Financial market developments

Prices in financial markets changed less in the fourth quarter of 1990 than in the third. Fears of a major oil shock subsided, although the influence of the Gulf crisis remained important. Stock market prices rose in most major markets during the quarter, and most bond yields declined. The dollar was generally weak, and touched a new low against the deutschemark on 10 December. Most markets lost ground early in the New Year but, in response to the outbreak of hostilities in the Gulf, the prices of both equities and bonds rose sharply on 17 January 1991 as news of early successes for the allies encouraged participants back into the market. Stock markets in the United States, Europe and Japan recorded rises of between 1% and 8%. The largest-ever one day decline in oil prices helped the rallies, as did short-covering by those closing out positions in anticipation of further rises. At the same time, turnover rose significantly, particularly in equity markets, with volumes in some markets more than doubling.

In most countries, and particularly in the United States and Canada, evidence grew during the fourth quarter of a weakening in economic activity (see the article on the international environment on page 9). As a consequence, most major bond markets rallied (except in Germany, where the increasing cost of unification was the predominant factor). Equity markets recovered from the low points in September–October but were still significantly below pre-crisis levels, most notably in Japan.

Table A
International financial markets: key indicators

	1990			1991
	1 Aug: pre-invasion	28 Sept.	31 Dec.	31 Jan.
United Kingdom				
Equity market: FT-SE 100	2,339.0	1,990.2	2,143.5	2,170.3
10-year government bond yield %	11.7	12.1	11.0	10.1
3-month Treasury bill yield %	14.8	14.8	13.8	13.3
United States				
Equity market: S&P 500	355.3	306.1	330.2	343.9
10-year government bond yield %	8.3	8.8	8.1	8.0
3-month Treasury bill yield %	7.7	7.3	6.6	6.4
Canada				
Equity market: TSE Composite	3,569.0	3,159.0	3,256.8	3,272.9
10-year government bond yield %	10.5	11.2	10.3	10.0
3-month Treasury bill yield %	13.2	12.5	11.4	10.5
Japan				
Equity market: Nikkei 225	30,838.0	20,983.5	23,848.7 (a)	23,409.6
10-year government bond yield %	7.2	8.2	6.9 (a)	6.6
3-month Treasury bill yield %	7.6	8.3	7.6 (a)	7.5
Germany				
Equity market: DAX	1,892.9	1,334.9	1,398.2 (a)	1,420.1
10-year government bond yield %	8.5	9.0	9.0 (a)	8.6
3-month interbank interest rate %	8.1	8.6	9.3 (a)	9.2
France				
Equity market: CAC General	525.9	415.3	413.0 (a)	419.2
10-year government bond yield (OAT) %	9.5	10.6	10.0 (a)	9.5
3-month Treasury bill (BTF) discount rate %	9.4	9.9	9.6 (a)	9.6
Italy				
Equity market: BCI	721.9	557.6	519.4	496.2
7-year government bond yield %	14.0	14.6	14.5	14.7
3-month interbank interest rate %	11.8	10.7	13.8	13.4

(a) 28 December.

Weaker economic activity has reduced private sector borrowers' ability to service loans. At the same time, the value of some assets backing loans has also fallen (eg property in the United States, shares in Japan). As a result of perceived greater risk, margins over Libor in credit markets and spreads over government bonds have widened for corporate borrowers. In the eurodollar sector, spreads on corporate bonds over US Treasuries widened by between 40 and 60 basis points between mid-September and end-December. In the international syndicated credits market, margins over Libor for well-rated borrowers reportedly widened by around 20–30 basis points.

The problems faced by many borrowers have impeded their ability to service debt and therefore affected the intermediaries from whom they borrow. Poor profitability and an increase in non-performing loans has led to a decline in the credit standing of a number of large banks, particularly, but not exclusively, in the United States and, to a smaller extent, in Japan. This has meant that margins for banks seeking to raise additional capital have widened, even for triple-A rated borrowers. For example, in the variable rate note market, the margins over Libor on some large issues reverted to their backstop rate (the rate which applies when issuers and arrangers are unable to agree a new spread over Libor).

The widening spreads over government issues for private sector borrowers in bond markets, combined with depressed stock market prices, have constrained banks' ability to raise new capital at a time when many need it to cover an increase in non-performing loans and to meet the interim BIS capital adequacy standards. In these circumstances, there are pressures on banks to contract their balance sheets and withdraw from markets, reducing employment and capacity. Banks in the United States have increasingly chosen to cut dividends.

