

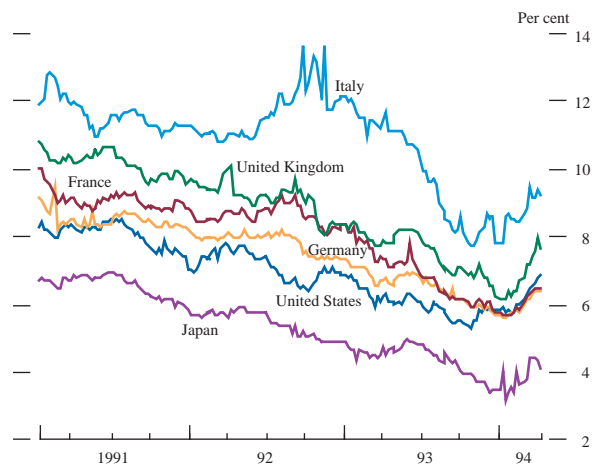
# Financial market developments

- *US government bond prices fell sharply during the first quarter of 1994, as the market reacted to the Federal Reserve's monetary tightening. Despite countries being at different points in the economic cycle, European bond prices responded by also moving lower.*
- *As a result of falling bond prices and adverse market conditions, few straight bonds were issued after January. Many borrowers chose instead to issue floating-rate notes, which met demand from investors wishing to take a defensive market view.*
- *In the highly volatile market conditions, turnover on derivative exchanges rose to record levels.*

## Overview

Bond markets around the world fell sharply during the first quarter of 1994. The prices of US government bonds had been falling gradually since October, but the Federal Reserve's decision to raise its federal funds rate by 25 basis points on 4 February precipitated a further, sharper drop in prices. This fall was closely paralleled in Europe and Japan, ending bond market rallies that had begun in 1990 and had reduced nominal yields to their lowest for over a decade (see Chart 1).

**Chart 1**  
Ten-year government bond yield



Source: Bloomberg.

Despite this background, issues of international bonds during the quarter totalled \$136 billion, only 8% less than the record for a single quarter set in 1993 Q1 (see Table A). The majority of issues, however, took place in January: volatile and falling markets dissuaded many issuers from coming to market during February and March. Of those issues that did take place during the latter part of the quarter, many were in floating-rate or equity-related form, in an attempt to reduce the cost of issuing and meet demand from investors wishing to take a defensive market view. The

switch away from straight bonds was clearest in the US dollar sector, where almost half of the bonds issued were floating-rate notes (FRNs). Falling bond prices also led investors to re-assess the risks of holding less liquid instruments and, as a consequence, the prices of bonds issued by non-OECD entities fell further than those of their OECD counterparts, discouraging new issues by the former.

The worldwide response to the US interest rate rise highlighted the continuing integration of world capital markets. Explanations of the general upward movement in international bond markets, despite countries being at different points in the economic cycle, are considered in the

**Table A**  
Total financing activity:<sup>(a)</sup> international markets by sector

\$ billions; by announcement date

	1992 Year	1993 Year	Q1	Q2	Q3	Q4	1994 Q1
<b>International bond issues</b>							
Straights	281.5	375.7	122.9	88.0	82.2	82.6	76.8
Equity-related	24.0	39.6	8.7	8.3	10.6	12.0	20.7
of which:							
Warrants	18.3	20.8	6.2	3.7	5.5	5.3	8.2
Convertibles	5.7	18.8	2.4	4.6	5.1	6.8	12.5
Floating-rate notes	43.2	68.5	15.6	13.6	19.0	20.3	38.7
Bonds with non-equity warrants (currency, gold, debt)	1.2	1.5	0.8	0.4	0.2	0.1	0.1
<b>Total</b>	<b>349.9</b>	<b>485.4</b>	<b>147.9</b>	<b>110.3</b>	<b>112.0</b>	<b>115.1</b>	<b>136.2</b>
<b>Credit facilities (announcements)</b>							
Euronote facilities	113.2	117.4	15.5	14.9	31.1	55.9	35.7
of which:							
CP	21.5	24.2	5.7	3.4	2.9	12.2	3.9
MTNs	90.8	92.7	9.8	11.2	28.1	43.6	31.9
NIFs/RUFs	0.9	0.5	—	0.3	0.1	0.1	—
Syndicated credits	221.4	221.2	42.1	69.4	54.7	55.0	52.0
<b>Total</b>	<b>334.6</b>	<b>338.6</b>	<b>57.6</b>	<b>84.3</b>	<b>85.8</b>	<b>110.9</b>	<b>87.7</b>
<b>Memo: amounts outstanding</b>							
All international							
Bonds <sup>(b)</sup>	1,686.4	1,847.9	1,741.8	1,774.9	1,843.6	1,847.9	1,980.8
Euronotes <sup>(c)</sup>	173.1	255.8	182.6	199.3	234.6	255.8	289.8
of which, EMTNs	61.4	146.6	77.8	94.8	124.6	146.6	177.9

(a) Maturities of one year and over. The table includes euro and foreign issues and publicised placements. Issues which repackage existing bond issues are not included. Figures may not add to totals because of rounding. Bond total includes issues from MTN programmes.

(b) BIS-adjusted figures, including currency adjustment. Includes issues of fixed-rate bonds and floating-rate notes.

(c) Euroclear figures.

reviews of the operation of monetary policy and the international environment in this *Bulletin*. A number of particular factors that influenced individual markets are, however, considered below.

In the United States, although the Federal Reserve presented its increase in the federal funds rate in early February as a pre-emptive move against inflation, the markets saw it as a confirmation of the authorities' perceptions of potential inflationary pressures, and yields on US Treasuries rose. Stronger-than-expected GDP figures and the Federal Reserve's further tightening on 22 March were followed by further rises in bond yields.

In Japan, yields had begun rising in mid-January, triggered by uncertainty over the outcome of the political reform bill and reflecting growing concerns over the increased supply of bonds that would be needed to fund the expansionary fiscal package. Public sector bond issues in 1993/94 substantially exceeded earlier expectations, and volumes of issues are expected to rise further in 1994/95. At the same time, deregulation of the domestic yen bond market had encouraged an increase in corporate bond issues, exacerbating the oversupply.

