unprecedented capital attracting levels in 1969. In other words, there are sources other than conversion of currencies that seem continually to expand short-term funds available for use by business (and, in 1969, by banks), and it should be noted that only eight European countries are covered by BIS data. The BIS chart, "Growth of

---

<sup>1/</sup> Fortieth Annual Report, 1970, p. 145.

the Euro-dollar Market" (see Figure 1) shows quarterly changes in liabilities of European banks and reflects their pull from various sources to supply the loans to U.S. banks. These peaks were reduced in September, 1969, when our Federal Reserve Bank introduced reserve requirements on U.S. bank Eurodollar borrowings and by the removal of Regulation Q interest ceilings on large denomination Certificates of Deposit (CDs).<sup>2/</sup> The statement of sources and uses prepared by BIS for 1968 and 1969 (see Figure 2) shows a steady growth in European nonbank sources of Eurodollars--both gross and net. Although bank sources did not change as much, they continued between \$3 and \$5 billion. Figures as far back as 1964<sup>3/</sup> indicate that these trends have been continuous within Europe. Nonbanks which were net users of Eurodollars between 1964 and 1967 turned to suppliers in 1968 and 1969. The indications are that, although other currencies may play their part, the Eurodollar supply in Europe continues to be an expanding one. The United States and Japan are the big users, the former being the larger.

Generally, there seems to be no need to worry about the basic supply of Eurodollars. The estimated supply now at \$45 million<sup>4/</sup> will continue to expand, although the bulge in 1969-70 caused by the very high interest rates will not mark the trend line. The continuing U.S.

---

<sup>2/</sup> Ibid., p. 155.

<sup>3/</sup> Bank for International Settlement, Thirty-ninth Annual Report, 1969, p. 149.

<sup>4/</sup> Bank for International Settlement, Fortieth Annual Report, 1970, p. 145.

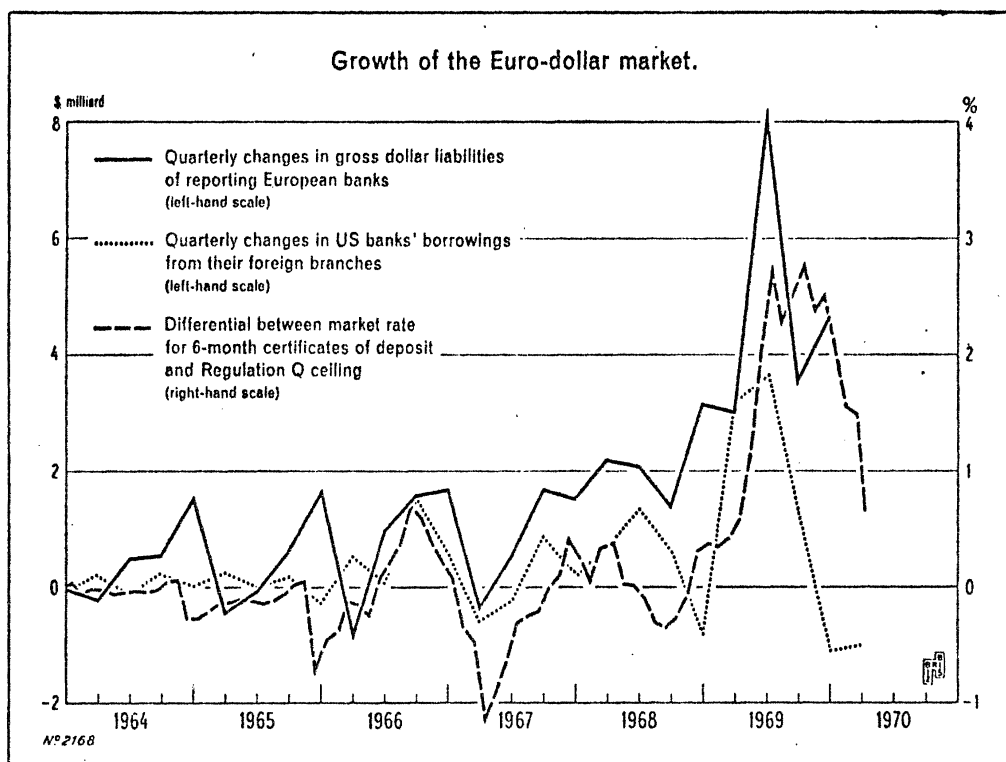


Fig. 1. Growth of the Euro-dollar market. (Source: Bank for International Settlements; Fortieth Annual Report, 1970, p. 148).

