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A SHORT ANATOMY OF THE EUROBOND MARKET

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## I. INTRODUCTION

The Eurobond market, sometimes referred to as the Eurodollar bond market, is part of the revolution in private international finance that has occurred during the past decade. The other major facet of this revolution is the market for foreign currency bank deposits, the Eurodollar market. It may be well at the outset to clarify the distinction between these two important markets, since they are frequently confused.

### Eurobonds and Eurodollars

The Eurodollar market is a market for dollars outside the United States. Financial institutions located outside the United States accept dollar-denominated time deposits and make dollar loans, just as savings banks do in domestic financial systems. These institutions are known as Eurobanks, even though Euro-banking may be only a sideline to their primary activity as domestic banks. The unique feature of the Eurodollar market--and of other so-called Eurocurrency markets--is that Eurobanks accept deposits and make loans denominated in currencies other than that of the country in which they are located. Like domestic savings banks, Eurobanks provide depositors with safe, interest-bearing, and relatively short-term financial assets, while they lend for considerably longer maturities to borrowers who represent the normal risks of investment.

The Eurobond market, on the other hand, operates in a fundamentally different manner. No intermediaries intervene between lender and borrower to undertake the risk and maturity transformation, as occurs in the Eurodollar market. Corporations and governments in need of long-term funds issue Eurobonds, which are usually sold through a geographically diverse group of banks to investors. In both markets the lender acquires a dollar-denominated financial asset and the borrower obtains dollars to spend. In the Eurodollar system lenders or depositors obtain claims on banks, which in turn obtain claims on borrowers; in the Eurobond market lenders hold claims directly on the borrower, usually a corporation or government entity. The difference between Eurodollars and Eurobonds is illustrated in Figure 1,

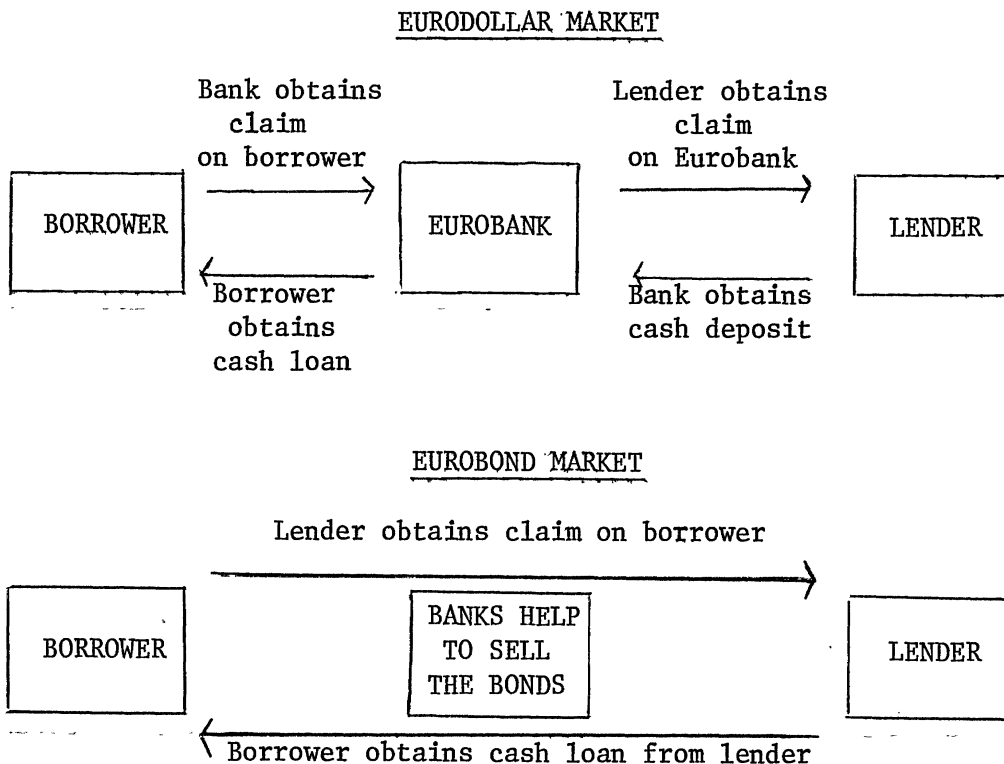


Fig. 1. Eurodollars and Eurobonds.

Eurobonds and foreign bonds

Eurobonds are in most respects very like domestic bonds. The distinctive feature of a Eurobond is that it is underwritten by an international syndicate of banks and sold principally in countries other than the country of the currency in which the issue is denominated. The borrower, too, may be of any nationality, including that of the currency of denomination. For example, a recent \$15 million Eurobond issue by an agency of the South African government had a 15-year maturity, was underwritten by forty-two international banks, and was sold to investors in a large number of countries outside of the United States and South Africa. Eurobonds sometimes take the form of private placements--that is, the issue is pre-sold and does not have an underwriting group. Both "straight" and "convertible" Eurobond issues are common.

The prefix Euro- is used in terms such as Eurodollar and Eurobond in order to distinguish these international financial markets from national money and capital markets. A further distinction should be drawn between Eurobonds and so-called foreign bonds, the latter indicating a bond issue in a particular country by a foreign borrower. Foreign bonds are underwritten by a syndicate composed of members from one country, sold principally in that country, and denominated in the currency of that country. The Eurobond market, on the other hand, is "external"--it is not tied to any particular location and thereby, to a certain extent, it escapes the norms and regulations that constrain individual national financial markets. For example, the German mark foreign bond market, unlike the German mark sector of the Eurobond

market, is subject to the rules, practices, and regulations of the German authorities. The foreign bond markets of European and North American countries operate parallel to, and hence in competition with, the Eurobond market.

The use of Euro should not be interpreted as implying that these markets are limited to Europe, although the concentration of banks and of financial experience in Europe ensures that a substantial proportion of Eurofinancial transactions occur there.

## II. THE RISE OF THE EUROBOND MARKET

During the early sixties the United States' balance of payments deficit became a concern of the U.S. government. In 1963 it was decided that, in order to stem the outflow of capital from the United States, the New York capital market would be closed off to a wide range of borrowers from abroad. This was achieved by means of the Interest Equalization Tax (I.E.T.), a device designed to raise the effective cost of borrowing by foreigners in the United States. The Eurobond market arose to supply the capital that Europeans and others could no longer obtain in New York. Later, it also came to serve the needs of U.S. multinational corporations faced with allegedly voluntary (later mandatory) restrictions on the amount of funds they could raise in the United States for overseas operations. Large borrowers who no longer had recourse to the broad, efficient American market had to find another source of long-term debt capital.