In Germany, disappointing money-supply figures and concerns that the Deutsche Mark might be vulnerable in an environment of rising US rates suggested that interest rates might not fall as fast as the market had anticipated. With a slower reduction in German rates, the markets judged that the pace of interest rate reductions in other European countries would also be held back. Having already discounted favourable short-term interest rate expectations, European bond markets may have become overvalued (nominal yields had fallen to historic lows). With US interest rates on an upward trend, and highly volatile and uncertain conditions in European bond markets, a reappraisal of the risks of potential inflation may have reinforced the bond-market falls that were already taking place.

The decline in bond prices may also have been exacerbated, in the short term, by technical factors. Given that the three-year rally in European bond prices was coming to an end, many investors—not least leveraged funds (see the box on page 125)—sought to hedge or unwind long bond positions which had been held on the premise of continuing rises in prices. Much of the initial activity took place in the futures markets, where record turnover in the government bond contracts on LIFFE, Paris's MATIF and Frankfurt's DTB coincided with substantial price falls and calls for additional margin. These additional margin calls, together with the falling value of much of the collateral being used to finance outstanding long positions, may in turn have exacerbated pressures on some investors (such as the more highly geared leveraged funds) to sell their remaining long bond positions.

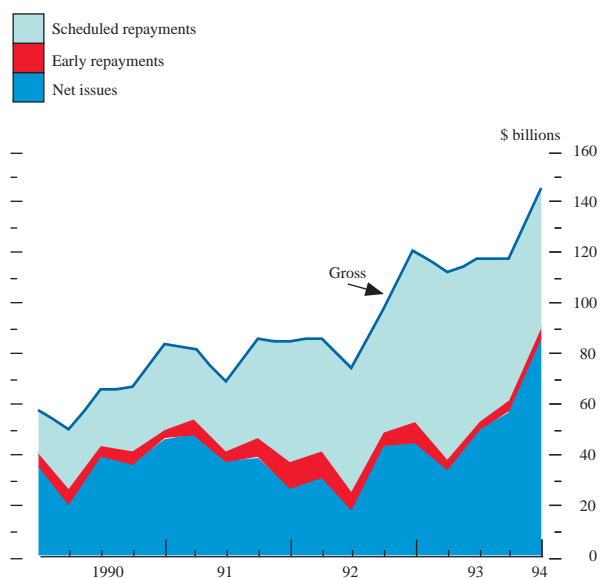
Prices were volatile in all the main equity markets too, as investors reacted to the rise in US short-term interest rates

and the falling bond markets worldwide. Buoyed in January by high levels of economic growth, prices of US equities subsequently fell throughout the rest of the quarter. After rises early in the quarter, European equity markets also fell, as investors reduced their expectations of the scope in the short term for further falls in European interest rates. In contrast, Japanese equity prices rose, encouraged by resolution of the problems over the political reform bill and by strong foreign investment.

## International bond markets

Despite the market volatility, \$136 billion was raised through international bond issues during the first quarter of 1994. This was close to the record total in the same quarter in 1993, and with redemptions of \$58 billion, the net amount issued during the quarter was a record \$78 billion (see Chart 2). Such a high quarterly total was achieved despite

**Chart 2**  
International bond issues<sup>(a)</sup>



Source: Bank of England ICMS database and BIS.

(a) Measured at date of completion rather than announcement, and therefore differing slightly from the figures given elsewhere in this article.

adverse market conditions as a result of the strength of borrowing in January, when \$70 billion was raised by issuers keen to take advantage of historically-low yields. The subsequent market turbulence led to a marked slowdown in new issues in February and March. Of those borrowers that did come to market later in the quarter, many chose to issue FRNs or equity-related debt, rather than fixed-income bonds.

As at the beginning of 1993, a large volume of international bond issues were made by national and regional governments in the first quarter of 1994 (see Chart 3). They raised a total of \$24 billion, almost half in floating-rate form; some governments, including the United Kingdom's, issued floating-rate debt in their domestic markets as well. European banks were also heavy borrowers in the international market, issuing almost \$30 billion in the quarter. The majority of this was done in January, as banks

## Hedge, or leveraged, funds

There is no precise definition of a 'hedge' fund; the term is used loosely to refer to an investment fund structured so as to be exempt from investor protection requirements and thus able to follow a flexible investment strategy. The funds' trading strategies typically involve taking both long and short positions, as well as leveraging those positions. Positions are very often not hedged; 'leveraged fund' is therefore a more accurate term. Leverage (or gearing) can be achieved by borrowing (either unsecured or against a fund's existing assets, perhaps using sale and repurchase agreements) and investing the proceeds, as well as by trading in derivative products. By leveraging in this way, the return on funds' positions becomes more sensitive to marginal movements in the prices of the assets concerned.

Leveraged funds have been the focus of much attention in recent months, and the lack of generally-available information on them has led to speculation about their activities. Central banks and regulators have also naturally been interested in them. Their concerns have not centred on investor protection, since the funds' high minimum investment levels mean that they only attract wealthy individuals and institutional investors, who should be able to look after their own interests. Rather they have been concerned to assess whether leveraged funds could have a disruptive impact on markets which might in turn affect other market participants, and whether their business is handled prudently by their counterparties.

The lack of transparency in leveraged funds' activities makes it difficult to reach a firm conclusion about their potential impact on markets. Anecdotal evidence suggests that they do affect markets, though their impact may have been somewhat overstated. Leveraged funds were active during the recent bond market downturn; but even if they were all highly geared their role is unlikely to have been as influential as some have suggested, given the small size of their capital relative to the market as a whole. The perceived importance of leveraged funds may instead be attributable to the status that some of the major fund managers now seem to have in the market.

The Bank has raised with the institutions it supervises the question of their exposure to leveraged funds. In general, banks judge that the funds provide them with adequate information; lack of information is not seen to be an obstacle to assessing counterparty risk. The larger funds also seem to have established long-term relationships with specific counterparties, whom they are willing to pay well for the ability to trade rapidly and in size. There has been strong competition for this business between those banks and securities houses able to take it on. This competition may have led to a temporary lowering of standards in assessing and protecting against counterparty risk, for example by taking adequate collateral. But the recent market volatility may have led counterparties to correct this.

### *Size and structure*

Information on leveraged funds as a whole is sketchy, and needs to be treated with care. Conservative estimates nevertheless indicate that there are around 800 leveraged funds worldwide, handling investment funds of at least \$45 billion. The funds vary enormously in size; a handful

of the largest (and best-known) account for perhaps half of the total. Although the majority of leveraged funds are still aimed towards US markets and investors, leveraged fund activity is growing in Europe and may continue to do so. As in the United States, growth in Europe is likely to be based offshore, because of restrictions on investments for onshore funds. The typical investors in leveraged funds still largely appear to be rich individuals, but the funds' active asset management style is likely to prove increasingly attractive to institutional investors.