| Items                          | 1966         | 1967         | 1968         |              | 1969         |              |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                | December     | December     | June         | December     | June         | December     |
| In milliards of US dollars     |              |              |              |              |              |              |
| <b>Sources</b>                 |              |              |              |              |              |              |
| United States . . . . .        | 1.1          | 1.7          | 2.9          | 3.2          | 4.4          | 3.8          |
| Canada . . . . .               | 0.6          | 0.9          | 1.0          | 1.3          | 2.3          | 2.9          |
| <b>Total</b> . . . . .         | <b>1.7</b>   | <b>2.6</b>   | <b>3.9</b>   | <b>4.5</b>   | <b>6.7</b>   | <b>6.7</b>   |
| Western Europe                 |              |              |              |              |              |              |
| Inside area . . . . .          | 8.4          | 9.6          | 12.2         | 13.2         | 16.8         | 18.6         |
| <i>of which:</i>               |              |              |              |              |              |              |
| Non-banks . . . . .            | 2.8          | 4.0          | 4.8          | 5.2          | 8.1          | 9.4          |
| Banks <sup>1</sup> . . . . .   | 5.6          | 5.6          | 7.4          | 8.0          | 8.7          | 9.2          |
| Other western Europe . . . . . | 1.1          | 1.4          | 1.5          | 1.9          | 2.1          | 2.7          |
| <b>Total</b> . . . . .         | <b>9.5</b>   | <b>11.0</b>  | <b>13.7</b>  | <b>15.1</b>  | <b>18.9</b>  | <b>21.3</b>  |
| Japan . . . . .                | —            | 0.1          | 0.1          | 0.1          | 0.2          | 0.4          |
| Eastern Europe . . . . .       | 0.4          | 0.4          | 0.4          | 0.6          | 0.6          | 1.0          |
| Other . . . . .                | 2.9          | 3.4          | 4.4          | 4.7          | 7.1          | 8.1          |
| <b>Total</b> . . . . .         | <b>3.3</b>   | <b>3.9</b>   | <b>4.9</b>   | <b>5.4</b>   | <b>7.9</b>   | <b>9.5</b>   |
| <b>Grand total</b> . . . . .   | <b>14.5</b>  | <b>17.5</b>  | <b>22.5</b>  | <b>25.0</b>  | <b>33.5</b>  | <b>37.5</b>  |
| <b>Uses</b>                    |              |              |              |              |              |              |
| United States . . . . .        | 4.4          | 5.2          | 8.8          | 9.5          | 16.7         | 16.5         |
| Canada . . . . .               | 0.6          | 0.7          | 0.9          | 0.9          | 1.2          | 1.3          |
| <b>Total</b> . . . . .         | <b>5.0</b>   | <b>5.9</b>   | <b>9.7</b>   | <b>10.4</b>  | <b>17.9</b>  | <b>17.8</b>  |
| Western Europe                 |              |              |              |              |              |              |
| Inside area . . . . .          | 6.3          | 6.9          | 7.1          | 7.9          | 8.9          | 11.7         |
| <i>of which:</i>               |              |              |              |              |              |              |
| Non-banks . . . . .            | 3.7          | 4.1          | 4.5          | 4.7          | 5.1          | 5.6          |
| Banks <sup>2</sup> . . . . .   | 2.6          | 2.8          | 2.6          | 3.2          | 3.8          | 6.1          |
| Other western Europe . . . . . | 0.9          | 1.2          | 1.4          | 1.5          | 1.3          | 1.6          |
| <b>Total</b> . . . . .         | <b>7.2</b>   | <b>8.1</b>   | <b>8.5</b>   | <b>9.4</b>   | <b>10.2</b>  | <b>13.3</b>  |
| Japan . . . . .                | 0.6          | 1.0          | 1.4          | 1.7          | 1.4          | 1.5          |
| Eastern Europe . . . . .       | 0.7          | 0.8          | 0.8          | 0.9          | 0.9          | 1.0          |
| Other . . . . .                | 1.0          | 1.7          | 2.1          | 2.6          | 3.1          | 3.9          |
| <b>Total</b> . . . . .         | <b>2.3</b>   | <b>3.5</b>   | <b>4.3</b>   | <b>5.2</b>   | <b>5.4</b>   | <b>6.4</b>   |
| <b>Grand total</b> . . . . .   | <b>14.5</b>  | <b>17.5</b>  | <b>22.5</b>  | <b>25.0</b>  | <b>33.5</b>  | <b>37.5</b>  |
| <b>Net<sup>3</sup></b>         |              |              |              |              |              |              |
| United States . . . . .        | 3.3          | 3.5          | 5.9          | 6.3          | 12.3         | 12.7         |
| Canada . . . . .               | —            | — 0.2        | — 0.1        | — 0.4        | — 1.1        | — 1.6        |
| <b>Total</b> . . . . .         | <b>3.3</b>   | <b>3.3</b>   | <b>5.8</b>   | <b>5.9</b>   | <b>11.2</b>  | <b>11.1</b>  |
| Western Europe                 |              |              |              |              |              |              |
| Inside area . . . . .          | — 2.1        | — 2.7        | — 5.1        | — 5.3        | — 7.9        | — 6.9        |
| <i>of which:</i>               |              |              |              |              |              |              |
| Non-banks . . . . .            | 0.9          | 0.1          | — 0.3        | — 0.5        | — 3.0        | — 3.8        |
| Banks . . . . .                | — 3.0        | — 2.8        | — 4.8        | — 4.8        | — 4.9        | — 3.1        |
| Other western Europe . . . . . | — 0.2        | — 0.2        | — 0.1        | — 0.4        | — 0.8        | — 1.1        |
| <b>Total</b> . . . . .         | <b>— 2.3</b> | <b>— 2.9</b> | <b>— 5.2</b> | <b>— 5.7</b> | <b>— 8.7</b> | <b>— 8.0</b> |
| Japan . . . . .                | 0.6          | 0.9          | 1.3          | 1.6          | 1.2          | 1.1          |
| Eastern Europe . . . . .       | 0.3          | 0.4          | 0.4          | 0.3          | 0.3          | —            |
| Other . . . . .                | — 1.9        | — 1.7        | — 2.3        | — 2.1        | — 4.0        | — 4.2        |
| <b>Total</b> . . . . .         | <b>— 1.0</b> | <b>— 0.4</b> | <b>— 0.6</b> | <b>— 0.2</b> | <b>— 2.5</b> | <b>— 3.1</b> |

<sup>1</sup> Conversions by the banks of domestic or third-currency funds into dollars. <sup>2</sup> Conversions by the banks of dollars into the domestic or third currencies; excluding, however, the Italian banks' use of Euro-dollars for third-currency loans to residents (included under non-bank uses). <sup>3</sup> A minus sign indicates that the area or grouping in question is a net supplier of Euro-dollar funds, whereas the absence of a sign indicates that it is a net user.

Fig. 2. Estimated net size of the Euro-dollar market.  
(Source: Bank for International Settlements, Fortieth Annual Report, 1970, p. 158.)



U.S.  
deficit  
of course

balance of payments deficit is a fundamental source, and there are no signs of a radical change in this element. It is true that rates on Eurodollars have now receded somewhat, making it less attractive to leave dollars in the Eurokitty. One company that has been depositing generated excess funds is about to bring them home because Eurodollar deposit rates are dropping nearer domestic borrowing rates.

On the supply side of the overall European market, which includes both national funds and Eurofunds, there is a continuing growth in savings. Dr. H. J. Mast calls attention to savings in France which have grown from 19 to 22 per cent of Gross National Product (GNP) since 1958, while they have remained at a high 25 per cent of GNP in Germany.<sup>5/</sup> Although he is speaking of real savings that are generally available in Europe, Dr. Mast points out that private savings, except possibly in Switzerland and Holland, have not been available through pension funds or life insurance companies, so the markets have lacked the steady support of institutional investors. On the continent of Europe the intermediaries are generally banks and savings and loan associations.

It is evident that the Eurodollar market is basically a stable one on the supply side, although the volatility at its margin will affect rates of interest and continue to reflect alternative short-term investment opportunities in various convertible currencies. (Of course, this situation will remain the same only if there is no rash of upsetting exchange controls.) It is confidence in the supply

---

<sup>5/</sup>H. J. Mast, Manager and Economic Advisor to the General Management of the Swiss Credit Bank, "Corporate Financing in Europe," Euromoney, September, 1970, p. 12.

of Eurodollars that leads to the lending of short-term deposits for medium- to long-term purposes in the capital market. It is only because of such confidence that three-, five-, or even seven-year arrangements can be made, and many are being made. Various deposit institutions, U.S. bank branches, Canadian branches, and continental commercial and merchant banks are translating short-term money into long- or at least medium-term capital.

Obviously there are risks to such procedure. The basic supply risk is evaluated and is being accepted. The interest rate risk is being hedged by the lenders using variable rates to the borrowers. Such hedging is accomplished by rolling over short-term notes within the confines of a long-term dollar (or DM) commitment; other lenders just agree to readjust interest rates every three, six, or nine months.

Because banks are the intermediate source of funds of this character, bank lending policies will dictate the terms. Competition in the area seems adequate with many U.S. bank branches tending to push foreign banks into the term loan business to which they had not been previously accustomed. Good banking policy should limit the extent to which these short-term funds (deposits) will be committed on a longer-term basis, but circumstances seem to point to an expanded availability of medium-term capital from banks for business operation and expansion. The fact that banks combine in these arrangements with business serves to spread their risks and diversify the incidence of maturities of their loans.

In terms of the capital raising problems of U.S. business, I would conclude that current conditions on the supply side of the Euro-dollar picture will push toward more institutional term-loan financing.

It is the way to tap the Eurocurrency market and to convert the supply of short-term funds to longer-term uses. Obviously, there are limits and risks that must be evaluated, but as long as there are U.S. balance of payments deficits the supply of funds seems assured. Multiple lending could pyramid loans to a dangerous level where calls could precipitate disaster--but this potential depends largely on bank policy. We can only hope that banks know enough to be self-regulating in this respect. A related risk to borrowers of these kinds of funds for commitment to their investment projects lies in the variable money cost; it becomes unpredictable and unbudgetable when tied to London money rates.