The Eurobond market and the E.E.C.

It was widely recognized at that time that, in spite of a high rate of personal savings in Europe, the national capital markets of individual European countries were all inadequate for the needs of major United States and European borrowers. Compared to the United States, continental Europe has not developed large contractual savings institutions, such as pension funds and life insurance companies; in addition, the capital markets of European countries tend to be dominated by their governments. These factors severely limit the amount that can be raised in any one bond market in Europe. It was hoped, however, that European capital markets would gradually become integrated under the auspices of the European Economic Community and so form one large, resilient European capital market.

Institutional rigidities and the absence of progress in the area of monetary unification have prevented this hope from being fulfilled. Instead of individual bond markets becoming integrated with one another, an external bond market developed--the Eurobond market. One might say that European bond markets became integrated through the back door.

The issuing technique of Eurobonds makes it possible to avoid official restrictions on new issues; and, since Eurobonds are underwritten by multinational banking syndicates and are placed simultaneously in many countries, they do not have to rely on the limited capacities of individual European markets. Before long the Eurobond market had developed into a highly efficient channel for the redistribution of savings, both within Europe and between Europe and the rest of the world.

As Table 1 shows, the limitations of the foreign bond markets of Europe have ensured that the growth of Eurobonds has outstripped that of foreign bonds. In fact, of the world's major bond markets, only Germany has remained open to foreign borrowers on a continuous basis. In most other countries, such as France, Japan, Canada, Great Britain, and even Switzerland, domestic needs (especially those of the public sector) take precedence, and/or exchange controls limit foreign borrowing. The Eurobond market has grown more or less steadily since 1963, although in recent years currency uncertainties and high short-term interest rates have led to a decline in the volume of new issues and a substantial switch into the Eurodollar market by borrowers,

#### Borrowers and lenders

The capital requirements of large European corporations and government entities first gave rise to the Eurobond market. After a few years the market came to be dominated by large American corporations, although their share of total borrowings dropped considerably in the early seventies. Table 2 records the division of the new issue market by category of borrower. Clearly governments have been consistently large borrowers in the market, one reason being that investors consider their liabilities as having a low risk of default. During the late sixties, less-developed countries began to discover the Eurobond market as an attractive source of funds with no political strings attached. In part, these funds were borrowed by the World Bank and other international organizations and re-lent to developing countries; but many such countries were able and willing to go directly to the market.



Table 1

FOREIGN BONDS AND EUROBONDS ISSUED OUTSIDE THE UNITED STATES  
1963-74  
(\$ Million Equivalent)

Year	Foreign Bonds	Eurobonds
1963	390	270
1964	260	680
1965	380	880
1966	380	1440
1967	400	2140
1968	1140	3840
1969	830	3270
1970	380	2970
1971	1540	3640
1972	2060	6340
1973	2650	4170
1974 Jan.-Aug.	470	1147

Source: World Bank; Morgan Guaranty Trust Company.

Table 2

EUROBOND ISSUES BY CATEGORY OF BORROWER  
1963-74  
(\$ Million Equivalent)

Year	Total New Issues	Percentage Issued			
		By U.S. Companies	By Other Companies	By Government and State Enterprises	By International Organizations
1963	270	--	15	81	4
1964	680	--	15	66	18
1965	880	34	31	29	6
1966	1440	38	33	20	9
1967	2140	28	29	37	6
1968	3840	59	17	24	1
1969	3270	32	26	40	2
1970	2970	25	36	32	7
1971	3640	30	31	36	3
1972	6340	31	28	35	6
1973	4170	21	31	38	10
1974 Jan.-Aug.	1147	10	27	46	17

Source: Morgan Guaranty Trust Company; World Bank.

Table 3 indicates the proportion of Eurobond funds that has been lent to developing countries.

Table 3  
EUROBOND ISSUES BY NATIONALITY OF ISSUER  
1963-73

Year	Percentage Borrowed		
	By Developed Countries	By Developing Countries	By International Development Banks
1963	63	0	37
1964	85	1	14
1965	89	0	11
1966	78	4	18
1967	81	9	11
1968	86	6	8
1969	83	4	13
1970	84	5	11
1971	85	4	11
1972	82	10	8
1973	79	11	10

Source: World Bank; Morgan Guaranty Trust Company.

It is much more difficult to identify lenders than borrowers in the Eurobond market. In fact it is impossible even to guess at the amount of funds coming from various sources. Certainly many of the funds come from those continental Europeans who are not prevented from subscribing by government regulation. A substantial amount has probably come from Middle East and Latin America, and North American funds have sometimes reached the market, despite the U.S. capital controls. Investments in the Eurobond market are often channelled through Swiss banks.

### III. OPERATION OF THE MARKET

Borrowers prefer issuing Eurobonds to issuing conventional domestic or foreign bonds for a number of reasons, not the least of which is the particular issuing technique, which takes the form of placing rather than formal issuing in order to avoid national regulations on new issues. Apart from this technique, the two most distinctive features of Eurobond issues are:

1. Eurobonds are placed simultaneously in many countries through multinational syndicates of underwriting banks, who sell them to an international investment clientele throughout the world.
2. Unlike conventional foreign bond issues, Eurobonds are denominated in one currency (mainly dollars) but sold principally in countries other than that of the currency-denomination (e.g., in the case of dollar-denominated Eurobonds, outside of the United States).

A further important attribute is that interest on Eurobonds is not subject to withholding tax, an advantage over domestic bonds on which withholding tax is charged before interest is paid. However, this feature applies to most foreign bonds as well. For the interest on a Eurobond to be free of withholding tax it is usually necessary for the issuing company to form a special financing subsidiary, often in Luxembourg. The subsidiary then issues the bonds with a parent company guarantee. The bonds are issued in bearer form.

Because Eurobonds are so diversified internationally, their issue requires the cooperative efforts of a large number of banks and other financial institutions throughout Europe and the world. These banks operate at two levels. The borrower (say, a government or large corporation) usually asks a major international bank to arrange the issue. A managing syndicate (often called a consortium), normally including at least four or five leading American, British, German, French or Belgian banks, is then organized. These banks, whose names appear at the top of the "tombstone" announcements, agree to subscribe to the issue at the issue price, less a commission of about 2 1/2 percent. Table 4 lists fifteen principal issuing houses as of 1974 on the basis of volume and number of issues. These houses and other banks help to maintain an active secondary market in Eurobonds after they are sold.