Typically, a leveraged fund is established by a trader, or a small group of traders, with a proven track record at a well-known institution or on the floor of an exchange. Traders are attracted to setting up their own funds by the independence it brings and by the prospect of high performance fees (typically at least 15%–20% of profits). As the size of the fund grows, the number of traders may increase, but investment decisions usually remain in the hands of a few key individuals. Traders' reputations are crucial, both in gaining capital for the fund and in providing justification for their performance fees.

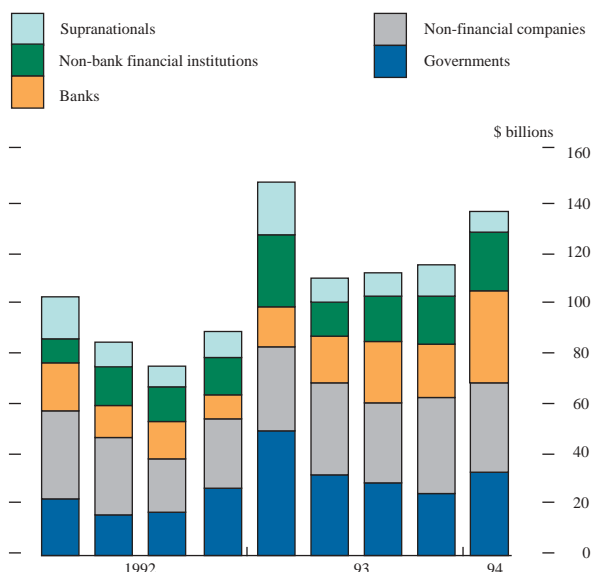
### *Trading strategies*

Leveraged funds, unlike most other asset managers, tend to aim for a total rate of return rather than gauging their performance against a benchmark. Their trading strategies differ enormously, from a market-neutral approach (typically based on quantitative methods and arbitrage techniques) to investing according to long-term fundamentals which may involve significant position-taking. The smaller funds appear to be largely quantitatively based; they may leverage by up to 40 times or more—generally through the use of exchange-traded futures contracts—and probably have relatively short-term investment horizons.

Larger leveraged funds tend to take a longer-term view (some larger funds require investors to commit their capital for three years or more). In taking these longer-term positions, larger funds also seem to resort less to leverage. They may obtain leverage through a combination of secured and unsecured borrowing, sale and repurchase agreements (repos) and margin-based derivative transactions. The possible leverage available to a fund will therefore depend, among other factors, on the collateral and margin requirements imposed by its counterparties.

Leveraged funds are active in financial markets across the globe, and funds' activities may involve complex cross-product and cross-currency trades. Few other investors—apart from the proprietary trading desks of their counterparties—undertake such broad cross-market and multi-instrument trades. Larger funds, however, tend to concentrate their trading in the more liquid markets so as to be able to take (and liquidate) major positions. The size of individual transactions undertaken by the larger leveraged funds can sometimes be very large indeed—up to several billion dollars. During 1993, total turnover in European government bond markets—and in particular repo business—increased rapidly and this may well have been due in part to the long positions taken by leveraged funds.

**Chart 3**  
Borrowers in the international bond market

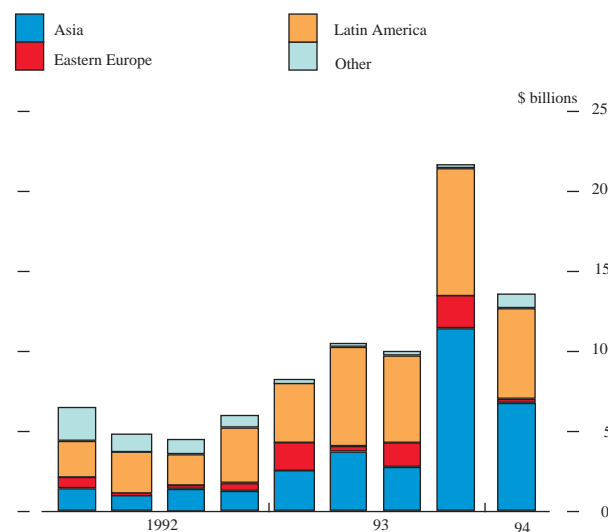


Source: Bank of England ICMS database.

made use of the low cost of capital to restructure their balance sheets and to take advantage of improving lending opportunities.

With prices generally falling, investors became increasingly reluctant to purchase illiquid lower-rated debt. The prices of Latin American Brady bonds in particular fell sharply—the spread of Mexican and Argentine bonds over US Treasuries widened by around 250 and 350 basis points respectively. Issues by non-OECD borrowers fell back to \$14 billion in the first quarter (see Chart 4), down from \$22 billion in the final

**Chart 4**  
International bond issues by non-OECD borrowers



Source: Bank of England ICMS database.

quarter of 1993. High demand for capital from non-OECD borrowers suggests, however, that they will be keen to resume issuing when more settled market conditions return.

In the first quarter, global bond issues<sup>(1)</sup> totalled \$9 billion. For the most part, they were major issues in one of the more liquid currencies made by borrowers with prime credit ratings. There were, however, a number of smaller issues, and the range of currencies of issue was widened further to include the Finnish markka, Swedish kroner, Ecu and Danish krone. These smaller deals were, however, structured as eurobonds with additional SEC registrations and, without linked settlement systems, they therefore lacked some of the attributes that had characterised earlier global bonds.

### Currency sectors

In the first quarter, US dollar-denominated issues accounted for 24% of all fixed-rate issues in the international bond markets—a lower proportion than the average in recent years (see Table B). They were concentrated in January: issuers had been keen to lock into historically-low funding costs, but with both short and long-term interest rates rising in the United States, they were less enthusiastic about issuing during the latter part of the quarter. And with short-term interest rates expected to rise further (by the end of the quarter the implied three-month rate for end-1994 was 5.3%), US dollar issuers may continue to favour the floating-rate sector in the coming months.