#### Eurobonds

There is no sharp line between the supply of funds for the dollar market and for the bond market. We know that in extreme cases there are some funds always kept short to meet the liquidity requirements of the lender (depositor) and that there are those funds left for years on an interest, dividend, or growth basis with little thought of liquidity. In fact, the liquidity preferences of the European investor seem to be somewhat of a myth. Evidence that this is a myth may be found in the equity market where, in spite of the U.S. stock market performance in 1969, foreigners were still net purchasers of U.S. equities until February, 1970.<sup>6/</sup> This preference may be for institu-

---

<sup>6/</sup> Fred H. Klopstock, "Foreign Demand for United States Equities--The Role of Off-Shore Mutual Funds," Federal Reserve Bank of New York Monthly Review, LII (July, 1970).

tional investments--that is, mutual funds--but they in turn were not pushed into heavy liquidation by investor redemptions. And this was in spite of Cornfeld and the Investors Overseas Services fiasco.

It is also known that many individual investors in Europe have been particularly attracted to Eurobonds by their guaranteed no-tax withholding feature. Whether for purposes of tax avoidance, evasion, or just uniformity in the midst of a welter of national tax laws, this no-withholding feature has created a substantial demand for Eurobonds--thus a supply of long-term funds. No one can compile statistics on the real nature and extent of this market, an essential characteristic of which is secrecy. On the long-term side, it runs a parallel course to numbered Swiss bank accounts.

There is much evidence to substantiate the fact that large amounts of Eurobonds are bought by individual investors. When bonds are picked up for sinking fund purposes the units are often small. Investment bankers say that many sales are in small units, particularly in Belgian markets. What the absorption power of this small investor market is, nobody knows. In 1970 we see evidence that these investors, like the institutions, can stay away in great numbers. They may well have been disillusioned by the price declines of lower coupon issues in face of the 9 to 10 per cent rates of recent months, or by the defaults of two or three Eurobond issues. Again, however, they have not rushed to liquidate. The secondary market quotations have not proven to be the real measure of cost to those wishing to make any significant acquisitions of the obligations of solvent companies.

Another supply source is beginning to appear on the scene in

the form of sinking fund redemptions of the substantial amounts of Eurobonds that have been issued in the past four years. The Kredietbank, in its Weekly Bulletin of August 28, 1970, shows by currency denomination the Eurofunds (mostly dollars) scheduled to become available this year. (See Table 1.) It is interesting to note that the total exceeds \$1 billion and just about equals the total long-term bonds of all currencies reported issued in 1968.<sup>7/</sup>

TABLE 1

Redemptions of Eurobonds in 1970  
(Converted into Thousands of Dollars)

| Currency                 | Amount             | Percentage of Total |
|--------------------------|--------------------|---------------------|
| Dollars                  | \$740,516          | 65.7                |
| Deutschmarks             | 199,710            | 17.7                |
| Florins (Dutch guilders) | 28,679             | 2.5                 |
| Lire                     | 8,420              | 0.7                 |
| Luxemburg francs         | 911                | 0.1                 |
| Swiss francs             | 94,775             | 8.4                 |
| Units of account         | 27,500             | 2.5                 |
| Pounds sterling          | 17,749             | 1.6                 |
| French francs            | 7,749              | 0.7                 |
| Swedish kroner           | 870                | 0.1                 |
| Belgian francs           | 420                | --                  |
| Total                    | <u>\$1,127,145</u> | <u>100.0</u>        |

Source: Kredietbank, Weekly Bulletin, August 28, 1970, p. 339.

<sup>7/</sup> Morgan Guaranty Trust Company of New York, World Financial Markets, August 18, 1970.

The funds available to the long-term market via Eurobonds are to some extent supplemented from the Eurodollar market, at least temporarily. Bank-held funds are used not only to finance long-term business projects on a medium-term basis, but they are also used to finance inventories of long-term Eurobonds--at least during a period of original distribution. However, there does not seem to be capital available to carry the substantial inventories necessary to support a good secondary market. It would seem, therefore, that while there would continue to be obvious crossovers between the short- and long-term money supplies, these interconnections would be marginal. The banks, by nature, will not supply long-term funds or investments in Eurobonds except on a temporary basis.

This leaves us largely dependent on individuals and individual trust accounts for Eurobond investments. Figures ranging from 25 to 40 per cent are mentioned as proportions of Eurobond offerings going to or through Switzerland. Such figures say little about the real investors except that Swiss influence on long-term investments is apt to be in the direction of permanence. Belgium is also reputed to be the home of substantial individual bond investors either as trustees or beneficiaries. How rapidly such funds accumulate may well depend in part on economic stability in some of the lesser developed countries. If and when investment confidence in Latin American, Asian, and African countries is enhanced, the funds of the wealthy in those countries may remain at home, and thus the supply of funds to the Eurobond market will be lessened. In other words, effective development of non-European countries may provide running competition for Eurobonds.

The success, or lack of it, of Eurobond offers in 1970 as compared to previous years is evidence that the investors, perhaps regardless of their supply of funds, do react to market conditions. The steadily rising interest rates on long-term dollar and deutschmark bonds in 1969, which accelerated and peaked in mid-1970, provided adequate reason for withholding the supply of funds. No one rushes to buy anything in a falling price market. It is reasonable to expect that the current stability (or slight decrease) in yields will again whistle up the supply which has been accumulating, waiting, and probably contributing to the recent increases in supply of short-term money. The data in Morgan Guaranty Trust Company's statistical compilations show the inverse correlation between new Eurobond offerings and the level of long-term interest rates. (See Figures 3 and 4.) There is no reason to believe that a shortage of long-term capital has existed; it has just been playing a waiting game. The waiting should be over if the lower level of yields starting in July is maintained or lowered further.

#### Demand Characteristics

On the supply side little enough appears to be known about either Eurodollars or funds for Eurobonds, but perhaps more is known, or at least published, about the dollars. When we start looking at the demand side of the picture, I think the reverse is true. Of course the demand for Eurodollars always equals the supply. But what constitutes the elements of demand, and how should we quantify them?