Table 4

MAJOR EUROBOND ISSUERS  
(As of January 1974)

House	Amount Issued (U.S. \$ Million Equivalent)	Number of Issues
Deutsche Bank AG	1,250.32	33
Kredietbank, S.A., Luxembourgeoise	1,060.25	33
S.G. Warburg & Co., Ltd.	933.74	29
Westdeutsche Landesbank Girozentrale	858.92	22
Banca Commerciale Italiana	856.26	21
Union Bank of Switzerland (Underwriters)	852.26	21
N.M. Rothschild and Sons	698.96	18
Crédit Lyonnais	623.54	19
Banque de Bruxelles	617.68	21
Crédit Suisse (Bahamas), Ltd.	617.12	18
Crédit Commercial de France	616.96	17
Swiss Bank Corporation (overseas), Ltd.	601.32	17
Banque de Paris et des Pays-Bas	537.70	14
Commerzbank AG	507.38	16
Société Générale	496.10	12

Source; Euromoney, February 1974,

At a second level, a much larger underwriting syndicate is formed. The banks in the managing syndicate make arrangements with a world-wide group of underwriters--chiefly banks, but also including securities dealers. As many as 100 or more banks may be involved. After arranging the participation of a number of underwriters, the managing syndicate makes a firm offer to the borrower, who gets the funds from the loan immediately at the issue price.

At yet a third level, the underwriting group usually arranges for the sale of the issue through an even larger selling group of bankers, brokers and dealers. In this manner funds are sought from a very broad and geographically diverse group of investors, particularly in Europe.

The market is thus a placement market: there is no attempt to sell bonds directly and openly to the general public. The likelihood that a bank will be a member of a selling group or of a managing syndicate depends on its placement ability.

Consider, for example, the tombstone announcement in Figure 2. This announces a dollar-denominated Eurobond flotation in which the government of Mexico raised \$30 million for 18 years. The issue was priced at par (100%) at the date of offering (November 1973), and carried a coupon interest rate of 8 3/4%. The managing syndicate of seven banks was headed by Rothschild's of London and also included, as is quite common, a leading bank of the borrowing country. The underwriting syndicate included no fewer than 156 financial institutions,

# U.S. \$30,000,000

## Mexico

(United Mexican States)

### 8<sup>3</sup>/<sub>4</sub> per cent. Bonds 1991.

### Issue price 100 per cent.

**N. M. Rothschild & Sons Limited**

**Banca Commerciale Italiana**

**Crédit Suisse (Bahamas) Limited**

**Deutsche Bank Aktiengesellschaft**

**The Nomura Securities Co. Ltd.**

**Banco de Comercio S.A.**

**Banco Nacional de México S.A.**

have subscribed for or procured subscribers for the Bonds.

The sale of the Bonds has been underwritten by, among others:

<b>Algemene Bank Nederland N.V.</b>	<b>Crédit Commercial de France</b>	<b>Merck, Finck &amp; Co.</b>
<b>American Express Securities S.A.</b>	<b>Crédit Industriel d'Alsace et de Lorraine</b>	<b>Merrill Lynch, Pierce, Fenner &amp; Smith Securities Underwriter Limited</b>
<b>A. E. Ames &amp; Co. Limited</b>	<b>Crédit Industriel et Commercial</b>	<b>B. Metzler soel. Sohn &amp; Co.</b>
<b>Amsterdam-Rotterdam Bank N.V.</b>	<b>Daiwa Europa N.V.</b>	<b>Model, Roland &amp; Co., Inc.</b>
<b>Andresens Bank A/S</b>	<b>Richard Daus &amp; Co. Bankiers</b>	<b>Samuel Montagu &amp; Co. Limited</b>
<b>Arnhold &amp; S. Bleichroeder, Inc.</b>	<b>Den Danske Landmandsbank</b>	<b>Morgan &amp; Cie International S.A.</b>
<b>Associated Japanese Bank (International) Limited</b>	<b>Deltec Banking Corporation Limited</b>	<b>Morgan Grenfell &amp; Co. Limited</b>
<b>Julius Baer International Limited</b>	<b>Den Norske Creditbank</b>	<b>Moscow Narodny Bank Limited</b>
<b>Banco de Londres y México</b>	<b>Deutsche Girozentrale</b>	<b>National Bank of Hungary</b>
<b>Banco di Roma/Commerzbank AG/</b>	<b>—Deutsche Kommunalbank—</b>	<b>Nesbitt, Thomson Limited</b>
<b>Crédit Lyonnais</b>	<b>Dewaay, Cortvriendt International S.A.</b>	<b>New Court Securities Corporation</b>
<b>Banco Urquijo Ltd.</b>	<b>Dillon, Read Overseas Corporation</b>	<b>Nikko Securities Co. (Europe) Ltd</b>
<b>Bank of America Limited</b>	<b>Dresdner Bank Aktiengesellschaft</b>	<b>Norddeutsche Landesbank Girozentrale</b>
<b>Bankers Trust International Limited</b>	<b>Drexel Burnham and Co. Incorporated</b>	<b>Sal. Oppenheim jr. &amp; Cie.</b>
<b>Bankhaus Friedrich Simon K.G.a.A.</b>	<b>Edilcentro-Sviluppo S.p.A.</b>	<b>Orion Bank Limited</b>
<b>Bankhaus I. D. Herstatt K.G.a.A.</b>	<b>Effectenbank-Warburg Aktiengesellschaft</b>	<b>C. &amp; R. Pastor Securities Limited S.A.</b>
<b>Bank Leu International Ltd.</b>	<b>Euramerica Finanziaria Internazionale S.p.A.</b>	<b>Peterbroeck Van Campenhout Securities S.A.</b>
<b>Bank Leumi Le-Israël (France) S.A.</b>	<b>Eurocapital S.A.</b>	<b>Pierson, Heldring &amp; Pierson</b>
<b>Bank Max Fischer</b>	<b>European Banking Company Limited</b>	<b>Privatbanken Aktieselskab</b>
<b>Bank Mees &amp; Hope N.V.</b>	<b>Fidi-Milano S.p.A.</b>	<b>Rea Brothers Limited</b>
<b>Banque Ameribas</b>	<b>Finacor</b>	<b>N. M. Rothschild &amp; Sons (Hong Kong) Limited</b>
<b>Banque Européenne de Tokyo</b>	<b>First Boston (Europe) Limited</b>	<b>Saifi Securities International Limited</b>
<b>Banque Française du Commerce Extérieur</b>	<b>First Chicago Limited</b>	<b>Salomon Brothers</b>
<b>Banque Générale du Luxembourg S.A.</b>	<b>Robert Fleming &amp; Co. Limited</b>	<b>J. Henry Schroder Wagg &amp; Co. Limited</b>
<b>Banque de l'Indochine</b>	<b>Girozentrale und Bank der österreichischen Sparkassen A.G.</b>	<b>Singer &amp; Friedlander Limited</b>
<b>Banque Internationale à Luxembourg S.A.</b>	<b>Goldman Sachs International Corp.</b>	<b>Skandinaviska Enskilda Banken</b>
<b>Banque Lambert S.C.S.</b>	<b>Greenshields Incorporated</b>	<b>Smith, Barney &amp; Co. Incorporated</b>
<b>Banque Lambert-Luxembourg S.A.</b>	<b>Gutzwiller, Kurz, Bungeon Securities Limited</b>	<b>Società Finanziaria Assicurativa (Gruppo R.A.S.)</b>
<b>Banque Louis-Dreyfus S.A.</b>	<b>Halsey, Stuart &amp; Co. Inc.</b>	<b>Société Générale</b>
<b>Banque Nationale de Paris</b>	<b>Hambros Bank Limited</b>	<b>Société Générale Alsacienne de Banque</b>
<b>Banque de Neufelize, Schlumberger, Mallet</b>	<b>Handelsbank in Zurich (Overseas) Limited</b>	<b>Société Générale de Banque S.A.</b>
<b>Banque de Suez et de l'Union des Mines</b>	<b>Helsingfors Aktiebank</b>	<b>Société Séquanaise de Banque</b>
<b>Banque de l'Union Européenne</b>	<b>Hill Samuel &amp; Co. Limited</b>	<b>Strauss, Turnbull &amp; Co.</b>
<b>Banque de l'Union Parisienne</b>	<b>Hill Samuel &amp; Co. oHG</b>	<b>Svenska Handelsbanken</b>
<b>Banque Populaire Suisse (Underwriters) S.A.</b>	<b>Industriebank von Japan (Deutschland) Aktiengesellschaft</b>	<b>Sveriges Kreditbank</b>
<b>Banque Rothschild</b>	<b>Interbiliare International Limited</b>	<b>Swiss Bank Corporation (Overseas) Limited</b>
<b>Barclays Bank International Limited</b>	<b>Israel-British Bank Limited</b>	<b>Trade Development Bank Overseas Inc.</b>
<b>Baring Brothers &amp; Co., Limited</b>	<b>Japan International Bank Limited</b>	<b>Tradinvest Bank and Trust Company of Nassau, Ltd.</b>
<b>H. Albert de Bary &amp; Co. N.V.</b>	<b>Jardine Fleming &amp; Company Limited</b>	<b>C. G. Trinkaus &amp; Burkhardt</b>
<b>Joh. Berenberg, Gossler &amp; Co.</b>	<b>Kansallis-Osake-Pankki</b>	<b>UBS-DB Corporation</b>
<b>Berliner Handels-Gesellschaft</b>	<b>Kidder, Peabody International Limited</b>	<b>Union Bank of Switzerland (Underwriters) Limited</b>
<b>—Frankfurter Bank—</b>	<b>Kjøbenhavns Handelsbank</b>	<b>United International Bank Limited</b>
<b>Blyth Eastman Dillon &amp; Co. Incorporated</b>	<b>Kleinwort, Benson Limited</b>	<b>Vereinsbank in Hamburg</b>
<b>Wm. Brandt's Sons &amp; Co. Limited</b>	<b>Kredietbank N.V.</b>	<b>M. M. Warburg-Brinckman, Wirtz und Co.</b>
<b>Brown Harriman &amp; Internationale Banks Limited</b>	<b>Kredietbank S.A. Luxembourggoalse</b>	<b>S. G. Warburg &amp; Co. Ltd.</b>
<b>Capitalfin International Limited</b>	<b>Kuhn, Loeb &amp; Co. International</b>	<b>Wardley Limited</b>
<b>Caisse d'Épargne de l'État Luxembourg</b>	<b>Lazard Frères &amp; Co.</b>	<b>Westdeutsche Landesbank Girozentrale</b>
<b>Cazenove &amp; Co.</b>	<b>Lloyds &amp; Bolsa International Bank Limited</b>	<b>Westfalenbank Aktiengesellschaft</b>
<b>Christiania Bank og Kreditkasse</b>	<b>Loeb, Rhoades &amp; Co.</b>	<b>White, Weld &amp; Co. Limited</b>
<b>Citicorp International Bank Limited</b>	<b>London Multinational Bank (Underwriters) Limited</b>	<b>Williams, Glyn &amp; Co.</b>
<b>Compagnie de Banque et d'Investissements (Underwriters) S.A.</b>	<b>Manufacturers Hanover Limited</b>	<b>Yamaichi International (Europe) Ltd.</b>
<b>La Compagnie Financière</b>	<b>McLeod, Young, Weir &amp; Company Limited</b>	
<b>Continental Bank S.A.</b>		
<b>Creditanstalt-Bankverein</b>		

From time to time the Eurobond market has had so-called digestion problems: the market is unable to absorb so many issues during a particular period. When this happens, the issue is withdrawn prior to being offered, or the underwriting banks hold a portion of the issue until they are able to sell it in the secondary market at a reasonable price. So far, however, the periods of difficulty in floating Eurobonds have been rather brief. Considering the very rapid increase in the frequency and size of Eurobond issues until 1973, the market has absorbed these flotations with remarkably little difficulty.

#### IV. ADVANTAGES OF EUROBONDS

##### Advantages to borrowers

Absorptive capacity. Why are borrowers and investors attracted to the Eurobond market? The primary appeal for borrowers is the market's absorptive capacity and the size of the issues that can be floated. As has been noted, the foreign bond markets of European countries could not handle the financing needs of governments, international institutions, and large corporations once New York became inaccessible. In fact, as early as 1964 the volume of issues on the Eurobond market exceeded the combined total of issues on all European foreign bond markets. The British foreign bond market did offer some depth and the efficiency of London's banking community; the fact that a foreign bond issue is tied to the currency of the issuing market, however, combined with Britain's balance-of-payments problems, made this alternative unsatisfactory.

The annual volume of new issues on the Eurobond market compares favorably with all national markets except New York. And the size of issues on the Eurobond market has reached the point at which the differences between it and the New York market, although noticeable, are not excessive.

Freedom and flexibility. The Eurobond market has, moreover, a freedom and flexibility not found in domestic markets. The issuing technique makes it possible to bypass restrictions such as requirement of official authorization, "queuing" arrangements, formal disclosure requirements, exchange listing obligations, and so forth, which govern the issue of securities by domestic as well as foreign borrowers in the individual national markets. Of course, all the financial institutions involved in Eurobond issues are subject to at least one national jurisdiction; national authorities therefore can and sometimes do make their influence felt, especially when their own currency is used to denominate the issue.

