

# The international bond market

*A feature of the past decade has been the growing internationalisation of bond markets. One aspect of this has been the rapid growth of the predominantly London-based eurobond market. Another has been the growth in the participation of foreign investors, issuers and intermediaries in the major domestic markets. These developments have been due in part to the processes of increased global economic interdependence, financial liberalisation and technological innovation. As a result, interactions between domestic bond markets and the eurobond market have grown. This article<sup>(1)</sup> examines the expansion of the eurobond market, the increasing links between euro, domestic and foreign bond markets, and the extent to which a truly global, homogeneous marketplace has begun to emerge.*

Eurobonds are traditionally defined as bonds which are issued, and largely sold, outside the domestic market of the currency in which they are denominated. They are typically underwritten by an international syndicate of banks, are exempt from any withholding taxes (ie taxes on coupon payments deducted at source), and are bearer in nature (ie no register of ownership is maintained). Originally, investors were attracted in particular by (and thus prepared to pay a premium for) the bearer status of eurobonds and their freedom from liability to withholding tax, although it is an over-simplification to characterise all eurobonds as having such distinctive features—practices vary between currency sectors and have altered with time. Eurobonds are distinct from domestic and foreign bonds. For the purposes of this article domestic bonds can in general be taken to mean bonds issued by largely domestic borrowers through domestic syndicates of banks and securities houses to predominantly domestic investors. 'Foreign' bond markets can be viewed as subsets of domestic bond markets, comprising domestic bonds issued by foreign borrowers.<sup>(2)</sup>

## Early development of the eurobond market

An international bond market can be traced back to the 19th century, when, for example, foreign governments launched bonds in London. However, the eurobond market developed much more recently, in the early 1960s, as an offshore market in, primarily, dollar bonds. A contributory factor to its development was the prior growth of a London eurodollar deposit market in the post-war period reflecting, *inter alia*, the emergence of a substantial US current account deficit in the early 1960s and restrictions on the maximum rate of interest which US-based banks could pay on US-held dollar deposits under Regulation Q.

Over time, eurodollar depositors diversified into the first important foreign bond sector—'Yankee' bonds (US dollar bonds issued in New York by non-US borrowers). Although Yankee bond issues were normally underwritten by US securities firms in New York, European intermediaries were

often invited to help distribute the bonds abroad. As European investors and issuers became more important in the Yankee bond market, the necessary conditions were in place for European securities firms to avoid the listing and disclosure requirements of the US bond market by themselves lead managing and underwriting dollar bond issues in London.

The introduction in July 1963 of an Interest Equalisation Tax, in response to the deterioration in the US current account, gave the decisive impetus to the development of the eurobond market. The Interest Equalisation Tax was levied on US investors' purchases of foreign securities and in turn raised the cost of foreign borrowing in the US market by 1%. The effect was a sharp contraction of issuance in the Yankee bond market and, with access to a number of other foreign bond markets subject to restrictions, issuance was diverted to the emerging eurodollar bond market. Reinforcing this, in 1965 the Voluntary Restraint Program established voluntary limits on foreign direct investment out of the United States (unless matching balance of payments earnings accrued) and in 1968 the guidelines were replaced by mandatory restrictions. As a result, US multinationals had little alternative but to fund their foreign subsidiaries through the euromarkets.

Eurobond market issuance expanded rapidly in the 1960s (reaching \$3 billion in 1970) and the currency base of the market broadened (in particular, markets in deutschemarks, Dutch guilders, yen and Canadian dollars became well established). In the 1970s, some of the factors which contributed to the early development of the eurobond market ceased to have effect: for instance, the Interest Equalisation Tax was abolished in 1974. Nevertheless, the eurobond market consolidated its position as a channel of intermediation for international capital flows, largely because an infrastructure for economical primary distribution and secondary trading had become well established, and because many domestic bond markets were subject to strict issuing requirements.

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(2) The international bond market is sometimes interpreted as comprising the foreign bond markets and the eurobond market: however, this article examines the increasing internationalisation of all bond markets, including domestic markets.

During these early stages of the eurobond market, London became established as the main centre for issuance and trading. Apart from the advantages possessed in terms of time zone and language, London also benefited from the international, innovative and entrepreneurial traditions of many of its institutions, as well as the relatively restrictive regulatory and fiscal regimes in other centres.<sup>(1)</sup>

### Eurobond market: 1980-90

The past decade has seen the eurobond market evolve considerably in terms of growth of issuance, currency diversification, shifts in the patterns of instruments and borrowers, and innovation.