#### Eurodollars

Just as in the case of commercial bank loans in the United

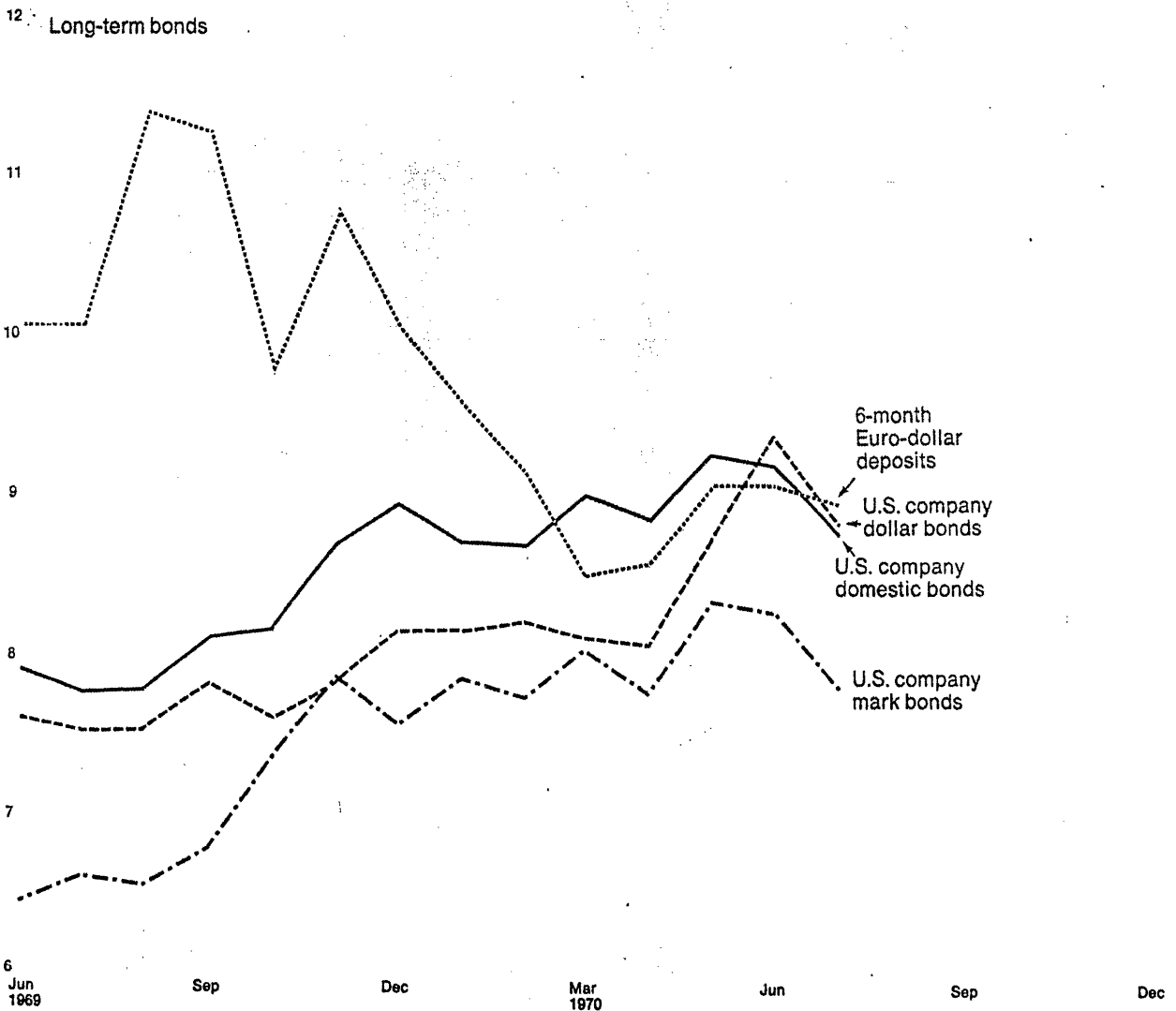
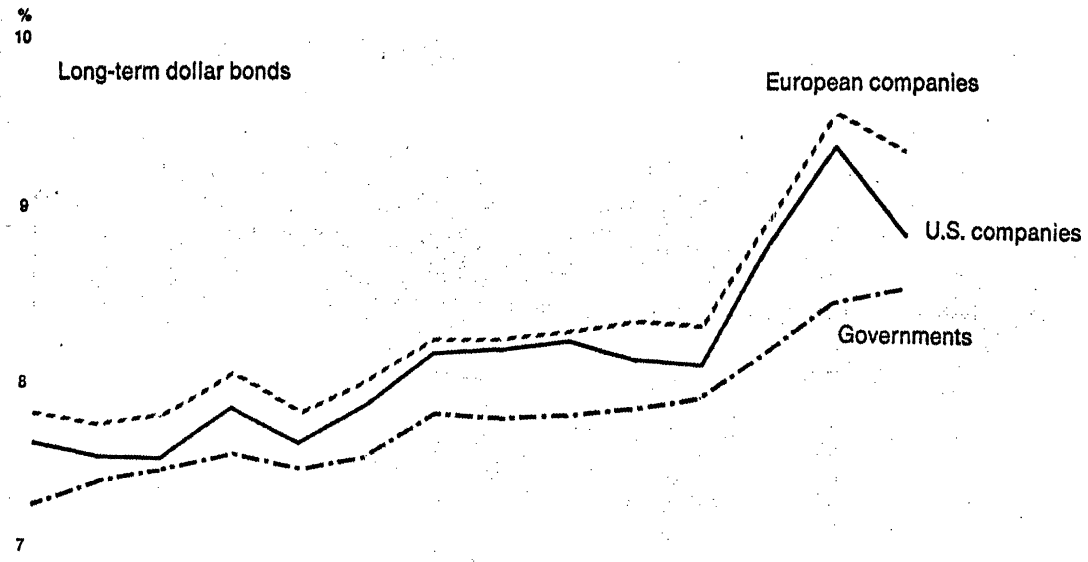


Fig. 3. International bond yields. (Source: Morgan Guaranty Trust Company of New York, World Financial Markets, August 18, 1970, p. 17.)



|                                    | 1965         | 1966         | 1967         | 1968         | 1969         | 1970       |            |            |            |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|------------|------------|------------|------------|
|                                    |              |              |              |              |              | Apr        | May        | Jun        | Jul        |
| <b>Euro-bonds, total</b>           | <b>1 041</b> | <b>1 142</b> | <b>2 002</b> | <b>3 573</b> | <b>3 155</b> | <b>321</b> | <b>248</b> | <b>129</b> | <b>180</b> |
| <i>by category of borrower</i>     |              |              |              |              |              |            |            |            |            |
| <i>U.S. companies</i>              | 358          | 439          | 562          | 2 096        | 1 005        | 40         | 63         | 100        | 42         |
| <i>Other companies</i>             | 319          | 376          | 575          | 603          | 816          | 131        | 38         | 17         | 94         |
| <i>State enterprises</i>           | 110          | 118          | 442          | 349          | 682          | 88         | 147        | 12         | 27         |
| <i>Governments</i>                 | 189          | 108          | 303          | 500          | 584          | 35         | -          | -          | -          |
| <i>International organizations</i> | 65           | 101          | 120          | 25           | 68           | 27         | -          | -          | 17         |
| <i>by currency of denomination</i> |              |              |              |              |              |            |            |            |            |
| <i>U.S. dollar</i>                 | 726          | 921          | 1 780        | 2 554        | 1 722        | 197        | 188        | 100        | 75         |
| <i>German mark</i>                 | 203          | 147          | 171          | 914          | 1 338        | 55         | 49         | -          | 55         |
| <i>Other<sup>a</sup></i>           | 112          | 74           | 51           | 105          | 95           | 69         | 11         | 29         | 50         |
| <i>by type of security</i>         |              |              |              |              |              |            |            |            |            |
| <i>Long-term straight debt</i>     | 836          | 675          | 1 427        | 1 108        | 1 851        | 192        | 214        | 112        | 100        |
| <i>Medium-term straight debt</i>   | 95           | 225          | 260          | 480          | 173          | 94         | 34         | 17         | 80         |
| <i>Certificates of deposit</i>     | -            | -            | 55           | 75           | -            | -          | -          | -          | -          |
| <i>Convertible</i>                 | 110          | 242          | 260          | 1 910        | 1 131        | 35         | -          | -          | -          |
| <b>Foreign bonds, total</b>        | <b>376</b>   | <b>378</b>   | <b>403</b>   | <b>1 135</b> | <b>813</b>   | <b>30</b>  | <b>-</b>   | <b>3</b>   | <b>70</b>  |
| <i>by category of borrower</i>     |              |              |              |              |              |            |            |            |            |
| <i>U.S. companies</i>              | 10           | 24           | 48           | 139          | 223          | 14         | -          | -          | 14         |
| <i>Other companies</i>             | 89           | 71           | 65           | 56           | 114          | -          | -          | 3          | 2          |
| <i>State enterprises</i>           | 59           | 7            | -            | 12           | 107          | 11         | -          | -          | -          |
| <i>Governments</i>                 | 62           | 76           | 157          | 317          | 98           | -          | -          | -          | -          |
| <i>International organizations</i> | 156          | 200          | 133          | 611          | 271          | 5          | -          | -          | 54         |
| <i>by currency of denomination</i> |              |              |              |              |              |            |            |            |            |
| <i>German mark</i>                 | 123          | -            | 10           | 674          | 518          | -          | -          | -          | 54         |
| <i>Swiss franc</i>                 | 78           | 94           | 153          | 238          | 196          | 25         | -          | 3          | 16         |
| <i>Italian lira</i>                | 24           | 139          | 24           | 72           | 24           | -          | -          | -          | -          |
| <i>British pound</i>               | 62           | 76           | 102          | 19           | -            | -          | -          | -          | -          |
| <i>Other<sup>b</sup></i>           | 89           | 69           | 114          | 132          | 75           | 5          | -          | -          | -          |
| <i>by type of security</i>         |              |              |              |              |              |            |            |            |            |
| <i>Long-term straight debt</i>     | 365          | 376          | 377          | 956          | 627          | 30         | -          | 3          | 70         |
| <i>Medium-term straight debt</i>   | 1            | 2            | 26           | 179          | 120          | -          | -          | -          | -          |
| <i>Convertible</i>                 | 10           | -            | -            | -            | 66           | -          | -          | -          | -          |
| <b>International bonds, total</b>  | <b>1 417</b> | <b>1 520</b> | <b>2 405</b> | <b>4 708</b> | <b>3 968</b> | <b>351</b> | <b>248</b> | <b>132</b> | <b>250</b> |