**Table B**  
Currency composition of fixed-rate bond issues<sup>(a)</sup>

Currency denomination	Percentage of total issues announced		1994			
	1992 Year	1993 Year	Q2	Q3	Q4	Q1
US dollar	32	30	33	29	28	24
Deutsche Mark	11	13	7	13	16	13
French franc	8	11	15	8	12	13
Sterling	6	8	10	8	6	12
Yen	14	13	9	16	16	8
Italian lira	2	3	5	4	2	6
Canadian dollar	6	8	5	8	5	5
Ecu	7	3	2	2	2	4
Swiss franc	5	5	5	6	5	2
Other	9	6	9	6	8	13
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

(a) Excluding equity-related issues.

The share of fixed-rate bonds denominated in European currencies was high—almost 60%—reflecting the fact that bond prices continued to rise in these markets until February. As the quarter continued, demand for new issues of straight bonds weakened, particularly in the Deutsche Mark sector, where there were few issues after the announcement of a 20% (annualised) increase in M3 in January. The abolition of the queuing procedure, under which borrowers had previously needed the Bank of Italy's permission before a launch, prompted an increase in lira issues; in January alone, issues in eurolire were equal to a quarter of the total issued in 1993. The quarter also saw the first foreign drachma issue, launched by the European Investment Bank (EIB) in the domestic Greek bond market.

Issues in the euroyen and samurai<sup>(2)</sup> markets accounted for only 8% of fixed-rate bonds issued in the first three months

(1) Global bonds are issued simultaneously in the European, US and Far Eastern markets, and can be settled in both domestic and international clearing systems.

(2) A samurai bond is a bond issued in the Japanese domestic market by a foreign issuer.

of the year, a sharp fall on recent quarters. Most of these international yen issues came in January, immediately following the abolition of the 90-day 'seasoning' period<sup>(1)</sup> for issues by public sector entities. Concerns about oversupply and uncertainty over the passage of the political reform bill subsequently deterred many prospective issuers.

New issues totalling £9 billion were made in the sterling debt markets in the first quarter. January and early February were particularly active, as borrowers took advantage of record low funding rates and investors bought in the hope that yields would continue to decline. Overseas interest was also encouraged by the rally of sterling; in mid-January it reached its highest level since 1992 against the Deutsche Mark. But the volume of new sterling issues fell back sharply in March, when only five issues totalling £750 million were made. Much of the paper issued during February and March was said to have remained with lead managers and syndicate members, as investors remained cautious.

Continuing the trend seen in 1993, banks and building societies were the most active borrowers in the first quarter, accounting for over 60% of the total. Major issues (raising £500 million each) were brought by the Halifax, Abbey National, Royal Bank of Scotland and Barclays, and the EIB was able to launch a £400 million 10-year bond priced at the same yield as the 10-year gilt. In January, British Gas extended the maturity of the eurosterling yield curve when it launched the first ever 50-year eurosterling issue, raising £200 million priced to yield 50 basis points over the 8¾% 2017 gilt.

The UK local authority bond market showed signs of a revival following clarification, under section 43(2) of the Housing and Local Government Act (1989), of the conditions under which local authorities are allowed to issue registered debt securities. Three councils issued partly-paid 25-year sterling bonds totalling £280 million, and a further three made a joint issue for £85 million using a special-purpose vehicle.

Turnover in the Ecu bond and money markets rose during the first quarter, despite the volatile conditions in individual European currency markets; the composite nature of Ecu securities offers exposure to a range of European markets with reduced currency risk. During the quarter, the Bank continued to hold its regular monthly Ecu Treasury Bill auctions. A tender was also held on 19 April to reopen the 1997 Ecu Treasury Note which was launched in January of this year.

The monthly Ecu Treasury Bill auctions continued to be oversubscribed at all three maturities on offer, with issues being more than twice covered at each auction, at levels up to 20 basis points below the Ecu six-month Libid. ECU 200 million of one-month, ECU 500 million of

three-month and ECU 300 million of six-month bills were on offer at each tender. Secondary market turnover in these instruments fell to ECU 1 billion during December, but rose to ECU 2.4 billion during March reflecting more stable conditions in European money markets. There are currently ECU 3.5 billion Treasury bills outstanding across all maturities.

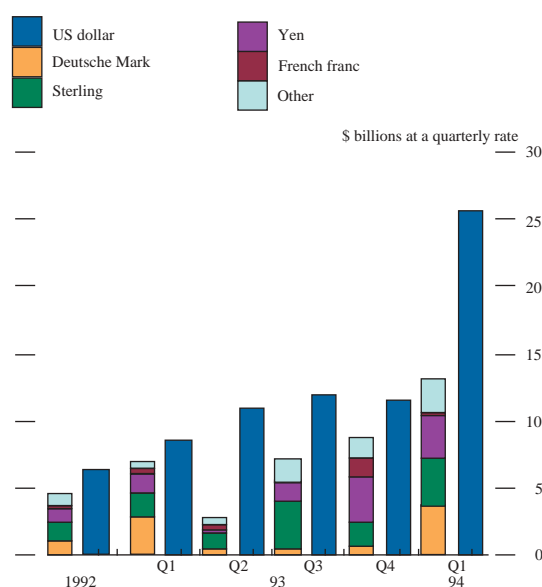
At the tender reopening HMG's Ecu Treasury Note maturing in January 1997 (the third three-year Note in the series), ECU 500 million was sold; the auction was almost four times covered. Bids were allotted at yields in a tight range of 6.30% to 6.34%, a few basis points through the theoretical composite basket. The oversubscription at the tender reflects the benchmark status of the debt in the Ecu market. Liquidity in the outstanding 1995 and 1996 Notes has been good, with turnover remaining at around ECU 2 billion a month over the last quarter.

Among the United Kingdom's other foreign currency debt, the DM 5.5 billion five-year and \$3 billion ten-year bonds, launched in 1992 to complete HMG's ECU 10 billion currency borrowing programme, continued to be liquid and remained among the most actively traded Eurobond issues settled through Euroclear and Cedel.

### Floating-rate notes

Issues of floating-rate notes (FRNs) rose substantially in the first quarter (see Chart 5). At \$39 billion, they constituted over a quarter of total bond issues. The substantial increase in the volume of issues—particularly in short-dated maturities—was stimulated by demand from investors who regarded FRNs as a defensive instrument in an environment

**Chart 5**  
Currency composition of floating-rate issues



Source: Bank of England ICMS database.