#### Total issuance

Eurobond issuance grew very rapidly, increasing from \$26 billion in 1980 to \$185 billion in 1986. Subsequently, issuance has fluctuated between \$142 billion in 1987 and \$224 billion in 1989 (Chart 1), reflecting, *inter alia*, a sharp fall in issues of floating-rate notes (FRNs) and the extremely high volume of dollar equity-warrant bonds issued by Japanese borrowers in 1989, a phenomenon owing much to the buoyancy of Japanese equity prices.<sup>(2)</sup> Straight eurobond issuance rose to record levels in the early part of 1991 as confidence returned to capital markets following the Gulf War, with investors switching into longer maturities and yields falling.<sup>(3)</sup>

#### Currency diversification

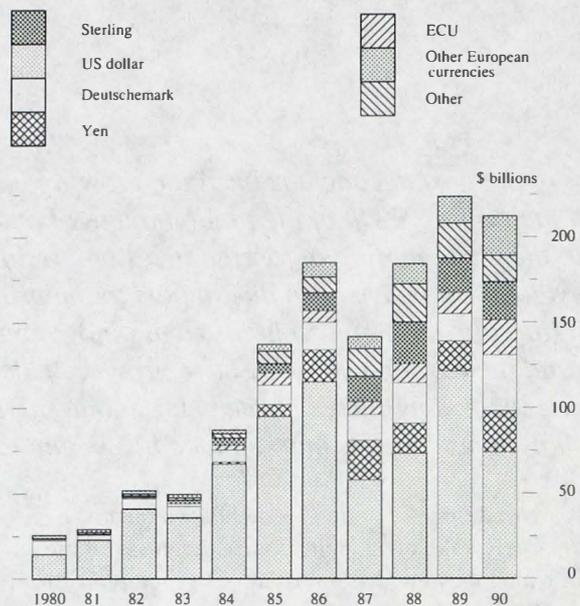
Deregulation has contributed to a widening of the range of currencies in which eurobonds are issued from 11 in 1980 to 21 in 1990. New currency sectors have included, for instance, the French and Luxembourg francs, the lira and the Swedish krona. The increased spread of currencies in the eurobond market has presented a means through which investors may diversify their portfolios without incurring the complications of investing in domestic markets (eg tax). It has also contributed to a natural widening in the investor and issuer base of the eurobond market.

As a result of the development of other currency sectors, reflecting the growing role of other currencies in international trade and capital flows, the share of the dollar in eurobond issuance has declined (from 57% in 1980 to 35% in 1990), matched by an increase in the share of the yen in the mid-1980s and more recently in the share of European currencies, notably the Ecu (Chart 1).

#### Instruments

Straight fixed-rate eurobonds have been the dominant instrument in the eurobond market, although their relative importance has diminished from 72% of eurobond issuance in 1980 to 61% in 1990 (Table A). The decline reflects developments in the markets for FRNs and equity-linked bonds.

**Chart 1**  
Currency composition of eurobond issues 1980-90



Source: Bank of England ICMS database.

FRN issuance grew rapidly until 1985, supported by issues from banks attracted by the ability to match the income from their loans with the interest expense of their FRNs. However, in 1986, investor demand for FRNs began to weaken, as concerns about oversupply heightened and as interest rates fell. Moreover, the successful introduction of asset-backed securities caused investors as well as market-makers to reassess the relative value of deeply subordinated perpetual FRN issues. This reassessment occurred at a time when

**Table A**  
Eurobond issues by instrument type

Year	\$ billions					Total
	Straight fixed-rate	Floating-rate note (FRNs)	Equity-related bonds Equity warrant	Convertible	Bonds with non-equity warrants(a)	
1980	18.6	3.5	—	3.6	—	25.7
1981	18.7	7.6	—	2.6	0.3	29.2
1982	36.4	12.4	0.4	1.4	1.1	51.7
1983	29.1	14.1	1.6	3.3	1.3	49.4
1984	40.8	33.5	2.7	4.6	5.6	87.2
1985	73.1	55.0	2.7	4.8	1.6	137.2
1986	115.2	46.7	15.3	5.9	2.0	185.1
1987	91.7	11.4	23.0	13.0	2.5	141.6
1988	126.6	23.4	28.3	5.4	0.7	184.4
1989	125.1	26.8	67.0	4.6	0.2	223.7
1990	129.9	57.2	20.6	4.3	0.1	212.1

Source: Bank of England ICMS database.