<sup>a</sup>Includes European unit-of-account and £/DM option issues.

<sup>b</sup>Includes £/\$ option issues.

Fig. 4. International bond issues outside the United States-- in millions of U.S. dollars. (Source: Morgan Guaranty Trust Company of New York, World Financial Markets, August 18, 1970, p. 18.)

States, the characteristics of bank lending policies of European banks and U.S. branches overseas have changed to include term loans. As far as Eurodollar loans are concerned, we know what is happening; I have already mentioned numerous arrangements or revolving loans that have been made, usually by a consortia of banks. The demand for medium- and long-term funds has not been satisfied by the long-term bond issues and the equity financing (largely limited to invested earnings). So we are confronted by the fact that at least part of the demand for short-term Eurodollars originates from long-term capital requirements. Companies are using the medium-term vehicle, which banks are willing to propel, in order to meet their requirements.

It is safe to presume that the extent to which business uses the short- or medium-term financing is a function of the level of interest rates and the related condition of the bond market. Again, the drop off in Eurobond issues and the apparent pickup in medium-term loans reflect both influences. There is the borrower's unwillingness to make a commitment on a long-term basis at high interest rates, and there is also the lender's unwillingness to risk funds for a long term in face of uncertainties of interest rates and currency (dollar, for instance) valuation. As of September, 1970, there seemed to be a returning willingness by the market to absorb bonds--of triple A character, at least--although the Swiss are expressing their doubts about the dollar vis-à-vis the Swiss franc.

#### Eurobonds

Any attempt to measure, let alone forecast, the long-term overseas fund requirements of U.S. companies is almost hopeless. Even

if the overseas requirements could be pinned down, they would not be the measure of demands of the Eurosecurities market which are made up of:

1. Overseas plant and equipment requirements of U.S. and other multinational concerns
2. Working capital requirements by the same
3. Governmental requirements from various developed countries
4. International agency requirements (such as World Bank), where withholding taxes are not a matter of concern

Even if we had projected totals for these categories, we would not have a projection of the funds raised overseas to bring home for domestic uses, or the impact of U.S. overseas investment regulations on earning retention and capital export.

The historical compilations of Morgan Guaranty Trust Company<sup>8/</sup> evidence the mixture of demands that meet in the Eurobond market, and the data give fairly closely with the totals in the BIS compilation<sup>9/</sup> for international issues. U.S. companies dominated the Eurobond picture in 1968 and were strong contenders in 1969, but in 1970 they are being outpaced by companies in other countries and by state enterprises. The point is that there are many different fishermen fishing in the same pond, and a highly competitive situation has developed.

We do have data estimated by the U.S. Department of Commerce which show expenditures for plant and equipment by foreign affiliates

---

<sup>8/</sup>World Financial Markets (monthly).

<sup>9/</sup>Bank for International Settlements, Fortieth Annual Report, 1970, p. 45.

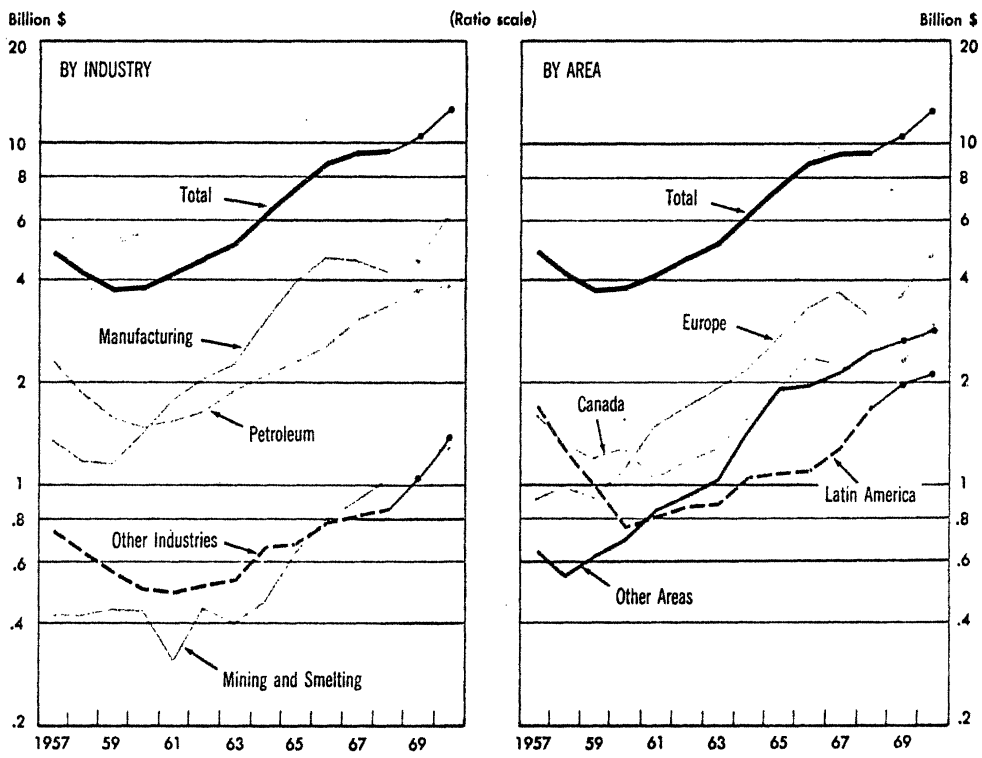
of U.S. companies. (See Figure 5.) These data show a decade of substantial annual growth, and such expenditures are now in amounts of \$4 to \$5 billion per annum.<sup>10/</sup> These expenditures bear no special relation to the fluctuating use by U.S. companies of the Eurobond market, although we know that they constitute a significant part of the overall demand picture. The particular Eurobond money amount of demand nets out after other sources of supply are utilized or, vice versa, as other sources such as reinvestment or short-term borrowings step up to meet Eurobond shortages.