(1) Euroyen bonds could not be sold to Japanese domestic investors for a period of 90 days after issue, although issuers regularly sought to circumvent this rule by 'warehousing' bonds: registering investor interest on the day of issue but only delivering the bonds after 90 days. Issues by public sector entities became exempt from these 90-day 'seasoning' restrictions with effect from 1 January.

of generally-rising interest rates. In such a context, FRNs retain their capital value better than straight bond issues since their coupons, rather than their prices, move in response to rising short-term interest rates. From the issuer's viewpoint, in volatile and falling market conditions FRNs are easier to price and to distribute. Several government borrowers were among those issuing international FRNs, with Sweden's \$3 billion issue the largest ever in the sector.

Floating-rate note issues featured prominently in the sterling bond market, as the growing weakness of the market deterred issuers and underwriters alike from committing themselves to fixed-rate offerings. Demand came from investors uncertain about what would happen to interest rates both here and abroad. Seven FRN issues were brought totalling almost £1.5 billion, including a £500 million deal by the Halifax Building Society (following its fixed-rate issue of the same size in January). In the floating-rate mortgage-backed sector, UCB, the mortgage subsidiary of Compagnie Bancaire, also raised £500 million—the largest sterling offering of its type.

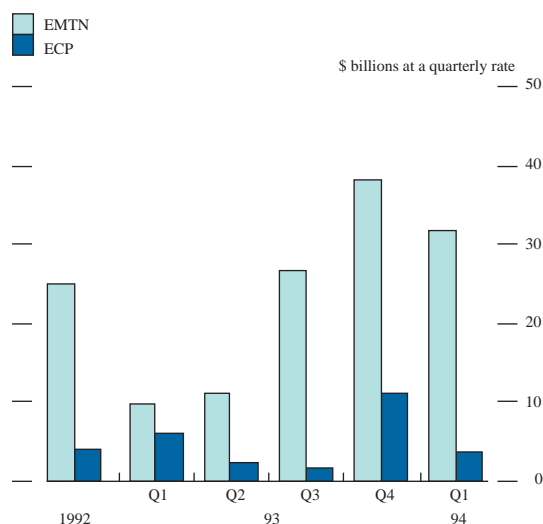
Once bond markets had turned down, there was a decline in the demand for reverse, collared and step-up recovery FRNs, which had been popular in the latter half of 1993: if short-term interest rates are rising, such structures are more likely to limit returns than to improve them. As a result, during the quarter only a tenth of FRN issues were structured. During January, however, a number of borrowers issued a new structured product, the 'range' or 'corridor' FRN. These short-maturity (one or two-year) notes offered a significant yield premium over conventional FRNs for those investors willing to take a position on the likelihood that short-term interest rates (or, in one case, exchange rates) would stay within a certain range. If that happens, holders of range FRNs receive a higher coupon than would be available on a conventional FRN from the same issuer; no interest accrues, however, on days when the interest rate is outside the range. Range FRNs allow top-rated borrowers to issue at rates well below Libor by swapping into what are, in effect, conventional Libor-based funds. \$2 billion of range FRNs were issued in January, with most taking a position on 3-month dollar Libor remaining below 4% in the first half of 1994, and below 6% until end-1995. With three-month dollar Libor reaching 3 $\frac{7}{8}$ % by the end of March, it is possible that investors may have misjudged the risks inherent in these instruments.

### *Euromedium-term notes and eurocommercial paper*

Issues of euromedium-term notes (EMTNs) totalled \$31 billion in the first quarter; announcements of new programmes also remained strong at \$32 billion (see Chart 6), though half of this was accounted for by just two programmes. The Kingdom of Sweden launched a \$10 billion programme to replace one arranged during the 1992 European currency crisis and to give it greater flexibility in its forthcoming debt issues. The World Bank announced a \$5 billion global MTN programme for issuing

structured debt, highlighting the degree to which even large MTN programmes can be used to target specific investors. Structured issues can, however, be subject to extreme illiquidity, if the embedded swaps and options move far out-of-the-money. The World Bank programme seeks to overcome this by requiring dealers to quote daily prices for all issues from the programme and by boosting liquidity by continuously offering to exchange structured bonds for ordinary FRNs.

**Chart 6**  
**EMTN and ECP programme announcements**



Source: Bank of England ICMS database.

Eurocommercial paper (ECP) programmes, by contrast, were much weaker; only \$4 billion of new programmes were announced, and the stock of ECP outstanding was little higher than in the fourth quarter of 1993.

### *Equity-related bonds*

Issues of equity-related bonds totalled \$21 billion in the first quarter, their highest level since early 1989. The fall in the prices of straight bonds encouraged many investors to look for higher returns from bonds offering exposure to the equity market, and especially the Japanese market. In the Swiss franc warrant sector, for instance, coupons fell to as low as 0.25%, suggesting that investors were focusing primarily on the equity component of issues. OECD borrowers increased their share of equity-related issues significantly, to almost 80%.

The bulk of the growth was in convertibles rather than in bonds with attached warrants, and much of the convertible debt was issued by UK and French entities. European borrowers generally prefer convertible bonds which, in contrast to bonds with warrants attached, have conversion rights that are not detachable and so cannot be traded separately. In addition, Japanese borrowers were encouraged by the relative strength of the Nikkei index to issue bonds with equity warrants; they raised \$9 billion, the largest amount since 1991.

### Syndicated credits activity

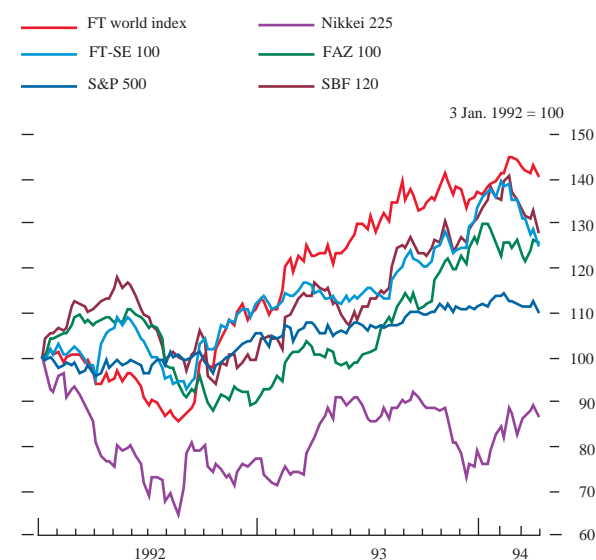
The prospects for syndicated credit activity in 1994 seem better than in recent years. Among the positive influences are: stronger corporate activity in the developed world; increasing market access for non-OECD borrowers; a revival in mergers-and-acquisition activity in the United States; and continued refinancing of earlier borrowing.