(a) Currency, debt, gold.

perpetual FRN investors, particularly the Japanese banks, were increasingly concerned about the treatment of perpetual FRNs, in the light of new capital adequacy requirements to be imposed by the Japanese Ministry of Finance: in December 1986, the cumulation of these factors led to a sharp sell-off of perpetual FRNs and a drying-up of liquidity, which also affected the dated FRN market. Since then, the growth of the

(1) See also 'London as an international financial centre' in the November 1989 *Bulletin*, pages 516-28.

(2) The interpretation of the figures quoted for the size of eurobond issuance is affected by inflation and exchange rate changes: in the second half of the 1980s, when the US dollar was depreciating, both inflation and exchange rate changes tended to increase the nominal value of eurobond issuance (in US dollar terms).

(3) See also 'Financial market developments' in the May 1991 *Bulletin*, pages 212-19.

swap market has made it easier for investors and issuers to create synthetic floating-rate instruments through the fixed-rate markets, and issues of FRNs have remained relatively subdued.

In the equity-related sector, issuance of equity-warrant bonds by Japanese corporations rose sharply in the late 1980s because yen financing could be obtained on very attractive terms after the proceeds of the issue (normally US dollars) were swapped back into yen: these terms were particularly favourable because investor interest in equity-warrant bonds arising from the strength of Japanese equity prices allowed fine terms on the underlying bond issue.

### Borrowers

Eurobond market investors have typically been 'name-conscious', so most issuers have been highly-rated borrowers from OECD countries.<sup>(1)</sup> (Between 1985 and 1990, issues by non-OECD countries averaged 3.7% of total eurobond issuance.) Over the last decade (Table B), issuance of eurobonds by the US private sector, the largest national group of issuers in the early 1980s, more than halved for a

**Table B**  
Gross flows in the eurobond market: borrowing by nationality  
Percentages

	United States	Japan	United Kingdom	West Germany(a)	France	Canada	International institutions	Other
1980	19.0	6.3	6.3	—	8.4	5.0	18.5	36.5
1981	22.2	9.9	4.2	0.2	7.2	16.8	13.5	26.0
1982	26.2	4.2	2.2	2.9	14.3	13.4	12.3	24.5
1983	13.2	9.6	3.4	4.8	11.5	7.8	19.9	29.8
1984	26.9	11.2	5.1	2.1	8.2	5.4	9.7	31.4
1985	27.4	10.2	10.3	2.0	7.9	5.3	8.9	28.0
1986	19.9	12.3	10.1	5.3	6.7	7.8	7.1	30.8
1987	14.1	23.3	6.9	5.9	5.0	4.2	10.4	30.2
1988	8.5	20.9	12.8	5.6	7.8	5.1	8.8	30.5
1989	6.9	36.7	10.2	4.1	5.0	4.3	7.6	25.2
1990	9.3	22.1	9.7	3.0	8.1	2.3	10.7	34.8

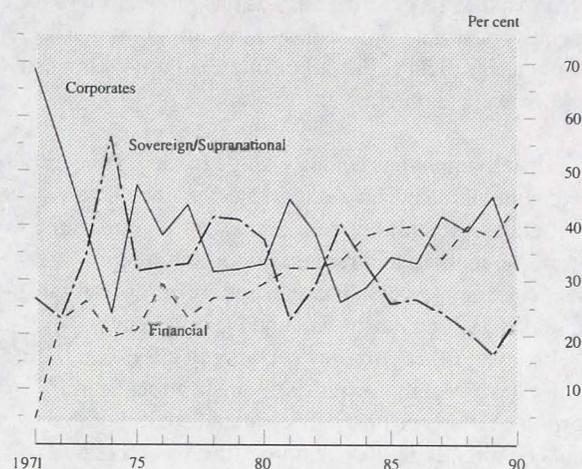
Source: Bank of England ICMS database.

(a) Includes borrowing by East German institutions following unification.

variety of reasons: for example, the use of shelf registration<sup>(2)</sup> in the United States accelerated the process of domestic bond issuance and reduced one of the competitive advantages enjoyed by the eurobond market; the abolition of withholding tax in the US domestic market also contributed to a decline in the attractiveness of the eurobond market to US borrowers; and in recent years increased corporate indebtedness, often associated with large takeover bids, has led to heightened investor awareness of the credit risk of US corporations.

Japanese private sector borrowers have supplanted their US counterparts as the largest issuers in the international bond market. In most cases, Japanese corporate borrowers have issued bonds with equity-warrants in the euromarkets through syndicates led by Japanese securities houses' affiliates in

**Chart 2**  
Share of eurobond market by business sector



Source: Bank of England ICMS database.