It is interesting, and perhaps significant, that a breakdown of the 1970 projection shows that the largest increases in plant and equipment expenditures are in the Office of Foreign Direct Investments' (OFDI) Schedule C countries which are under severest limitations with respect to U.S. capital export. This could mean that external--meaning both outside the company and outside the country, i.e., the Eurosecurities market--sources will have to be tapped to a larger extent by the foreign affiliates of U.S. companies. The report of the Department of Commerce by R. David Belli correctly concludes, "If credit conditions abroad are very tight, and the OFDI program remains unchanged, actual plant and equipment expenditures in 1970 could well be lower than now projected."<sup>11/</sup> The transfer of funds to U.S. residents as a percentage of those raised abroad was 17 of \$2,129 million in 1968 and it increased

---

<sup>10/</sup>U.S., Department of Commerce, Office of Business Economics, Survey of Current Business, L (March, 1970), p. 21.

<sup>11/</sup>Ibid.



NOTE.—1969 obtained by multiplying 1968 by change in "D" estimate. 1970 obtained by multiplying 1969 by change in "B" estimate. See note to table 2.

• Expected

Fig. 5. Expenditures for plant and equipment by foreign affiliates of U.S. companies. (Source: U.S., Department of Commerce, Office of Business Economics, Survey of Current Business, L /March, 1970/, p. 21).

to 27 of \$1,026 million in 1969.<sup>12/</sup> This may well portend a most confusing internationalization of the capital market which will be made worse by public utility companies that are talking of getting foreign finance for equipment purchased abroad.<sup>13/</sup>

Table 3 from the Survey of Current Business (see Figure 6) further characterizes the plant and equipment expenditures that constitute this sector of demand for funds in relation to the Eurobond market. It shows Schedule C countries going from \$1,826 million in 1965 to an estimated \$2,712 million in 1969, and projected at \$3,387 for 1970. Manufacturing enterprises make up the largest part of the totals in each instance.

#### Conclusions

It is clear that a new dimension has been added to the problems of financial management and to their solutions by business throughout the developed countries of the world. This does not mean that the phenomena of international capital movements are new. U.S. business, during the early years of the country, financed developments in merchandising, manufacturing, canals, and railroads with funds from overseas. Then funds flowed in the other direction after World War I. In both instances the medium was largely, though not totally, in the form of security investments; first Europeans bought bonds and shares of U.S. companies, then Americans bought securities of foreign concerns.

---

<sup>12/</sup> Ibid., table D2, p. 35.

<sup>13/</sup> Southern California Edison Company and San Diego Gas and Electric Company are planning equipment purchases in England to be financed by British banks (apparently on a subsidized interest basis).

[Millions of dollars]

|                               | 1965  | 1966  | 1967  | 1968  |       |       |       |       | 1969  |       |       |       | 1970  |        |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
|                               | E     | E     | E     | A     | B     | C     | D     | E*    | A     | B     | C*    | D     | A*    | B      |
| ies, total <sup>1</sup> ..... | 5,595 | 6,282 | 7,034 | 7,721 | 8,464 | 8,254 | 7,589 | 7,285 | 8,116 | 9,154 | 9,378 | 8,586 | 9,680 | 10,831 |
| , total.....                  | 1,743 | 1,787 | 1,990 | 2,465 | 2,724 | 2,592 | 2,493 | 2,463 | 2,846 | 3,302 | 3,299 | 2,943 | 3,072 | 3,490  |
| & smelting.....               | 209   | 271   | 333   | 375   | 489   | 452   | 449   | 487   | 516   | 604   | 617   | 601   | 483   | 620    |
| um.....                       | 638   | 574   | 688   | 1,075 | 1,003 | 975   | 1,008 | 990   | 1,097 | 1,329 | 1,385 | 1,228 | 1,365 | 1,387  |
| cturing.....                  | 658   | 718   | 714   | 783   | 970   | 880   | 755   | 705   | 906   | 1,003 | 913   | 772   | 866   | 1,055  |
| ndustries.....                | 238   | 225   | 255   | 231   | 262   | 285   | 281   | 282   | 327   | 366   | 384   | 343   | 358   | 428    |
| , total.....                  | 2,026 | 2,124 | 2,374 | 2,492 | 2,906 | 2,950 | 2,695 | 2,574 | 2,579 | 3,043 | 3,143 | 2,932 | 3,221 | 3,491  |
| & smelting.....               | 147   | 185   | 222   | 119   | 171   | 200   | 194   | 187   | 187   | 227   | 215   | 223   | 200   | 241    |
| um.....                       | 714   | 692   | 935   | 1,002 | 1,243 | 1,240 | 1,173 | 1,130 | 952   | 1,213 | 1,317 | 1,198 | 1,150 | 1,161  |
| cturing.....                  | 1,069 | 1,153 | 1,113 | 1,287 | 1,423 | 1,406 | 1,280 | 1,170 | 1,348 | 1,513 | 1,511 | 1,400 | 1,770 | 1,964  |
| ndustries.....                | 96    | 94    | 104   | 83    | 69    | 95    | 78    | 87    | 92    | 90    | 101   | 104   | 95    | 126    |
| , total.....                  | 1,826 | 2,371 | 2,670 | 2,764 | 2,834 | 2,712 | 2,401 | 2,258 | 2,691 | 2,809 | 2,936 | 2,712 | 3,387 | 3,849  |
| & smelting.....               | 62    | 36    | 33    | 28    | 32    | 33    | 20    | 23    | 28    | 28    | 37    | 27    | 37    | 39     |
| um.....                       | 422   | 612   | 741   | 738   | 695   | 653   | 615   | 660   | 765   | 820   | 763   | 714   | 843   | 905    |
| cturing.....                  | 1,213 | 1,538 | 1,697 | 1,807 | 1,890 | 1,810 | 1,566 | 1,459 | 1,656 | 1,727 | 1,852 | 1,709 | 2,192 | 2,549  |
| ndustries.....                | 129   | 185   | 200   | 191   | 217   | 216   | 200   | 216   | 242   | 234   | 284   | 262   | 315   | 357    |

d.  
ot include Canada. For a listing of the countries in each schedule area, see Foreign  
stment Regulation (15 CFR 1000.319 F.R. 49) or reprints of the regulations dated

July 20, 1968, Office of Foreign Direct Investments, U.S. Department of Commerce, Wash-  
ington, D.C. 20230.

Fig. 6. Estimates of plant and equipment expenditures by foreign affiliates of U.S. corporations, by OFDI schedule area and industry--summary of surveys. (Source: U.S., Department of Commerce, Office of Business Economics, Survey of Current Business, L /March, 1970/, p. 24).