The difficulties being faced by banks have led them to exercise greater caution in extending new credit. Thus lesser names (including, perhaps, some less developed countries and countries in eastern Europe) may find it harder to obtain private sector financing either directly from international capital markets or from banks. In a domestic context, the more restricted access to credit arising from commercial banks' greater caution implies tighter monetary policy at a given level of interest rates; the Federal Reserve cited tighter credit market conditions as one factor behind the cuts in the federal funds rate in late 1990.

The strains on the financial system have been recognised in official action in other ways also. In the United States the Federal Reserve abolished reserve requirements on non-personal time deposits with an original maturity of less than eighteen months and on net eurocurrency liabilities, thereby reducing banks' reserve requirements by about $14 billion. In January, when the Bank of New England was declared insolvent, the Federal Deposit Insurance Corporation decided to guarantee all deposits with that bank, and not just those below the $100,000 legal limit, to help to maintain confidence among depositors. In Japan, the authorities have taken an increased interest in banks' exposures to the property sector and in December the Bank of Japan required banks to expand their reporting of positions with non-bank financial institutions.

New debt issues and turnover in international markets

New financing activity in international capital and credit markets declined slightly in the fourth quarter, to $128 billion, giving a total for 1990 little different from that in 1989 (Table B), so that fears about a sharp reduction in

Table B
Total financing activity:[(a)] international markets by sector
$ billions, by announcement date

	1989	1990				
	Year	Year	Q1	Q2	Q3	Q4
Fixed-rate bonds						
Straights	150.0	169.8	41.3	42.5	36.3	49.7
Equity-related	85.1	32.7	11.2	2.3	12.9	6.4
of which:						
Warrants	*69.5*	*22.4*	*7.2*	*0.7*	*9.8*	*4.8*
Convertibles	*15.6*	*10.3*	*4.0*	*1.6*	*3.1*	*1.6*
Bonds with non-equity warrants (currency, gold, debt)	0.5	0.1	—	0.1	—	—
Total	**235.6**	**202.6**	**52.5**	**44.9**	**49.2**	**56.1**
Floating-rate notes	27.1	57.6	9.7	10.9	29.6	7.3
Euronote facilities	71.4	70.4	19.5	17.0	12.6	21.3
Syndicated credits	151.7	161.9	39.8	38.2	40.9	42.9
Total	**485.8**	**492.5**	**121.5**	**111.0**	**132.3**	**127.6**

(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.

flows through international financial markets were not realised in 1990. This may reflect a number of factors: borrowers concerned about future availability of funds may have decided to secure finance sooner rather than later and lenders may have been encouraged into the market by a widening of margins and spreads. In addition, as illustrated by the difficulties with the Bank of New England and the Rhode Island banks, regional and local banks are among those suffering the most severe difficulties, and these banks are less active in the international markets.

In the fourth quarter, issues of floating-rate notes fell sharply, as falls in bond yields world-wide and little strength in equity markets encouraged issuers to switch to straight fixed-rate bonds. Equity-related issues were modest, reflecting weakness in the Japanese stock market. The value

Table C
Currency composition of fixed-rate bond issues
Percentages of total issues announced

	1990			
Currency denomination	Year	Q2	Q3	Q4
US dollars	34	31	42	27
Swiss francs	12	9	12	10
Yen	15	12	14	19
Deutschemarks	5	4	4	4
Sterling	6	6	4	7
Australian dollars	4	4	5	4
Canadian dollars	3	4	4	4
ECU	9	12	4	10
French francs	5	8	4	5
Other	7	10	7	10

of syndicated credits announced rose slightly in the fourth quarter.

The pick-up in new issues of straight fixed-rate bonds was most marked in November and early December, and particularly in the yen sector, though the dollar remained the most active currency (Table C). Issues in the European currencies, which had been very subdued after the onset of the Gulf crisis in August last year, picked up also.

The rise in international issues of yen bonds in the fourth quarter was mainly in the euroyen sector where Japanese corporations, unusually, predominated as conditions in the international equity-related sectors were unfavourable and their domestic funding opportunities were depressed. Issues

Table D
Fixed-rate bond issues by country of issuer
Percentage by value of total issues announced

	1990			
Country of issuer	Year	Q2	Q3	Q4
United States	10	16	10	7
United Kingdom	7	6	8	8
Japan	24	8	32	26
Germany	4	3	2	2
France	9	11	7	11
Canada	6	5	4	8
Australia	3	2	4	4
Italy	4	5	3	4
International institutions	14	18	13	14
Other	19	26	17	16

of samurai bonds (ie yen bonds issued in Japan by foreign borrowers) were little changed. In the dollar sector, the public market for straight fixed-rate debt remained relatively quiet, and was tapped only by the highest-quality borrowers.