London, with placement thought to be largely with Japanese investors. The sharp decline in Japanese equity prices last year led to some reduction in equity-warrant issues, although this has partly been offset by increased issuance by Japanese corporates of fixed-rate debt. Meanwhile, following authorization in July 1990, Japanese City banks have over the past year or so been heavy issuers of subordinated debt in the international markets to help bolster their balance sheets.

Supranational organisations, such as the International Bank for Reconstruction and Development (IBRD), the European Investment Bank (EIB) and regional development banks, have been consistently important issuers in the international bond market. The larger supranational organisations have become significant issuers of large liquid bonds which, together with a few bonds by top quality sovereigns, act as benchmarks in the eurobond market.

### Investors

The bearer status of eurobonds precludes a comprehensive analysis of the investor profile, but a number of observations can be made.

UK residents' purchases of eurobonds were limited until the abolition of exchange control in 1979, since when they have been free to purchase eurobonds without restriction. In the United States, domestic investors are inhibited from buying eurobonds through an initial public offering which has not been registered with the SEC (although they may be sold freely after an official 'seasoning period' of 40 days).<sup>(3)(4)</sup> US investors have, in any case, ready access to large and liquid domestic capital markets. Continental European investors—traditionally 'name-conscious' and placing a premium on bearer instruments and freedom from

(1) In 1990, 40% of all public eurobonds were rated, and of these 90% were at least AA.

(2) The introduction in 1982 of Rule 415 of the Securities and Exchange Commission (SEC), the 'shelf registration' rule, effectively eliminated a delay of up to three weeks between deciding to launch an issue and obtaining SEC consent. The period between the decision to launch an issue and distribution was shortened to a day or less: this enabled issuers to ask for competitive fixed-price tenders from individual investment banks or syndicates which bore the risk that interest rates might rise between making a bid at a fixed price and distributing securities to investors. The fixed-price bid (or 'bought deal') was already established in, and had enhanced the attractiveness of, the eurobond market.

(3) Prior to April 1990, the 'seasoning period' was 90 days.

(4) However, eurobond private placements can be issued directly into the United States for purchase by qualified institutional investors under Rule 144a.

withholding tax— have been a major source of demand for eurobonds. And in recent years Japan has become a major source of demand as its external surplus has grown; in addition, equity-warrant bond issues in the eurobond market have become a significant channel of intermediation between Japanese borrowers and investors.

A separate development has been a change in the character of certain segments of the eurobond market. Small private investors ('retail' investors) were a significant feature of the early days of the market, and remain important in high interest rate currency sectors characterised by comparatively small, illiquid issues (eg Australian and New Zealand dollars). However, other currency sectors (eg US dollar, Ecu, yen, sterling) have become increasingly institutionalised (ie the proportion of funds professionally managed, rather than being managed directly by the final investor, has increased): as a result, a demand for liquidity in the secondary market, and hence for large primary issues, has been created. Nevertheless, institutional investors are usually subject to restrictions on the diversification of their investments (eg German life insurance companies may only invest a maximum of 5% of their assets in overseas securities).

**Table C**  
Distribution of eurobond bookrunners by nationality  
Percentages

	United States	Japan	Continental Europe	United Kingdom
1980	19.5	4.9	52.4	12.0
1981	26.9	10.0	42.2	11.3
1982	28.6	5.5	51.3	8.1
1983	16.6	6.3	59.1	9.4
1984	34.4	8.9	40.4	9.3
1985	33.6	12.2	39.5	10.0
1986	27.2	24.3	37.5	7.5
1987	18.1	36.9	33.6	9.8
1988	19.6	44.8	25.8	6.6
1989	19.7	44.8	25.8	6.6
1990	18.8	29.1	40.8	8.1

Source: Bank of England ICMS database.

The global nature of the eurobond market—intermediating between borrowers and investors throughout the developed world—is matched by the wide nationality range of bookrunners (Table C). Banks and securities houses have traditionally maintained especially close links with issuers and investors from their home country. Consequently, the market shares of bookrunners have changed to reflect the pattern of intermediation through the eurobond market (eg Japanese firms have been bookrunners for virtually all equity warrant bond issues by Japanese companies), although there remain some banks and securities houses with a significant presence in a variety of countries and currency sectors.