Two aspects of the market, however, provide it with a flexibility that has assured its survival and growth. First, issuing syndicates are made up of financial institutions from all major financial centers and which often operate and are incorporated in many countries. This ensures that the market will not succumb to a temporary funds shortage in one country. Second, the Eurobond market provides borrowers with an unmatched flexibility in their choice of currency of denomination; in addition it gives them the chance to obtain foreign exchange simultaneously with raising long-term capital.



Costs of issue. The costs of issue of Eurobonds, around 2.5 percent of the face value of the issue, are also relatively low. When all charges are considered, probably only the market for domestic bonds in New York has lower issuing costs (approximately 1.5 percent); if one compares underwriter commissions for foreign issues sold in New York with those for Eurobonds, the latter are probably lower.

Interest costs. Interest costs on Eurobonds also appear to be competitive with those in New York. A comparison of yields on securities of prime American corporations in the United States and the Eurobond markets reveals even under the conditions of the U.S. capital control program, which biases any interest rate comparison against the Eurobond market, there were significant periods when U.S. multinational corporations could raise funds at a slightly lower cost in that market than in the U.S. domestic market. Interest rates are, of course, dependent on the attractiveness of the instrument to investors; this aspect is discussed below.

Maturities. Maturities in the Eurobond market are particularly suited to long-term fund requirements. Maturities can reach thirty years, although fifteen-year Eurobonds are more common. In the medium-term range, say five-ten years, Eurobonds run into competition with medium-term Eurodollar loans or lines of credit. Eurodollar credits are now extended for as long as twelve years or more; conversely; Eurobonds are sometimes issued for maturities as short as five years. (Issues with initial maturities of between five and ten years are generally referred to as notes; see below.) The longer maturities

provide the assurance of funds availability at a known rate. Nearly all Eurobonds provide for a call feature, giving the borrower the option to buy back the bonds at a stated price after three to eight years but before their maturity. There is also usually a sinking fund beginning after four to six years which may retire 90 percent or more of the issue prior to maturity.

Institutional framework. A final and important feature of the Eurobond market is the development of a sound institutional framework for underwriting, distributing, and placing of securities. The New York market is well known, not only for its breadth and depth but also for the rapid exchange of information within a tightly knit group of sophisticated institutional investors. In comparison, the distribution of newly issued securities in the Eurobond market is more cumbersome, because of the great number and wide geographical dispersion of underwriters and investors and a relative dearth of institutional investors. Nevertheless the institutional basis for Eurobond issues has developed to a high degree over the past decade. Since the same issuing houses act for many borrowers and serve largely the same group of investors, the volume of borrowing can be coordinated and tailored to the capacity of the market. These institutions have developed excellent connections with the group of investors who are prepared to employ their funds outside domestic capital markets. The institutional basis of the Eurobond market, however, goes far beyond expertise in managing, underwriting, and placing; for example, special mutual funds for Eurobonds have appeared, investors have set up a network of nonresident

accounts, and most importantly a tremendous educational effort has resulted in a high degree of investor awareness. A review of the financial columns of major and not-so-major foreign papers gives an excellent indication of the change that has occurred in this last aspect.

Advantages to investors

Investors in Eurobonds comprise a diverse group and are attracted to this form of investment for a variety of reasons. Almost all Eurobonds are issued in such a form that interest can be paid free of income or withholding taxes of the borrowing countries. In addition, most bonds are issued in bearer form and held outside the country of the investor, enabling him to evade domestic income tax. For all practical purposes, therefore, those investors who wish to may regard the gross yield on Eurobonds as virtually tax free. This fact serves also to lower the interest rate that must be paid to attract investors' funds for any given class of borrower.

A crucial aspect of any securities market from the investor's point of view is the existence of an active secondary market where he may sell his bonds before they mature. The secondary market in Eurobonds is described in the section that follows; suffice it to note here that, while an active "used Eurobond" market has developed, it does not by any means match the New York bond market.

Issuers of Eurobonds have, on the whole, an excellent reputation for credit-worthiness. Most of the governments that borrow are considered prime borrowers, and issues of U.S. corporate borrowers are regarded very highly by investors. Most of the remaining borrowers

are large international European or Japanese concerns whose issues are also considered high-grade, and international institutions who are in excellent standing with investors both because of the member governments' explicit or implicit guarantees and because of their past records,

Of course, investors consider not only the safety of the security but also the yield it offers. Since arbitrage between New York and the Eurobond market is now completely unrestricted, there should be little difference in this respect between the Eurobond market and the New York foreign bond market. An advantage for the investor in Eurobonds that the New York market cannot provide is the opportunity to diversify in terms of currencies. But more on yields and currency risks below.

#### Convertibles and warrants.

A special advantage to borrowers as well as lenders is provided by convertible Eurobonds. Holders of convertible debentures are given an option to exchange their bonds, at a fixed price and within a specified period, for the stock of the parent company of the financing subsidiary. Investors are attracted by the interest on the bond, which is much higher than the dividend they would obtain on common stock. And investors are safeguarded against a drop in the company's stock. American corporations have found convertible Eurobonds particularly advantageous because larger sums can be raised at lower interest rates, particularly when stock prices are exhibiting an uptrend. Table 5 gives evidence of the popularity of this form of

Eurobond, particularly during the late sixties,

Table 5

STRAIGHT AND CONVERTIBLE EUROBONDS  
1963-74  
(In Percentage of Total New Issues)

Year	Straight Debt	Convertible
1963	88	12
1964	87	13
1965	89	11
1966	79	21
1967	87	13
1968	47	53
1969	64	36
1970	92	8
1971	92	8
1972	81	19
1973	84	16
1974, Jan.-Aug.	92	8

Source: Morgan Guaranty Trust Company.

Another feature that sometimes serves as a "sweetener" to make a Eurobond issue attractive to investors is the inclusion of warrants. A warrant gives the bondholder an option to buy a certain number of shares of common stock at a stated price. The more the price of the underlying stock rises, the more valuable the warrant becomes. And since the warrants are usually detachable, the bondholder may retain the bond while selling the warrants if he wishes. As with the convertibles, warrants enable the issuer to obtain a lower interest rate than would otherwise be required.