Total bond issues by UK borrowers in foreign currencies rose from $2.2 billion in the third quarter to $2.5 billion in the fourth, most of which were issued by the non-financial corporate sector, whose share in issues by UK borrowers has increased steadily over recent quarters. The remainder was split equally between issues by banks and those by other financial institutions. The US dollar was the most actively used currency, accounting for nine out of the eighteen issues in the quarter, or 70% by value, while three issues, or 18% by value, were yen-denominated.

The slightly higher level of turnover in the secondary market for bonds during the third quarter was maintained in the fourth quarter (see the chart on page 39), primarily reflecting the increased turnover in the yen sector.

International banking developments

Following a marked slowdown in the first half of 1990, the cross-border business of banks in the BIS reporting area recovered sharply in the third quarter, with both assets and liabilities rising by just over 4% (assets $216.9 billion, liabilities $235.5 billion).[1] The principal factor behind the bounce-back was a revival in the interbank activity of Japanese banks, both via their head offices and through their affiliates in other major financial centres. This seems to have been associated with window-dressing over the end of the third quarter but may also have reflected Japanese banks raising more capital in international markets (see the November *Bulletin*, page 473), which will have helped to ease pressures on their capital ratios.

The notably faster rise in the external claims of reporting banks was widely spread across financial centres. The growth of the combined external claims of banks in Europe surged from $33 billion in the second quarter to $130 billion in the third, with banks in the United Kingdom, Germany, France and Luxembourg showing the strongest growth. Inflows to the United Kingdom, Switzerland and the United States were raised by transfers of business from the Middle East, but for reporting banks as a whole there was a sharp drawdown of interbank deposits by banks in the Middle Eastern OPEC countries. There were, however, substantial inflows of new funds to banks in the BIS area from non-OPEC developing countries. In total, banks' identified claims on countries outside the reporting area rose by $7.7 billion during the third quarter; a large part of the increase resulted from the inclusion for the first time of reporting banks in the former East Germany.

The London market

Following a depressed level of activity in the second quarter, the third quarter saw rapid growth in the cross-border business of banks in the United Kingdom (see the table). Most of the sharp increase in lending, of over $46 billion (almost 5%), was to banks abroad. Japanese banks borrowed almost $20 billion of this, as compared with a fall in their borrowing of $10 billion in the previous quarter, and banks in the United States accounted for $5.2 billion. Total lending to the BIS industrial area rose by $45.4 billion, within which claims on France ($5.6 billion), West Germany ($6.5 billion) and Italy ($4.5 billion) were notable. Lending outside the BIS area continued to fall, with a fall in lending to the USSR of $0.8 billion the largest contributor to lower lending to Eastern Europe. Lending to non-oil developing countries rose slightly, for the first time since the second quarter of 1989, reflecting a turn-round in lending to Mexico, Taiwan and Malaysia.

The rise of 4% in the third quarter in the cross-border liabilities of banks in the United Kingdom reflected an unusually large rise (of $21.3 billion) in deposits taken from non-banks abroad. Liabilities to countries outside the BIS reporting area also rose unusually sharply (by