#### Other instruments of international financial intermediation

A variety of instruments—eg syndicated credits, euro medium-term notes and eurocommercial paper—can be regarded as alternatives, in varying degrees, to eurobonds<sup>(1)</sup> as a means of raising finance in the international capital markets. Table D shows that, in contrast to the pattern of

**Table D**  
Gross borrowing in the international financial markets  
\$ billions

	Eurobonds	Foreign bonds	Syndicated credits	Euronotes	Total
1980	25.7	11.3	82.9	—	119.9
1981	29.2	19.5	100.7	1.0	150.4
1982	51.7	22.6	88.2	2.4	164.9
1983	49.4	24.4	38.1	3.3	115.2
1984	87.2	21.5	30.1	18.8	157.6
1985	137.2	27.3	19.0	50.7	234.2
1986	185.1	36.5	29.9	75.1	326.6
1987	141.6	34.0	88.8	76.3	340.7
1988	184.4	43.1	111.8	84.2	423.5
1989	223.7	39.0	151.7	71.8	486.2
1990	212.1	50.6	165.0	70.5	498.2

Source: Bank of England ICMS database.

eurobond issuance, the volume of syndicated credit announcements fell sharply in the first half of the 1980s owing partly to the international debt crisis. However, syndicated credit activity later recovered, helped by a surge in merger and acquisition financings, to reach a record level of \$165 billion in 1990. Both eurobonds and syndicated credits provide long-term finance for borrowers and, although they are in certain circumstances alternative sources of finance, each has distinct characteristics: for instance, the syndicated credits market is normally open to borrowers with a lower credit-standing than the eurobond market; it can raise exceptionally large amounts for highly-rated credits (eg to finance takeover bids); and syndicated credit facilities can provide flexibility over the pace of disbursement.

There has also been considerable growth in short-dated borrowing: euronote facilities (eg eurocommercial paper (ECP), note-issuance facilities (NIFs) and euro-medium-term notes (EMTNs)) are distinguishable from eurobonds by being continuously offered as well as by their generally shorter maturities. Eurobond maturities are typically 5–15 years (although they can be as short as 1 year), compared with around 4 years for EMTNs, and around 90–180 days for ECP. Over the years, there has been a move towards shorter maturities in the eurobond market: in 1990, the average original maturity of eurobonds was under 6 years, compared with over 8 years in the early 1980s. Shorter maturities have been one means of providing some protection against volatile interest and exchange rates. However, the development of derivatives, such as futures and options, as well as the use of prepayment options (both 'calls' and 'puts'), and the perceived liquidity of large bond issues have provided alternative forms of protection for investors and borrowers.

The growth of the EMTN market has been particularly rapid in recent years. It has been due to, and sustained by, the flexibility the EMTN offers in terms of timing, amount and currency of issuance. This flexibility has been attractive to both issuers and investors. However, total new EMTN programmes, at \$20 billion in 1990, are still small relative to eurobond issuance and to the US domestic MTN market where the instrument originated. Nonetheless, there are moves in the direction of eroding the distinction between eurobonds and EMTNs. For example, some issuers have on occasion raised a large tranche of fungible bonds under a

(1) Certain eurobond issues (albeit publicly announced and included in the figures quoted in this article) are highly illiquid and have some of the characteristics of private placements.

previously established EMTN programme—this technique provides cost savings for borrowers because, while the launch of a traditional eurobond generally costs less than the costs of establishing an EMTN programme, these latter costs can soon be recouped by a frequent borrower.

Private placements represent an alternative channel of fund raising to public eurobonds. Comprehensive figures on private placements are unavailable because issuance, by definition, need not be announced, but the volume of those which have been announced rose from \$3.7 billion in 1980 to \$8.5 billion in 1990; this trend is believed to be broadly representative of the private placement market as a whole. The private placement market has been used by issuers whose funding requirements, because of their complexity, cannot be satisfied in the public markets. The market has also enabled borrowers to raise funds discreetly without the costs associated with a stock exchange listing or the documentation required for a public issue. Over recent years, the increased use of private placements may also reflect a widening awareness among borrowers that medium-sized issues in many public markets do not offer a significant advantage in terms of increased liquidity over private placements. In the United States, liquidity in the private placement market was given a boost in April 1990 by the Securities and Exchange Commission's (SEC) Rule 144A which liberalised the US private placement market by allowing immediate resale to 'qualified' investors;<sup>(1)</sup> and a trading system called Portal was established.