The new dimension is one of greater direct investment in both directions, but mainly direct investment by U.S. companies in branches or subsidiaries abroad. Not only is the dollar amount reaching \$10 to \$13 billion per annum,<sup>14/</sup> but it is significant that nearly \$10 billion of \$13 billion is directed to OFDI schedule countries. These capital expenditures do not include working capital requirements or those of nonmanufacturing concerns.

In addition to the sheer magnitude of the overseas fund requirements of U.S. companies is the fact that more and more individual enterprises are becoming involved.<sup>15/</sup> This fact poses problems arising from the range of quality of the concerns, especially when some purely domestic U.S. corporations are reaching out to the overseas capital market for their home requirements. Already bankruptcies are appearing on the scene, and the Eurosecurities market is becoming sensitive to questions of quality--finally. Also, the fact that other developed countries are jumping into this same market with company, state-owned enterprise, and government issues should not be overlooked.

#### Environmental Characteristics

In face of all these new conditions and the supply-demand characteristics that have been indicated, it may be helpful to consider

---

<sup>14/</sup>U.S., Department of Commerce, Office of Business Economics, Survey of Current Business, L (July, 1970), table 1, p. 22.

<sup>15/</sup>The files of the Program in International Business in the Graduate School of Business Administration at the University of Michigan contain 234 prospectuses of 151 different U.S. companies (1965-1970, to September) offering securities overseas in the Eurobond market.



briefly some of the pertinent characteristics of the market machinery. The situation is dynamic and characteristics may be expected to change, but some significant factors affecting change can be indicated.

Market regulation

Neither the Eurodollar nor the Eurobond market is subject to any regulation except that of the market place. There have been conversations about a queuing system for new issues, but there is no place to queue in the Euromarket. The desire for regulation of issuer information has also been expressed, but there is no one to enforce or direct such regulation. The exchange requirements for listed issues (New York, Amsterdam, Paris, Frankfurt, Luxemburg, Brussels, and so on) set minimum standards for information, but there are no required certifications in the over-the-counter market.

In the Eurodollar sector of the market there is evidence that the Bank for International Settlements has intervened from time to time to prevent a disastrous shortage. In the Eurobond market, however, there is no discount facility or other means of controlling the amounts of offerings or their secondary market disposal. There are restraints aplenty on the many European national markets, but the chief characteristic of Eurobond issues, issuers, and purchases is the freedom from all such restrictions. So far, the discipline of the market as exercised by and through the investment dealers and underwriters has sufficed to prevent all instances of indigestion; no real ulcers have developed.

In the foreseeable future there are no signs of governmental regulation of the Eurobond market. Given a European Economic Community corporation law or a common currency, we can imagine some type of EEC

control of Eurobond issues, but these would only further extend the boundaries of the Eurobond market. Central banks of various countries can, by way of exchange controls, bring restraints to bear on Euro-dollar uses and sources, but they are less likely to extend those controls beyond their own currencies and nationals because to do so would cramp the international aspects of their own respective economies.

We may conclude, therefore, that market discipline will constitute the only controls for some time to come. This will not make it any easier for the capital acquirer because there will be no central information bureau and no official rules of the game. A feel for the market will be all important, and only the issuer who is in constant touch will know what it is all about at any particular moment. There is evidence that the market for Eurobonds of U.S. companies has suffered a damaged image resulting from issues of companies recently bankrupt, such as Four Seasons and Commonwealth United. It is reasonable to expect greater discrimination on the basis of quality of issues than has heretofore existed. The Europeans have been praising our prospectuses, and they have finally begun to read them--and to read behind them; yields are beginning to vary more with quality (inversely, of course).

#### The primary market

The chief characteristic of the primary or new issue market for Eurobonds is confusion. The investment banking and underwriting institutions operating in this area are not as specialized as those in the United States. In France, Belgium, and Italy investment banks act as distributors; in Belgium, Holland, and Germany the commercial banks are the largest participants. In England--not a market for Eurobonds--

there are the old-time specialist investment bankers, but occasionally the commercial banks also dabble in underwriting.

The ultimate purchasers of these long-term instruments are individual investors, trustees, and institutions--in that order. It would probably be hopeless for an issuer of long-term securities to try a do-it-yourself direct placement because institutions are the most interested in liquidity such as that which comes from public issues, and they are often limited to investments in listed securities by the investment laws of their countries. Life insurance companies in Germany, for instance, cannot buy Eurobonds for their legal reserves.

At the level of the medium-term loan, placement is more the order of the day. For one thing, the typical  $2\frac{1}{2}$  per cent banker's commission adds substantially to the annual cost of less-than-ten-year money. It can be hoped that costs of private placement can be less; at least they can be bargained and not influenced by the  $2\frac{1}{2}$  per cent public placement pattern.

It will be interesting to watch for the day when competition may break the  $2\frac{1}{2}$  per cent commission. So far it seems true that practically all banking houses are involved in every large issue, even of highest quality, so there is no incentive to break the price. Smaller issues and lesser issuers, which should logically cost more, just follow along, albeit with a differentially higher yield and cost which are based on coupon and price.

#### Instrumentation

We have yet to see a mortgage bond or a secured loan in the Eurobond or Eurodollar markets. Doubtless the legal complications of

establishing liens in various nations would be insurmountable. The guarantee of parent companies of issuing finance subsidiaries is almost universal and must continue to be the real source of security for Eurosecurity issues. Assets will be too various in type and locality to serve any good purpose as far as risk limitation is concerned. Strong operating subsidiaries might be able to forego the guarantee, but for nonwithholding-tax reasons issues are usually those of phantom finance companies.

There is no question but that the lines between short, medium, and long commitments have continued to blur. Revolving credits and arrangements have been stretched out to meet or overlap the five year notes, and term loans from five to ten years connect with 12-15-20 year bonds. At the short end the commercial banks are dominant, and there is every possibility of a borrower tailoring his own deal with one, two, or three banks. Likewise, the formal consortia of intermediate-term credit institutions stand ready to provide capital on bases tailored to need. These institutions have been set up by banks around the world to meet the needs of various nationals going abroad. You can infer the needs in the names of the banks such as those participating in the following organizations:

Organization

Euro-Pacific Finance Corporation

Participating Banks

Commercial Bank of Australia  
Midland Bank, Ltd.  
Fuji Bank  
United California Bank  
Deutsche Bank  
Société Générale de Banque  
Amro-Bank

Organization

European Financial Associates

United International Bank

European Australian Finance  
Corporation

Banque Européenne de Crédit à  
moyen terme (BEC)

Participating Banks

Amro-Bank  
Deutsche Bank  
Pierson Heldring & Pierson  
Rothschild & Sons

Bank Mees a Hope  
Beyerische Hypotheken-und  
Wechselbank  
Crédit du Nord  
Banque Française due Commerce  
Extérieur  
Bank of Nova Scotia  
Crocker Citizens National Bank  
Sveriges Kreditbank

Banca Nazionale del Lavoro  
Dresdner Bank  
Banque Nationale de Paris  
Commonwealth Trading Bank of  
Australia

Société Générale de Banque  
Deutsche Bank  
Amro-Bank

Confusion continues to reign with respect to Eurocommercial paper as a medium for capital raising. It sounds good, because, unlike bank Certificates of Deposit (CDs), units of commercial paper (promisory notes) could be made available to smaller and more nonbank investors. Recent experiences with such paper in the United States (such as the experiences of Penn Central) do not advertise the program very favorably, and there is a real question whether the Euromarket is yet ready for this financial instrument.