New syndicated credits facilities totalling \$52 billion were announced in the first quarter of 1994, a total little different from that in the fourth quarter of 1993. Non-financial companies remained the principal borrowers, accounting for four fifths of the total. Two factors largely explain the continuing high level of lending: refinancing and the activity of Asian borrowers. A quarter of the syndicated credits could be identified as refinancing of existing loans—almost all by US, UK and Irish entities keen to replace earlier loans on more advantageous terms. And Asian entities—primarily Thai and Indonesian borrowers—increased their borrowing to \$11 billion.

### Equity markets

After rises early in the quarter, prices fell in all the major equity markets except Japan (see Chart 7). The falls were triggered primarily by the rises in US short-term interest rates and fears that cuts in European interest rates would prove to be more gradual than expected. During the quarter as a whole, the FT-Actuaries world index fell 1.6% in local currency terms, with weakness in the European markets only partly offset by the strength of the Japanese and other Asian markets. Buoyed initially by the continuing strength of the economic recovery, US equity prices rose modestly during January before falling in the rest of the quarter; the S&P 500 ended the quarter down 4.2%. The Nikkei 225 index's performance was closely linked to the passage of the political reform bill in Japan. Encouraged by resolution of the problems surrounding the bill and by strong foreign investment, it peaked in mid-March at 20,677, before falling

**Chart 7**  
Equity indices<sup>(a)</sup>



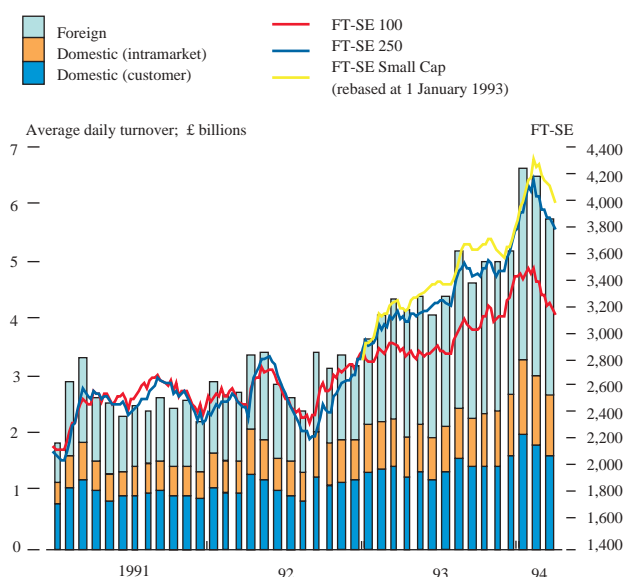
(a) End-week prices.

to 19,559 at the end of the quarter—a rise of 12% since the end of last year.

In the United Kingdom, the FT-SE 100 rose to a record high of 3,520 at the beginning of February, encouraged by falling bond yields and hopes of further interest rate cuts. When faced instead by rising long-term rates and a reduced prospect of further cuts in short-term rates, it fell by over 12% from its peak, to end the quarter at 3,086.

In volatile market conditions, secondary market turnover in UK equities reached record levels (see Chart 8). Daily turnover averaged £3 billion—20% up on 1993 Q4—of which customer business formed £1.7 billion. Turnover on SEAQI also far exceeded the record levels of the previous

**Chart 8**  
Equity turnover and prices on the London Stock Exchange



quarter; daily turnover in the overseas equities traded in London averaged £3.3 billion during the quarter, 27% up on 1993 Q4.

Despite the falling equity prices, there was a high volume of new sterling issues throughout the quarter. 165 ordinary share issues were announced, seeking to raise £5.2 billion; the favoured issue method was placings. This may have been encouraged by a revision to the Stock Exchange's listing rules in December 1993, which raised the thresholds on the maximum number of shares that could be placed, rather than having to be offered for sale or subscription.

An increased number of construction and property-related companies came to the market, as confidence about the property sector grew. The stream of new investment trust issues seen over the last year or so also continued; the largest was the Mercury European Privatisation Trust issue, which achieved its target figure of £575 million—the largest ever launch of a UK investment trust. Another substantial offering was made by the Kleinwort European Privatisation Investment Trust, which raised £500 million.

## CREST—the first phase completed

The publication of a final group of papers on 3 May concluded the first phase of the CREST project. The project team, together with the CREST Steering Committee (which represents a wide range of market expertise), has now delivered to the equity industry a workable and accepted design for an equity settlement system to replace the current Talisman system. As part of the process, on 18 July the London Stock Exchange will move to a system of rolling settlement ten business days after trades take place (T+10); this will be followed, in early 1995, by a move to T+5 rolling settlement.

The Bank established the CREST project team last August to take forward the recommendations of the Securities Settlement Task Force (which was set up to consider the best way forward for UK equity settlement following the failure of TAURUS). The Task Force had recommended that:

- the Bank should within nine months prepare a detailed design for a new electronic book-entry settlement system—CREST;
- the fortnightly account should be replaced in July 1994 by T+10 rolling settlement;
- rolling settlement should move to T+5 early in 1995; and
- CREST should become operational two to three years after completion of the detailed design.

The first of these recommendations has been met, and clear progress is being made towards the other three. Given the momentum established by the project team, the Bank believes that the move to T+5 rolling settlement should take place well before the introduction of CREST, which it expects to be implemented on time.

### *CREST: the first phase*

In February, the project team published a substantial paper describing the system which, in the Bank's judgment, is needed to meet the industry's business requirements. This followed a period of intensive consultation with all areas of the industry. The paper set out the design which the Bank was prepared to develop into a fully tested computer system, provided there was adequate market support for CREST.

The project team has therefore been assessing the level of support. It has done this partly in the context of seeking external funding for the project's next stage. The Bank does not intend to own or operate CREST, since it believes that it should be a utility service and would best be owned by its users. In the Bank's eyes, ownership should be broadly based to preclude dominance by any sector or single organisation within the industry.