### Innovation

The eurobond market—just like the US domestic bond market—has traditionally been a leading channel of financial market innovation, allowing financial structures to be adapted to accommodate the requirements of issuers and investors more flexibly than has been possible in some domestic capital markets. For instance, the use of swaps in the eurobond market was a natural consequence of the increased internationalisation of bond markets, while the eurobond market also witnessed the development of the Japanese equity warrant. Other instruments, such as asset-backed securities, had earlier developed into a sizable market in the United States, and became an important part of the eurobond market (with issuance rising to \$15 billion in 1990).<sup>(2)</sup> The eurobond market is now host to a wide and diversified range of instruments, including many which have relatively complex interest-rate and redemption profiles: for example, capped FRNs, in which the coupon rate has an upper limit, and index-linked bonds, such as bull-bear bonds, in which redemption prices are linked to, say, a stock market index, with redemption proceeds on the bull portion rising as the index rises and the redemption proceeds on the bear tranche rising as the index falls. In many cases, the wider range of instruments available in the eurobond market compared with

domestic markets has reflected regulatory regimes: for instance, issuance of FRNs, zero-coupon bonds and dual-currency bonds was prohibited in Germany until May 1985, although such instruments were issued in other currency sectors of the eurobond market.

### Secondary market

Investors' desire for liquidity (eg the ability to buy or sell bonds in sizable amounts before they mature without much influencing the price) has led to the development of a sizable secondary market in eurobonds.

The secondary market is primarily an over-the-counter market, even though most eurobonds are listed on the London or Luxembourg Stock Exchanges. (Listings are normally obtained because some institutional investors are not allowed to purchase unquoted securities). Secondary market trading has expanded rapidly in recent years: Table E shows the growth in secondary market trading through the international clearing systems (Euroclear and Cedel).<sup>(3)</sup>

**Table E**  
Secondary market turnover<sup>(a)</sup>  
\$ billions

1980	240
1981	404
1982	864
1983	896
1984	1,512
1985	2,208
1986	3,570
1987	4,666
1988	4,627
1989	5,084
1990	6,262

Source: AIBD.

(a) Comprises secondary market turnover of fixed-income bonds, floating-rate notes, certificates of deposit and short and medium-term notes in euro and domestic sectors through Euroclear and Cedel.

The rapid growth of secondary trading is closely linked to structural changes in the market, in particular the increased institutionalisation of the investor base. During the early development of the market, issues were small (particularly in relation to government bond issues in domestic markets) and the market was oriented towards retail investors who were attracted by the anonymity and perceived tax advantages of eurobonds. Institutional investment was focused on domestic capital markets, partly reflecting exchange controls, while the lack of competitive market-making, inefficient settlement systems and unsophisticated communications technology represented further disincentives to sizable institutional investment in the eurobond market. As a result, there was little secondary market trading and bid/offer spreads were wide.

Gradually, improvements in the market infrastructure (eg improvements in trading and settlement systems and procedures)<sup>(4)</sup> attracted more institutional investors (insurance companies, pension funds, etc); in addition, central banks

(1) ie investors with a minimum of \$100 million invested in securities; also, banks and thrifts are required to have a net worth of \$25 million.

(2) See the May 1991 *Bulletin*, pages 244–5.

(3) The figures, which include an element of domestic turnover, are believed to be broadly representative of the growth in eurobond market turnover over the past decade.

(4) For example, in 1980 the two international clearing systems, Euroclear and Cedel, became linked by an 'electronic bridge' which enabled members of one system to make simultaneous book-entry transfers against payments with members of the other system; and, in 1989, TRAX was introduced by Euroclear and Cedel, in association with the AIBD, as a trade-matching and confirmation system, designed to reduce clerical burdens and possible exposure to failed settlements.

began to be significant investors in eurobonds. In contrast to retail investors, who typically held eurobonds to maturity, the investment institutions adopted more active portfolio management strategies (eg switching between bonds and cash or between currencies, hedging by means of, for example, futures and options, and arbitraging inefficiencies by, for example, switching between bonds in the same sector), which in turn contributed to, and required, a more liquid market. This activity both generated liquidity and enabled dealers to develop their trading and hedging techniques. Eurobond dealers began to make more use of brokers, and of domestic instruments (including futures, swaps and options) in the same currency as hedges; and they have started to develop repurchase markets as a means of enabling them to offer bonds for sale which they do not own, as well as a means of financing offsetting long positions.

The changed investor base has contributed to the sharp growth of secondary market turnover described above. In addition, the size of eurobond issues has increased, on average, from \$62 million in 1980 to \$155 million in 1990, when 56 issues were greater or equal to \$500 million; the average size of secondary market trades has risen; and bid/offer spreads on top-quality issues have fallen considerably.

In some of the more active currency sectors (eg US dollar, Ecu, yen and sterling), a significant number of issues are large, highly-rated and liquid (almost on a par with government bond markets) to a degree that is highly attractive to sophisticated institutional investors. But other currency sectors (eg the Australian dollar and the New Zealand dollar) continue to be mainly characterised by small, illiquid issues with a substantial retail investor base. As a result, the market is now rather segmented.