Already there is plenty of short-term financing of long-term projects in the Euroloan market. Great care will be needed to recognize the liquidity implications of commercial paper, and, with Eurodollar deposits available, it is difficult to see why the liquidity-minded Euroinvestor would turn from those bank deposits to commercial paper,

unless a substantial interest differential develops.

The floating rate issue

A feature which is not as new in the Eurodollar market as it is in the Eurobond area is the floating rate or flexible rate. In the case of dollar loans the interest rate tied to London interbank rates ( $\frac{1}{4}$  to  $\frac{1}{2}$  to  $\frac{3}{4}$  per cent above) is designed to protect the lending banks from increases in Eurodollar deposit rates. On a revolving or commitment basis banks can--for a fee--guarantee a supply of funds for a budgeted period even though they cannot guarantee the cost of borrowing. The bargain which the borrower is able to drive with banks for these loans depends on his credit status and the confidence of the lender in the currency loaned that is to be repaid. Some loans are in multiple currencies at choice of borrower. Some reduce commitment with each borrowing, and some continue maximum limit throughout the life of the arrangement. Typically there is no schedule of amortization of the loan.

The next step up is the variable rate note or bond, publicly offered. This security is designed to raise funds in a market that is fearful of inflation where the investor seeks to minimize such risk by tying the interest rate to (so far) London bank rates for Eurodollars. Obviously, this raises hob with the issuer's long-term capital cost estimates. There seems to be a concensus that this instrument is a last resort for use in emergencies only. If capital must be had, the rate protection will pull funds out of the money market when rates are volatile but reflective of ever-changing current conditions. The rates have been tied to London Eurorates with adjustments at six month intervals; as such, they differ from index bonds which have never enjoyed

much success. The scheme is supposed to keep prices at par, but there is yet to be proof that a six-month adjustment schedule will do that.

After the emergency of high-level, fluctuating, uncertain interest rates subsides the term investors will again seek fixed interest investments. The Eurobond market took the price declines that were based on yield increases with surprising equanimity. It was primarily the losses that were based on the deteriorating position of issuers that drove them to doubt and led them to stay out of the new issue market. A fixed interest rate or bond at today's market rate would sell without too much difficulty, except that the Swiss might express doubts about putting Swiss francs into dollars in the face of a possible change in their relative values. It is believed that the individual investors or trustees who constitute the major market for Eurobonds prefer to make commitments on a fixed-income basis--as far as bond investments are concerned. They will and do take the variable participations in common stocks of companies directly or through investment bonds.

#### Convertibles

Another reasonable expectation is that within the year the convertible bond will return to the Eurosecurities market. The convertibles presently outstanding are, as the result of U.S. stock market declines, a long way from any chance of conversion, so there has been little experience with the end result. One issuer, half of whose convertible issue was turned in before the decline, felt that the motivation was largely one of marketability. Shares were listed and actively traded, while the bonds were not. There was no clue to the real beneficial owners for the conversion process. It could not be established

to the satisfaction of the Commerce Department that overseas holding continued, so the amount of conversion was charged against the issuer's capital export quota.

Nevertheless, if relatively high interest rates continue (7 to 9 per cent) and the stock markets resume a more hopeful outlook, U.S. companies as well as companies in Japan, Holland, and other countries with capital needs at home and abroad may be able to cut the coupon rates and attract future owners.

#### Secondary Eurobond market

Many Eurobonds are listed on one exchange or more in Europe and the United States. So far this has been just a gesture as far as establishing a lively secondary market is concerned. (Too much can't be said for the secondary market for U.S. bonds listed on the New York Stock Exchange when it currently takes six weeks to acquire \$50,000 of AAA low-coupon bonds issued in 1960.) One element in the picture is the fact that institutions generally are, for legal or policy reasons, not investors in Eurobonds. The individuals who are investors are not too interested in liquidity or trading. They are characterized, instead, as long-term investors, holding for maturity.

The bankers--at least the European ones--who are responsible for underwriting and distributing bonds in Europe have many other irons in the fire. They have neither the capital, the staff, the know-how, or the inclination to run a good secondary market. They would need to carry inventories and take positions, and this activity would detract from their commercial banking, merchant banking, and syndicating operations. U.S. investment bankers have moved into this void, and they do



cooperate with Europeans to provide quotations, but that's about all. There is a shortage of professional dealers and traders--and there is really a shortage of clients because buyers hold and institutions don't participate.

We conclude that the Eurobond secondary market is, at best, an adolescent one. It does exist, but it has neither capital nor experience. If there is a need, it may develop further. In the meantime, the lack of a secondary market is not a serious handicap to the sale and distribution of the Eurobonds. The underwriters (banks) will carry inventories for short periods of primary distribution (some are limited to six months' holding), and finally most of the issues are put away for good. As and if institutions begin to play a larger part in the market, they may have liquidity and portfolio management requirements that will call for more trading. I would guess such a demand would bring forth the capital and skills to render the service.

#### The new international financing

Until recently, when we mentioned international financing by U.S. companies we thought we meant financing international or overseas operations. This is not necessarily so. Southern California Edison Company and San Diego Gas and Electric Company are planning to finance generating capacity in California with English capital (subsidized as to rate in order to promote purchase of the equipment in England). As they are stated in Eurobond prospectuses statements of purpose for funds raised are generally vague, but who is to say that dollars raised abroad are used to build plants abroad or at home, or even to send home in the form of dividends? In a multinational business overseas sources of funds

are just another classification of source like any debt, equity, or earnings plus depreciation. One Eurobond and Eurodollar user said that a new ad hoc bank arrangement was just another leg to support company operations, in addition to several U.S. market legs. When these multinational business users are joined by purely domestic users in the Eurosecurity market they will find themselves competing with companies in Holland, Italy, Japan, Sweden, and so on.

OTHER WORKING PAPERS

Working Paper  
Number

- 1 "Reflections on Evolving Competitive Aspects in Major Industries," by Sidney C. Sufrin
- 2 "A Scoring System to Aid in Evaluating a Large Number of Proposed Public Works Projects by a Federal Agency," by M. Lynn Spruill
- 3 "The Delphi Method: A Systems Approach to the Utilization of Experts in Technological and Environmental Forecasting," by John D. Ludlow
- 4 "What Consumers of Fashion Want to Know," by Claude R. Martin, Jr.
- 5 "Performance Issues of the Automobile Industry," by Sidney C. Sufrin, H. Paul Root, Roger L. Wright, and Fred R. Kaen
- 6 "Management Experience with Applications of Multidimensional Scaling Methods," by James R. Taylor
- 7 "Profitability and Industry Concentration," by Daryl Winn
- 8 "Why Differences in Buying Time? A Multivariate Approach," by Joseph W. Newman and Richard Staelin
- 9 "The Contribution of the Professional Buyer to the Success or Failure of a Store," by Claude R. Martin, Jr.
- 10 "An Empirical Comparison of Similarity and Preference Judgments in a Unidimensional Context," by James R. Taylor
- 11 "A Marketing Rationale for the Distribution of Automobiles," by H. O. Helmers