## V. THE SECONDARY MARKET IN EUROBONDS

We have already stressed the importance for the primary market of an efficient and resilient after-market, to ensure marketability and hence provide investors with greater liquidity. Admittedly, if investors who buy Eurobonds at issue wish to hold them for a very long period, this aspect becomes less crucial. Nevertheless, for a number of years an insufficiently active secondary market was regarded as a weak point of the Eurobond market. This factor may, in fact, account for the relatively slow growth of the market from 1964 to 1967. Although listings at one or more public exchanges were, and are, obtained for most issues, it was found that the wide geographical dispersion of an issue that was perhaps only \$20 million or less in the first place, led to a very thin market in most financial centers. The holdings in any one country were not sufficient to assure an active turnover in that country alone. The original assumption that a number of local markets in Eurobonds would be created, mainly on the various stock exchanges where the bonds were listed, was never realized.

During the late sixties and early seventies, however, a very active secondary market did develop. Paul Einzig, in The Eurobond Market, estimated in 1969 that turnover of Eurobonds in Western Europe averaged \$50 million a day and other estimates put it much higher. By 1971 it was said that daily turnover in Eurobonds comfortably exceeded the total turnover in all types of debt obligations in any European market, with the exception of the London market in gilt-edged securities,

The secondary market in some issues as well as the primary market in Eurobonds suffered a significant setback in 1973: the uncertainties surrounding the dollar and other currencies appear to have made it difficult for buyers and sellers to reach agreement on acceptable prices and yields. Although at the time of this writing (late 1974) trading volume is much lower than in previous years, it hardly seems reasonable to suppose that the secondary market will never recover,

The growth of the secondary market in Eurobonds is the result of two institutional developments. First, a number of major issuing houses, recognizing that the primary market (and hence their business) would be considerably strengthened by a reliable secondary market, began to play an instrumental role in creating secondary markets in the issues which they managed. They called themselves market makers; they were prepared to take a position in Eurobonds and to buy and sell at relatively stable prices. It is interesting to note that during 1973 those bonds that had the backing of market-maker houses had much more active secondary markets than did other issues,

The second and more important development was perhaps inevitable. If national markets in Eurobonds proved too thin, the logical alternative was to develop an international market. This is what happened. Eurobonds are traded over the counter, both locally and internationally, between financial institutions that are ready to buy or sell Eurobonds for their own accounts or on behalf of their clients. Clearly, an international primary market requires an international secondary market. Telephone and teleprinter linkages have

integrated the international Eurobond market, particularly in Western Europe, where most of the trading occurs. The secondary market in Eurobonds is much more akin to the international foreign exchange market than to conventional bond markets or stock exchanges. The secondary market for foreign bonds does not have anything like the multinational character of that for Eurobonds.

Since 1968 trading internationally in Eurobonds has been greatly facilitated by a clearing-house arrangement formed by Morgan Guaranty Trust Company in Brussels and called "Euro-clear." Participants in Euro-clear can complete transactions by means of book entries rather than time-consuming physical movements of the securities. This removed the main barrier to secondary market trading, which had been the inability to deliver bonds on time. The other major clearing arrangement in Europe is CEDEL, and in 1971 a "bridge" between the two systems was established as a result of pressure from the market's self-regulatory body, the Association of International Bond Dealers. In 1973, the average weekly trading volume in Eurobonds was about \$250 million for each of Euro-clear and CEDEL, giving a total of about \$500 million in weekly transactions.

How does the Eurobond secondary market actually operate?

Assume a financial institution receives a buying or selling order from one of its clients. If the institution is not an active participant in the secondary market, it in turn places an order with a house that does participate actively in the organized market. The



most active participants in the secondary market for a particular Eurobond issue are usually those banks that made up the issuing syndicate. The participant bank, on receipt of an order from another bank or directly from a client, does not merely act as a middleman but sells or buys the securities for its own account. It thus acts as a market maker. Assuming the bank does not want to change its net position in that Eurobond, it will then seek to cover the transaction by buying or selling in the market. First, local dealers will be contracted, and if no counterpart is forthcoming the bank will telephone or telex dealers in other financial centers, asking for rate quotations. A counterpart will probably be found without difficulty, and if the price is agreeable the transaction is consummated. A large amount of resources and personnel is devoted to these activities, and dealing between centers is very active throughout Western Europe. Many active dealers are prepared to take a position in Eurobonds in which they are interested, and quote buying and selling rates simultaneously--indicating that they are prepared to deal either way. There is, of course, a small spread between the two rates quoted; this is how the dealer makes his profit. Recently, however, a large proportion of deals have bypassed the dealer, as large institutions conclude transactions directly with one another in order to avoid paying the spread. This, of course, undermines the willingness of dealers to play the role of market makers, and in fact many dealers have withdrawn from the market altogether.

## VI. INTEREST RATES AND CURRENCIES

Issuers of Eurobonds may choose between several currencies or combinations of currencies in which to express their issues, depending on their own requirements and on investors' preferences. This section concerns the interplay between currency of denomination and yield on Eurobonds, and between Eurobond yields and domestic bond market yields.

In the total absence of restraints on international capital movements, yields on Eurobonds and bonds of equivalent risk in domestic markets of the same currency denomination would be identical. If this were not so, investors would shift to the market with higher yields and borrowers to the market with lower yields, and before long the yields would be equalized. Hence, if domestic and Eurobond yields do differ for prolonged periods, some restraints on investor-arbitrage or borrower-arbitrage or both must exist. A glance at Figure 3, which traces the history of yields on dollar and German mark domestic bonds and Eurobonds, reveals the fact that dollar-denominated Eurobonds bore yields consistently higher than did U.S. domestic corporate bonds. Probably some of this difference reflects differences in credit-worthiness. Largely, however, it results from the U.S. capital control program: Many borrowers on the Eurobond market were prevented from borrowing in New York by the Interest Equalization Tax; this meant that there was no competition from New York to drive Eurobond yields down (or U.S. yields up). The same Interest Equalization Tax made it unprofitable for Americans to invest in the higher-yielding Eurobonds. Since February 1974, when the U.S. control programs were terminated altogether, the