### Convergence of bond markets

In recent years there has been a growing integration—in terms of increased substitutability and interactions—between the euro, domestic and foreign bond markets. Moreover, the term 'eurobond' as a synonym for an international bearer bond which is exempt from withholding tax has become something of a simplification in view of both the diverse arrangements in different currency sectors, and the expansion of the number of currencies in which eurobonds are issued.

The two major differences of form which distinguished eurobonds from domestic and foreign bonds have gradually been eroded. Fiscal reforms have led to the dismantling of withholding tax regimes in a number of major OECD countries (eg in the United States in 1984, Germany in 1989 and France—for foreign investors only—in 1989); and, in those countries which retain withholding taxes, procedures often exist for the reclaiming of tax under double taxation agreements for at least some categories of investor. The bearer status of eurobonds was not at the outset a unique feature of eurobonds: bearer bonds were, and are, issued in a number of domestic markets eg Germany, Switzerland and

Luxembourg. Moreover, the increasing role of institutions as eurobond investors means that the anonymity associated with bearer status is less valued. The settlement of eurobond trades through the two clearing systems (Cedel and Euroclear) is also no longer a distinguishing feature; a significant amount of domestic bonds, notably government bonds, are now settled in the same way.

The integration of euro and national bond markets has been enhanced by the 'global' bond which can be readily transferred between depositories in these sectors. To facilitate this transfer, links have been created between Cedel and Euroclear in Europe and Fedwire in the United States. The enhanced worldwide marketability of 'global' bonds increases their liquidity and thus the attractiveness of these issues to institutional investors, enabling the borrower to launch an issue at a lower spread than would have been attained had separate tranches been issued in more than one market. The first fully fungible global issue was a US\$1.5 billion issue by the IBRD in September 1989 which was distributed and settled simultaneously in North America, Europe and the Far East.<sup>(1)</sup>

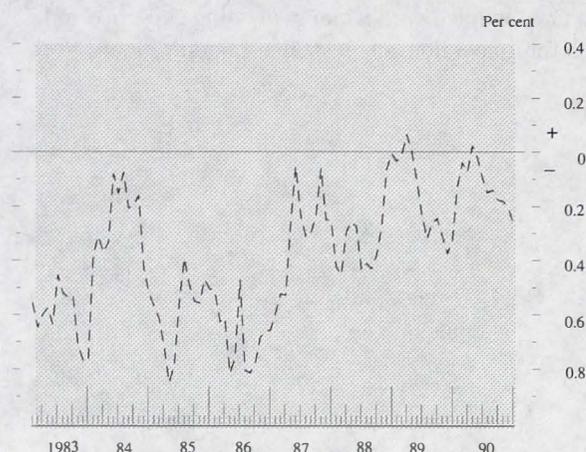
The eurobond market is no longer the only bond market which is genuinely international in character. Over the years the traditional domestic bond markets have attracted increasing international investor interest as a result of factors such as improved communications technology and dismantlement of exchange controls. At the same time, portfolio diversification across markets has become an accepted component of investment strategy: for instance, the Employee Retirement Income Security Act (ERISA) in the United States promoted overseas investment as helping to reduce risk. The process of international portfolio diversification has been further stimulated by the development of markets in swaps, futures, options, etc, which have facilitated the elimination or transformation of currency and interest rate risks.

Furthermore, eurobonds are no longer characterised by the composition of the syndicate, or by their syndication procedures. Traditionally, eurobond issues were underwritten by an international syndicate, while domestic issues were underwritten by local firms. However, domestic bond markets have been increasingly opened up to foreign-owned financial institutions (eg from May 1985, foreign-owned banks were permitted to lead-manage deutschemark domestic bond issues), while primary market syndication procedures have become increasingly similar in many domestic and eurocurrency sectors: for example, the negotiated fixed-price re-offering, a method already adopted in the US domestic market, was re-introduced in the eurodollar bond market in June 1989.

The effect of all these developments has been the evolution of an increasingly international bond market in which the previously rather distinct domestic, foreign and euro sectors have become more inter-linked. Instruments traded in different markets are becoming more homogeneous, as is the

(1) The global bond was registered with the SEC to overcome sales restrictions in the United States.

**Chart 3**  
Eurodollar/US domestic bond yield differential<sup>(a)</sup>



Source: Salomon Brothers and BIS.