Cross-border business of banks in the United Kingdom

$ billions: changes exclude estimated exchange rate effects

	1989			1990			Outstanding at end-Sept.
	Year	Q3	Q4	Q1	Q2	Q3	1990
Liabilities vis-à-vis:							
BIS industrial area	58.7	18.3	9.0	16.3	-5.3	27.7	748.6
of which:							
United Staes	*-15.7*	*-2.6*	*1.5*	*-16.2*	*1.2*	*8.7*	*149.0*
Japan	*18.0*	*13.5*	*-3.7*	*4.8*	*-9.7*	*2.3*	*111.8*
'Offshore' banking centres	6.6	0.3	-0.8	0.6	-4.0	1.2	123.7
Sub-total	65.3	18.6	8.2	16.9	-9.3	28.9	872.3
Outside reporting area							
Developed countries	6.4	2.3	1.1	1.0	-0.2	2.2	36.8
Eastern Europe	0.4	0.6	—	-1.0	-0.9	0.6	9.0
Oil exporters	3.5	-0.4	-1.7	0.8	0.3	5.0	64.9
Non-oil developing countries	-2.3	2.3	0.8	0.5	2.6	2.3	57.7
of which, Latin America	*-1.1*	*0.6*	*0.3*	—	*0.9*	*0.8*	7.6
Sub-total	12.6	4.8	0.2	1.3	1.8	10.0	168.4
Other (a)	1.8	7.9	2.3	3.3	5.4	-0.5	97.7
Total (d)	79.8	31.3	10.7	21.5	-2.2	38.4	1.138.4
Assets (b) **vis-à-vis:**							
BIS industrial area	50.0	15.7	11.2	23.4	-2.8	45.4	770.2
of which:							
United States	*0.9*	*6.4*	*-0.3*	*-0.8*	*3.7*	*5.2*	*140.0*
Japan	*9.9*	*16.2*	*-1.6*	*-0.6*	*-9.8*	*14.4*	*224.0*
'Offshore' banking centres	8.1	3.0	1.7	0.4	5.0	2.7	131.4
Sub-total	58.1	18.7	12.9	23.8	2.3	48.1	901.6
Outside reporting area							
Developed countries	-2.0	-0.5	0.7	-0.4	0.4	0.4	35.5
Eastern Europe	1.9	0.1	0.3	-0.9	-1.4	-1.4	22.0
Oil exporters	-1.4	-0.8	-0.5	-0.2	-0.7	-0.8	18.4
Non-oil developing countries	-3.4	-0.9	-2.1	-2.8	-2.0	0.9	42.3
of which, Latin America	-2.6	*-0.9*	*-1.3*	*-3.1*	*-2.5*	*-0.1*	*22.8*
Sub-total	-4.9	-2.0	-1.7	-4.3	-2.7	-0.9	118.2
Other (c)	4.1	1.5	3.2	1.3	5.2	-1.0	14.5
Total (d)	**57.3**	**18.2**	**14.4**	**20.8**	**4.7**	**46.2**	**1,034.3**

(a) International organisations, unallocated and international issues of securities.
(b) Including securitised lending.
(c) International organisations and unallocated.
(d) Includes business unidentified by sector.

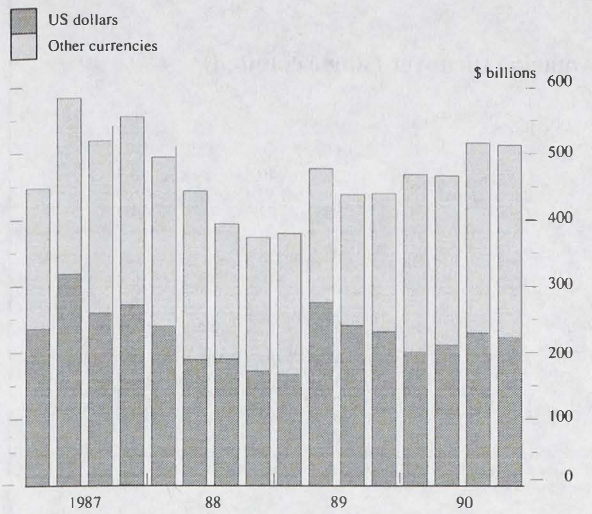
$10 billion, almost as much as in the whole of 1989), with oil exporters accounting for $5 billion of this (mainly Saudi Arabia and Egypt).

The share of Japanese incorporated banks in the external business of UK banks continued to fall, though less rapidly, in the third quarter, declining by 0.3 percentage points to 34.2% of external claims. The shares of British owned and American owned banks declined slightly, each accounting for 13.8% of total external claims, while the share of 'other overseas banks' (including consortium banks) rose again, by 1.3 percentage points to 38.2%.

Preliminary figures for the fourth quarter show slower growth than in the buoyant third quarter, with international claims rising by 2%. About half the rise in international claims in the fourth quarter was accounted for by Japanese banks; this was largely in the form of lending to unrelated banks overseas as well as foreign currency lending to UK residents (both banks and non-banks). By contrast, American banks' business fell (with all of the fall occurring in December); the main area to show growth was lending to their own offices abroad. During 1990 as a whole, UK banks' international business rose by 8.7%, the most rapid growth since 1987.

(1) The inclusion of figures for the external positions of banks located in the former East Germany contributed around $20 billion to the recorded figures for cross-border claims in September.

Straight eurobonds: secondary market turnover



In contrast to the fixed-rate sector, the value of new floating-rate note issues was depressed, partly by the deterioration in the credit quality of some financial institutions, the predominant borrowers in this market. Issuance for lower quality credits has become more expensive, though high quality borrowers were still able to issue at attractive rates. A number of issues were arranged as private placements. As a consequence of concerns about the credit standing of borrowers, spreads in the secondary market have widened significantly.