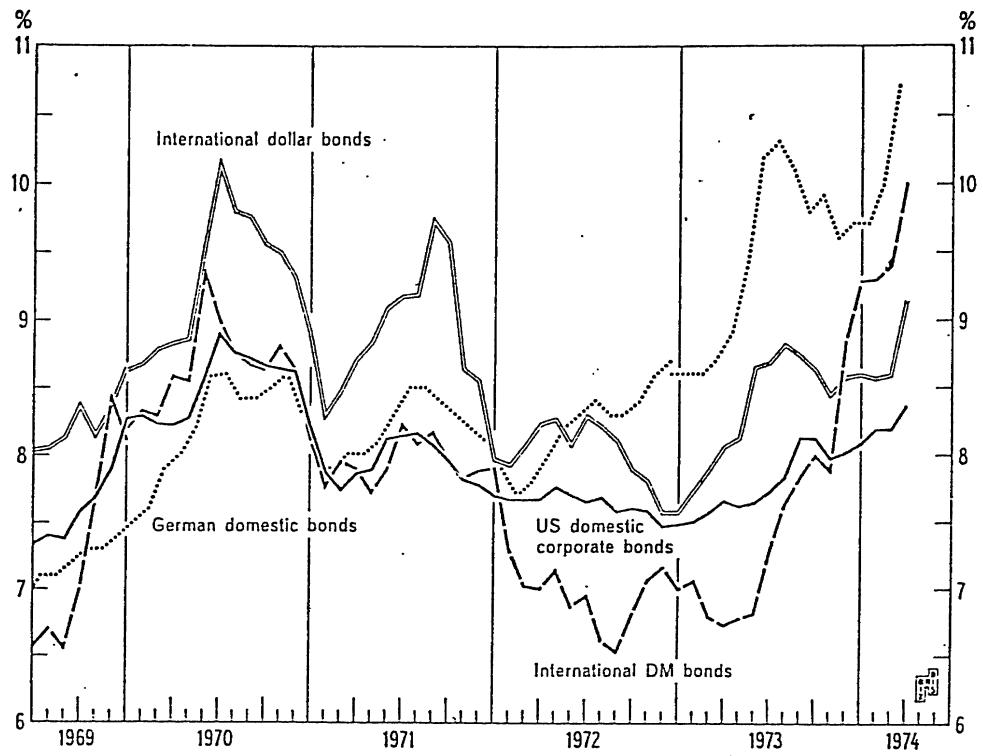


Fig. 3. Yields on dollar and German Mark Eurobonds and domestic bonds.

(U.S. domestic bond yields are calculated to final maturity, the others to average maturity.)

Source: 44th Annual Report, Bank for International Settlements, 1974.

Eurobond-New York yield gap has narrowed significantly. However some difference between yields in the two markets will remain as long as there remain institutional barriers (such as the SEC disclosure requirements) and taxes or interest payments. (The United States imposes a withholding tax on foreigners' investments in the United States, amounting to about 30 percent of interest yield.)

It is left to the reader to speculate on the reasons for the periods of convergence and divergence between yields on German mark Eurobonds and German domestic bonds (shown in Figure 3).

Similar considerations govern the differences between yields on Eurobond denominated in different currencies. In a world of no barriers to capital flows between Eurobonds of different currency denominations, and where all currencies bear fixed and stable relationships to one another, yields would be equalized by arbitrageurs. The first condition is, for all intents and purposes, a reality. Both issuers and investors have almost complete flexibility in their choice of currencies. Hence any differences in yields between Eurobonds denominated in different currencies must be primarily a reflection of currency uncertainties.

Currency uncertainties cause yields to diverge for the following reason: Borrowers in strong currencies face the risk that the currency will revalue and it will cost them more to obtain the foreign exchange to pay the interest and principal. They will therefore be unwilling to offer a high interest rate on the bond. Investors,

on the other hand, stand to gain if the currency is revalued; hence they might be prepared to accept a lower interest rate than they would otherwise. Of course, if the currency in question--say, the German mark--does in fact revalue, the actual yield to investors will be much higher than the nominal yield. Conversely, if the issue is denominated in a relatively weak currency, the possibility of devaluation will induce investors to demand a higher interest rate. The greater the difference in confidence that investors and borrowers have in two given currencies, the greater the probable difference in interest rates on Eurobonds denominated in those currencies. And as long as investors and borrowers hold more or less similar expectations about the probability of devaluation or revaluation, the two parties should always be able to determine a premium or discount on the interest rate to reflect those expectations. If, on the other hand, the borrower (or investor) feels that the probability of a currency depreciation exactly equals the probability of an appreciation, as the modern theory of efficient markets suggests he should, then he will pay no attention to the weakness or strength of a currency. Instead he will concentrate on (a) relative interest rates and (b), the variability of the currency of denomination relative to his own currency.

Returning to Figure 3, one may observe that dollar Eurobonds provided higher yields than German mark Eurobonds up until late 1973. The yield difference was particularly pronounced at times when confidence in the dollar dropped sharply, as in mid-1973; but a reverse gap appeared when investors lost faith in the mark.

The reader will by now realize that, whatever currency is used for the denomination of an issue, either the lender or the borrower faces a "currency" risk. Investors have often appeared rather reluctant to assume this risk, despite the offer of higher interest rates. Holders of dollar-denominated assets must bear the full brunt of any dollar devaluation. The risk to borrowers, on the other hand, may often be reduced; for example, many multinational firms have revenue streams in strong currencies, resulting from overseas operations. These entities have often found market acceptance for German mark issues to be significantly greater than for dollar issues, despite the higher yields on the latter. The strength of the mark has been instrumental in increasing the share of issues denominated in that currency, partly at the expense of dollar issues.

In order to increase the acceptability of their Eurobond issues, borrowers have tried a variety of currency denominations, as Table 6 shows. Some borrowers, when they felt they had the choice, have denominated issues in currency option form. Currency option bonds allow the holder his option of currency of repayment at a parity set at the time of issue. Here the issuer assumes a disproportionate part of the risk, because the investor will obviously opt for whichever of the currencies in the option subsequently becomes the strongest over a long-term period. An example of a currency option Eurobond is the German mark/dollar (DM/\$) bond. In recent years ECU (European Currency Unit) bonds have become quite popular: they involve an option of no less than six European currencies.

Table 6

THE CHOICE OF CURRENCIES FOR EUROBOND DENOMINATION  
1968-74<sup>a</sup>

Currency of Denomination	Issues in Each Currency	
	Total (U.S. \$ Million Equivalent)	Percentage
U.S. Dollar	13,775	56.7
German Mark	6,934	28.6
French Franc	760	3.1
Unit of Account	552	2.3
Yen	456	1.9
Luxembourg Franc	379	1.6
Belgian Franc	233	1.0
British Pound	217	.9
British Pound/German Mark	197	.8
Lira	176	.7
Europa (₣)	165	.7
Eurco	138	.6
Lebanese Pound	69	.3
Dutch Guilder	58	.2
Danish Krone/German Mark	37	.2
Austrian Schilling	35	.1
Canadian Dollar	35	.1
Australian Dollar/German Mark	32	.1
U.S. \$/Luxembourg Franc	20	.1
Kuwaiti Dinar	8	0

<sup>a</sup>First three quarters of 1974 only.

Source: Kredietbank Weekly Bulletin, October 4, 1974.