(a) 10-year maturities. Composite of prime quality borrowers.

investor base in different markets. Nevertheless, the process is far from complete: although yield differentials between domestic and eurobond markets have been substantially arbitrated away in recent years, they still exist (Chart 3). The substitutability of euro and domestic sectors of the bond market is limited by a number of factors: for example, restrictions on domestic financial institutions' investment in overseas securities and differences in the registered/bearer status of certain domestic bonds and eurobonds.

If the eurodollar bond market is set in the context of US domestic bond markets (a comparison which gains validity as a truly international bond market becomes a more relevant paradigm), it is apparent that, although the rate of growth of issuance of the euro sector of the US dollar market has outstripped the rate of growth of issuance in the domestic sector during the last ten years, the euro sector remains quite small relative to the domestic sector (Table F). The greater size of the domestic sector partly reflects government borrowing, although the domestic market is also a much larger source of finance than the euromarkets for corporate borrowers: for instance, corporate borrowing in the eurosector of the US dollar bond market is only just over a

**Table F**  
US dollar sector—bond issuance

	Total			of which: corporate		
	Domestic(a)	Foreign	Euro	Domestic	Foreign	Euro
1980	267.8	1.8	14.5	42.2	0.5	4.4
1981	284.0	6.7	22.7	40.1	1.7	9.4
1982	392.9	5.9	40.9	53.0	0.3	13.8
1983	434.8	5.2	35.8	45.4	0.2	7.4
1984	557.8	1.8	67.3	66.8	0.1	16.3
1985	754.2	3.5	95.1	111.5	—	26.4
1986	819.8	6.1	115.3	189.7	0.5	35.0
1987	744.7	4.7	57.9	152.8	0.1	33.4
1988	736.2	9.8	73.4	169.5	1.7	39.8
1989	761.2	8.1	121.3	158.2	1.5	72.4
1990	831.7	12.8	74.0	151.0	3.8	29.0

Source: OECD *Financial Statistics Monthly* for domestic bond market data, and Bank of England for foreign and eurobond market data.

(a) From 1987, data exclude issues by central government agencies. (Government agencies accounted for approximately 6% of total domestic issuance, and 9% of public sector bond issuance in 1986, the last year for which these data are available.)

quarter of the size of corporate borrowing in the domestic sector.

### London's position in the international bond market

London has developed a pivotal position in the international bond market. About 65% of eurobond issues in recent years have been syndicated in London, including, among non-sterling issues, nearly all eurodollar and euroyen bonds. As a guide to the location of eurobond bookrunners, 58 of the 93 members of the IPMA are registered in London. Most secondary trading of eurobonds also takes place in London: as a guide to the location of market-making, 73 of the 96 dealers reporting daily or weekly prices to the AIBD are located in London (Table G). Furthermore, a significant portion of secondary trading in domestic bonds from other countries takes place in London—eg 5%–10% of turnover in US Treasury bonds, according to anecdotal estimates.

**Table G**  
Secondary market: location of AIBD reporting dealers

	Number of dealers	
	Total	of which: located in London
End-1986	128	89
1987	115	80
1988	112	79
1989	102	75
1990	96	73

Source: AIBD.

The rapid growth of the eurobond market, reflecting the flexible and innovative way in which the market has been able to intermediate capital flows, has made a significant contribution to London's position as an international financial centre. However, the deregulation of domestic bond markets in a number of other centres presents a challenge to the eurobond market in that capital flows previously intermediated through the eurobond market may instead be intermediated through domestic markets.

It is worth recalling that the eurobond market has a consistent record of evolving flexibly to changed circumstances; and there remain restrictions on borrowers' access to markets and investors' fund allocation decisions in some countries (eg continental Europe). All the time, however, the traditional distinctions between domestic, euro and foreign markets are being eroded and a more homogeneous, truly international bond market appears to be evolving.

London's international orientation and the innovative and entrepreneurial traditions of many of its institutions, coupled with the relatively restrictive regulatory and fiscal regimes of other countries, were important in contributing to its initial development as a centre of international bond market activity. Reinforcing these have been 'external economies of scale' reflecting the benefits of establishing close to related activities (eg other financial markets and a well-developed legal and accounting infrastructure).<sup>(1)</sup>

London has gone on to establish itself as an important centre

(1) See also 'London as a international financial centre' in the November 1989 *Bulletin*, pages 516–28.

for trading international bonds in the wider sense: domestic bonds as well as eurobonds. This owes much to London's attractions as a place of business for international financial intermediaries, and is reflected in its leading role in the

development of important ancillary markets such as repos, swaps, futures and options. The development of the financial infrastructure, coupled with its long-standing expertise and reputation for innovation, suggests that London should