The team has been discussing these ideas with a range of potential owners, and has drawn up a set of heads of

agreement with those who have expressed interest in owning a share of CREST. These will form the basis of the articles of the company that will own CREST—known as CRESTCO. So far 48 institutions—including banks, institutional investors, registrars, market-makers, brokers and the London Stock Exchange—have committed themselves in principle to providing finance for the next stage of CREST. The Bank will also participate at the outset. CRESTCO itself will be established in the late summer.

Commitments on ownership are in part contingent on the outcome of an independent audit of the project team's work, particularly its information technology aspects. During March and April, a team from Price Waterhouse addressed three aspects of this work:

- how closely the design of the computer system related to the business requirements;
- the cost and time estimates for the development of the software; and
- whether the security measures proposed for the communications links and for the operation of CREST itself were adequate.

The auditors' summary report was published with the other papers on 3 May. In brief, the auditors drew attention to a range of unfinished business, reflecting the early stage of the project, but found the procedures in place acceptable at the current stage. A further audit of cost estimates and the timetable will take place in September.

Important progress has also been made on the legal changes which will be necessary before CREST can become operational. In March, the Treasury published a paper which described the scope and likely content of the regulations that it would make under section 207 of the 1989 Companies Act to enable securities to be held in dematerialised form within CREST and transferred without physical documents of transfer. Legal title will still be conferred only when shares are registered in the new owner's name, and so the legal changes required are fairly minor.

### *Relations with investors and companies*

The Bank has been at pains to preserve and, if possible, improve the position of small, retail investors. First, it has introduced the concept of sponsored membership: an individual, trust or firm will be able to be a *member* of CREST without having to operate that membership; another CREST participant will, as *sponsor*, do so for them. This will allow investors who make frequent transactions to take full advantage of electronic settlement, while keeping their names on company registers and thus being full members of the companies in which they invest. Sponsored members will be reliant on the honesty and competence of their sponsors; and so will therefore need to exercise care in their choice of sponsor.



Investors who rarely trade will probably prefer to continue using certificates. The CREST design will allow them to transact much as they do now, and it is unlikely that their costs will be higher than today. It is important that using certificates should remain a genuine option, since CREST's legal infrastructure is based on the principle that investors will retain a free choice whether to use it. Market-makers will therefore need to be prepared to offer reasonable prices on deals using longer-dated rolling settlement, particularly once CREST is fully operational and the bulk of the wholesale market has moved to two or three-day rolling settlement.

Some investors will choose to use CREST via a nominee rather than be sponsored members, which will offer the same reduced costs and improved security. The introduction of CREST may thus increase the use of nominees. But investors who use nominees are not full members of the companies in which they invest: they cannot participate fully in the companies' affairs, and may not have full and timely access to company information and benefits. Many customers of nominees are content with this; but some would like to improve their position. With the Bank's support, ProShare has been investigating the demand for improvement, and how it might be satisfied using a voluntary code of practice.

#### *Rolling settlement*

The team has also been working closely with the staff of the London Stock Exchange to prepare for rolling settlement. At present, all transactions executed on the Stock Exchange over a two-week account period are settled on a single day six working days after the end of that account. When rolling settlement is introduced, each day's transactions will be settled a fixed number of days later. So, from 18 July, trades will settle ten working days after they have been struck.

The move to T+10 settlement presents a number of operational challenges. In the Bank's view, however, with adequate preparation all areas of the industry should be able to meet those challenges. But the further transition to T+5, using the present systems with their reliance on movement of paper, will pose a much greater challenge—even for the wholesale market.

There are three key areas where current practices will need to be changed: the stage between trade and settlement, particularly the time it takes for institutional investors to pass instructions to their custodian banks; the management of certificates by investors who trade frequently and the time it takes for registrars to return certificates to investors; and the operation of stock borrowing and lending. It seems likely that, by streamlining current practices and changing some procedures, industry participants will be able to make improvements in the first two of these.

The issues raised by stock borrowing may not be resolved so easily. Access to efficient stock borrowing arrangements is essential to allow market-makers to

provide deep and liquid markets in UK equities. Adjustment to T+5 is therefore likely to require some changes to systems to allow greater flexibility. These questions continue to be examined by the market and the Stock Exchange.

For the retail investor, T+10 settlement should not pose any insuperable problems; existing postal and cheque-clearing systems provide enough scope to settle at the market standard. But investors dependent on these services will have difficulty in managing T+5 settlement, so many may continue to use ten-day settlement. T+5 will, however, be easier for those prepared to allow their broker or bank to manage their securities and cash for them.

Against this background, the CREST Steering Committee and the Bank have strongly encouraged the Stock Exchange and the equity industry to commit themselves to making the transition to T+5 as early as possible in 1995. A decision in principle will need to be taken this year in the light of experience with T+10 settlement.

#### *CREST: the next phase*

The project team has now begun work to develop the broadly defined design into a working computer system. Its IT design staff are specifying the system to the level of detail required for the software to be written; coding will then begin in the late autumn.

In the meantime, the business team is addressing outstanding issues with representatives of the equity industry. These discussions are not reopening the design of the system, but considering how participants will use it. The team will also continue discussions with the Treasury, the Inland Revenue, the SIB, the Stock Exchange and various other regulators to define their requirements more closely.

The Bank's task is to produce tested software by the end of 1995, which it can then hand over to the owners of CRESTCo. The owners will assume control of project strategy in areas such as the choice of operator, the tariff structure and pricing policy. They will also decide how to implement live operations. The Bank will, at the owners' request, continue to provide support for these activities.

The owners will reach these decisions through a board of directors. While remaining non-partisan, the composition of the board should reflect that of the owners; CREST will exist as a service to the industry and its board should reflect that function.

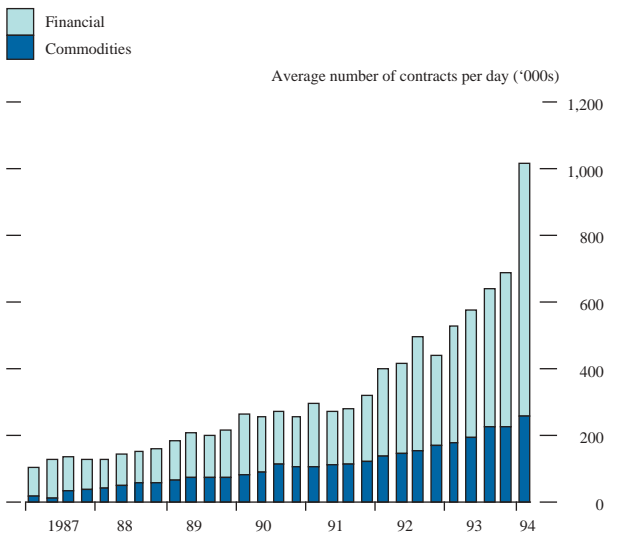
The Bank's role in this phase of the project is clear: to deliver the software by the end of 1995, and to provide strategic continuity until the owners of CRESTCo are in a position to take this forward. It will also supply some continuing software support. But it remains committed to the principle that CREST should be a development owned and run by the industry.