The excessive risk borne by the issuer in currency option bonds led to yet another innovation in currency denomination, the Eurco. The Eurco attempts to minimize the exchange-rate risks of borrower and lender by extensive currency diversification: Its value is based on the currencies of all the EEC member states, weighted by the relative size of the nine countries' gross national products. Hence a Eurco-denominated bond tends to be less sensitive to changes in particular exchange rates, and exchange-rate risk is more evenly distributed between borrower and lender than in the case of currency option Eurobonds.

Nevertheless as Table 7 shows, the great majority of issues has been in dollars. The U.S. dollar has long been considered neither excessively weak nor excessively strong; in addition, it is the major currency of trade and investment and has a very broad foreign exchange market free of potential restrictions. Most large international firms, for example, conduct a substantial proportion of their activities in dollars.

#### VII. MEDIUM-TERM EURONOTES

The reluctance of borrowers and lenders to commit themselves for long maturities has led, in recent years, to a reduction of loan maturities to three to eight years, the frequent use of floating interest rates, and a shift from normal Eurobonds to Euronote issues. Euronotes are shorter-term Eurobonds with an issuing technique which is less formal and, since it requires no elaborate procedures, saves some borrowing costs. Interest rates on Euronotes, therefore, whether fixed or floating, can be negotiated with great flexibility. The investor receives a



Table 7  
DISTRIBUTION OF EUROBOND ISSUES BY CURRENCIES  
(In Percentage of Total Volume)

Year	U.S. Dollars	German Marks	Other <sup>a</sup>
1963	63	0	47
1964	71	27	2
1965	63	30	7
1966	76	14	10
1967	89	8	3
1968	70	24	6
1969	55	42	3
1970	60	23	17
1971	61	22	17
1972	62	18	20
1973	59	24	17
1974 Jan.-Aug.	61	6	34

<sup>a</sup>Includes Dutch guilders, French francs, Sterling, Luxembourg francs, etc., as well as bonds denominated in combinations of currencies such as DM/\$, the European Unit of Account (EUA), and the European Composite Unit (EURCO).

Sources: World Bank; Morgan Guaranty Trust Company, World Financial Markets, various issues; and Gunter Dufey, The Eurobond Market: Function and Future (Seattle: University of Washington, 1969).

negotiable instrument with a reasonable secondary market and probably gets about as good a yield as that available on comparable instruments. Since the bank or underwriter arranging placement of the notes does not undertake elaborate issuing procedures and does not assume commitments as strict as those involved in a bond issue, the fees are lower: from 0.5 to 1.5 percentage points. When the interest rate is floating, it is usually set at some amount (say 0.75 percent) above the London Eurodollar interbank rate. In this and other respects, medium-term Euronotes are similar to medium-term rollover Eurodollar credits. The difference, of course, is that in the Eurodollar market lenders hold a claim on a bank and not directly on the borrower.

Floating rate Euronotes tend to be issued at times when the market for long-term funds is tight and short-term interest rates are high. About \$1-\$2 billion of Euronotes have been issued in the period 1970-74, or about 10 percent of the total Eurobond issues. Because Euronotes are issued in denominations as small as \$1,000, borrowers using this medium are able to tap the investment funds of individual investors who do not have access to the attractive rates on Eurocurrency deposits.

#### VIII. WILL THE EUROBOND MARKET SURVIVE?

To conclude this description of the Eurobond phenomenon, a word about the permanence of the market. After all, it is hardly worth devoting time to reading (or writing) about techniques if they are soon to become obsolete. Time and again the durability of the Eurobond market has been questioned. Particularly in recent years observers

have speculated that, since the initial raison d'être of the technique was the closing-off of the U.S. domestic capital market, once the U.S. capital controls were eliminated and borrowers returned to the efficient New York bond market the Eurobond market would cease to exist. This sentiment has been reinforced by the partial drying up of the market since 1973, when the volume of issues dropped 35 percent below the previous year's level.

However, the major reason for the contraction of the Eurobond market was not the removal of I.E.T. but the preference of borrowers and lenders for the medium-term Eurodollar market. In contrast with the sharply reduced activity in the Eurobond market in the mid-seventies, medium-term Eurocredits expanded remarkably, particularly in 1974 when the market became flush with oil producers' surplus revenues. Investors were simply not willing to tie their funds up for ten or fifteen years in bonds when higher interest rates could be obtained in short-term bank deposits. And when interest rates are unusually high, borrowers prefer rollover Eurodollar credits, which offer the chance of paying lower interest rates at a later date, since the rate they pay is tied to the London interbank rate.

Nevertheless, as one may see by opening any recent issue of Euromoney, funds continue to flow through the Eurobond market. Why? Here are a few reasons, some of which have already been indicated, for supposing that the Eurobond market has come to stay.

Borrowers favor this market because, in the first place, there are no formal requirements in the Eurobond market. In fact, some categories of foreign borrowers are effectively excluded from the New York

market by the stringency of requirements. Second, borrowers may choose the currency or combination of currencies in which they denominate Eurobond issues. Third, issuing costs are close to or lower than those in any domestic market, including that of the United States. Fourth, although the facilities of the European capital markets are likely to improve, it will be a long time before they are sufficiently integrated to allow the volume and size of bond flotations that the Eurobond market offers. And finally, although the medium-term Eurodollar market can intermediate vast sums, the capital requirements of economic growth and development in both the industrial and less developed worlds will require secure amounts for much longer maturities than bank loans can provide.

Investors, as has been observed, like the anonymity and freedom from government interference and taxes that the Eurobond market provides. The market also provides investors with the chance to diversify in terms of currencies without having to go to a number of separate markets for that purpose. And with Eurobonds being issued so frequently by governments or government agencies, Eurobonds are appealing more and more to European institutional investors, chiefly insurance companies and pension funds.

Some borrowers as well as investors, of course, do have a preference for the New York market and have returned there now that they have the choice. This applies particularly to U.S. corporations, since withholding tax must be paid on Eurobonds issued by U.S. corporations' subsidiaries which derive less than 80% of earnings from international activities.

Amounts of greater size (as much as \$100 million) can be raised by public issue in the United States, and at lower cost for some American borrowers. Interest rates, on the other hand, are likely to be about equal in the two markets. In fact some observers predict the integration of the New York and Eurobond markets, as interest rates and selling and underwriting commissions converge, particularly since U.S. managing banks will need the placing power that the large European banks have developed.

So, what of the future? International financial crises might result in another setback for Eurobond issuing activity, as might economic difficulties which lead to wholesale defaults by foreign debtors. But such a setback, even if of long duration, it would be temporary. The basic economic advantages and sophisticated institutional framework which the market has developed provide reason to believe the Eurobond will survive as long as countries maintain a reasonable, but not perfect, degree of freedom for international capital movements.

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