In February, the London Stock Exchange issued a code of conduct on the dissemination of price-sensitive information. The code is voluntary, and the Exchange will publicly censure parties that contravene it only if it has overwhelming evidence of misbehaviour. The code offers guidance to companies on how to plan investor communication; it encourages them to talk to their industry regulators about what information might be price-sensitive and to brief employees on what to say to market analysts. Quarterly reporting is not made compulsory, but companies are advised to communicate regularly with the market in order to avoid unexpected price shocks.

### Derivative exchanges

London's derivative exchanges showed impressive growth on the record turnover achieved at the end of 1993 (see Chart 9). Much of this was accounted for by LIFFE, where global financial uncertainty led to a record quarter; turnover was nearly 38% up on the previous record set in 1993 Q4.

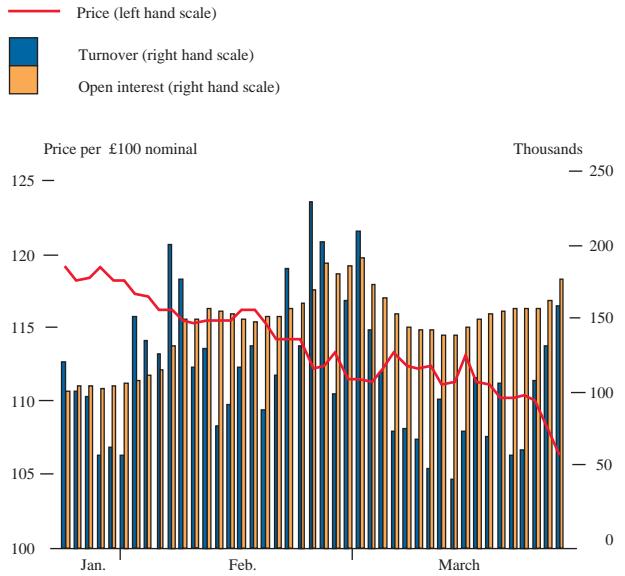
**Chart 9**  
Turnover in London's derivatives markets



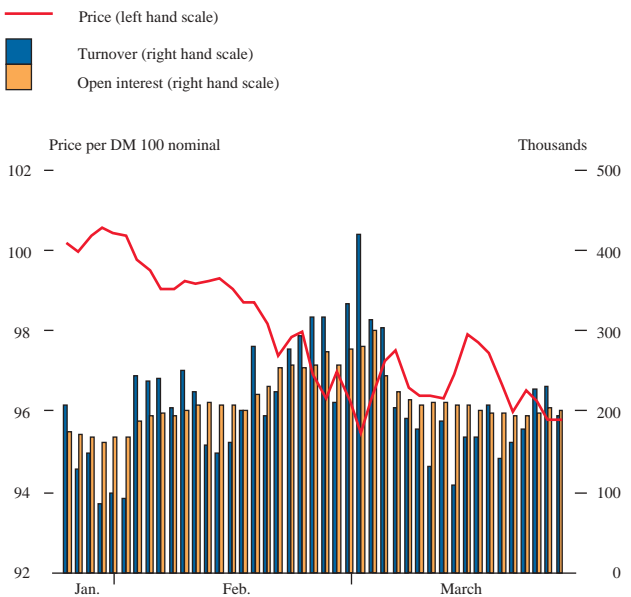
The increase in volumes occurred mainly in European bond contracts, although the FT-SE 100 contract was also affected. Market volatility caused exchanges worldwide either to call for extra margin payments or to suspend trading for a period as circuit breakers were triggered. The volatility on LIFFE caused the London Clearing House to make additional margin calls on 2 March totalling £470 million on the FT-SE 100 and UK, German and Italian government bond contracts. On the same day, MATIF halted trading for two hours in Europe's most highly-traded contract, its 10-year government bond future (the Notionnel), when the size of its price fall triggered a suspension.<sup>(1)</sup> MATIF also made additional margin calls that day, and in Frankfurt the DTB increased margin requirements on its government bond and stock-index futures contracts. The Chicago exchanges

**Chart 10**  
Turnover in LIFFE's gilt and Bund futures contracts

**LIFFE gilt futures contract**



**LIFFE Bund futures contract**



also experienced record volumes—on 4 February, the Chicago Mercantile Exchange experienced the busiest day in futures history, trading 2.4 million contracts.

The very high levels of turnover on LIFFE, together with the increased levels of open interest (see Chart 10)—particularly around the end of February—demonstrated the importance of futures markets to investors wishing to hedge their positions during a period when the underlying cash markets are volatile and illiquid. Although LIFFE has provisions in its rules allowing price-fluctuation and position limits to be set, only one such limit is currently in force.<sup>(2)</sup> So, in

(1) At the time, if the price of the contract fell by 250 basis points, trading was suspended for two hours. If it subsequently fell by a further 250 basis points on the same day, trading was suspended until the following day. Similar circuit breakers applied for rises of 250 basis points.  
 (2) Trading in the Japanese government bond future is halted for an hour if its price moves more than 100 basis points away from that day's closing price on the Tokyo Stock Exchange.

contrast to MATIF, trading on LIFFE continued uninterrupted throughout the period. Following the recent market turbulence, MATIF widened its allowable price movements before a suspension is triggered from 250 to 300 basis points.

During February, FT-SE 250 futures contracts were launched on both LIFFE and OMLX.<sup>(1)</sup> Competition between the two

exchanges in these contracts will provide fuel for the current debate over whether the future of exchange-traded derivatives is in automated trading or the traditional open-outcry method. OMLX launched its contract on 4 February on its 'CLICK' automated system followed, on 25 February, by LIFFE's launch of the same contract on its trading floor. Neither exchange has yet managed to generate substantial volumes of business.

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(1) The London sister exchange of OM Stockholm, a Swedish securities and derivatives exchange.