The value of international syndicated credits (Table E) rose in the fourth quarter owing to a number of large deals for major OECD borrowers. Fears evident at the end of the third quarter that banks would cut back their involvement in the market were not realised, perhaps because a widening of margins made the business rather more attractive. The banks' increased focus on profitability, as capital constraints bite, has led to a more selective approach to lending, and a widening of margins.

Table E
Announced eurocurrency syndicated credits[(a)]
$ billions

	1989 Year	1990 Year	Q1	Q2	Q3	Q4
Major OECD	98.6	90.4	24.1	20.3	17.0	28.9
Minor OECD	25.8	28.8	9.0	6.4	7.8	5.6
Developing countries	25.0	30.2	6.4	7.9	9.0	6.9
Eastern Europe	2.2	12.1	—	3.6	7.1 (b)	1.4
Other	0.1	0.4	0.3	—	—	0.1
Total	**151.7**	**161.9**	**39.8**	**38.2**	**40.9**	**42.9**

(a) Includes those syndicated loan facilities which may allow a borrower to increase its liabilities partly or wholly in foreign currency (from the borrowers' point of view) and/or involving an international capital flow.

(b) Of which borrowing by East Germany accounted for $5.34 billion.

In the eurocommercial paper market a number of substantial facilities were announced, many as 'global' offerings, ie for simultaneous placement in both Europe and the United States. Nevertheless, the concerns over credit quality and profitability remain prominent—here too there seems to be increased focus on issuers' credit standing. There were three further withdrawals of dealers from the market in the fourth quarter. The euro medium-term note market, which had seen a significant increase in outstandings in the third quarter, continued to grow, with banks the main borrowers (Table F). Though the dollar remains the largest single currency of issuance, there is a trend towards increased use of structured multi-currency facilities.

Table F
Announced euronote facilities[(a)]
$ billions

	1989 Year	1990 Year	Q1	Q2	Q3	Q4
Committed (b)	2.9	0.1	0.1	—	—	0.1
Uncommitted	68.5	70.3	19.4	17.0	12.6	21.2
Total	**71.4**	**70.4**	**19.5**	**17.0**	**12.6**	**21.3**
Nationality of borrower						
United States	11.7	14.4	6.1	2.4	2.0	4.0
United Kingdom	5.8	8.4	0.6	2.9	3.1	1.9
Australia	12.7	10.3	3.2	4.1	0.9	2.1
Japan	10.1	6.0	3.1	0.6	1.0	1.3
Other OECD	25.7	28.2	5.3	6.2	4.8	11.7
Other	5.4	3.1	1.2	0.8	0.8	0.3

(a) Includes all facilities providing for the use of euronotes (including note issuance facilities, revolving underwriting facilities, multiple-option facilities which incorporate a note issuance option, eurocommercial paper programmes and euro-medium-term note programmes).

(b) Underwritten or otherwise backed by bank commitments.

Domestic markets

New issues and turnover

The total of capital issues in sterling, including both debt and equity, rose slightly in the fourth quarter (Table G). Most of this reflected an increase in the value of issues by overseas borrowers, the total amount raised by UK issuers remaining broadly unchanged from the third quarter, though sharply down from the first half year. Within the total for UK borrowers, issues of shares fell back sharply from the third quarter, perhaps reflecting the low level of stock-market prices (which had fallen sharply after Iraq's invasion of Kuwait in August) and uncertainty over company sector prospects. In contrast, fixed-rate debt issues recovered strongly from the depressed level in the third quarter as companies took advantage of falling yields. Issues of FRNs remained virtually unchanged from the level in the third quarter. The largest issue in the fourth quarter was the

Table G
Sterling capital issues: amounts announced[(a)]
£ millions

	UK borrowers(b)			Overseas borrowers	
	Shares(c)	Fixed-rate debt	Floating-rate debt	Shares and fixed-rate debt	Floating-rate debt
1988	7,177	5,933	5,648	3,681	—
1989	7,715	7,677	5,808	4,648	36
Q1	835	3,304	725	1,205	—
Q2	3,074	1,904	1,500	1,130	—
Q3	2,008	1,902	1,669	1,543	36
Q4	1,798	567	1,915	769	—
1990					
Q1	1,574	1,555	1,300	1,122	350
Q2	1,431	1,631	2,312	550	60
July	466	303	250	—	290
Aug.	783	137	140	—	—
Sept.	105	447	540	—	—
Q3	1,355	888	929	—	290
Oct.	251	381	475	—	—
Nov.	380	618	475	555	—
Dec.	114	408	—	95	—
Q4	745	1,407	950	650	—

(a) Further details can be found in the Bank's monthly Capital Issues Press Notice.

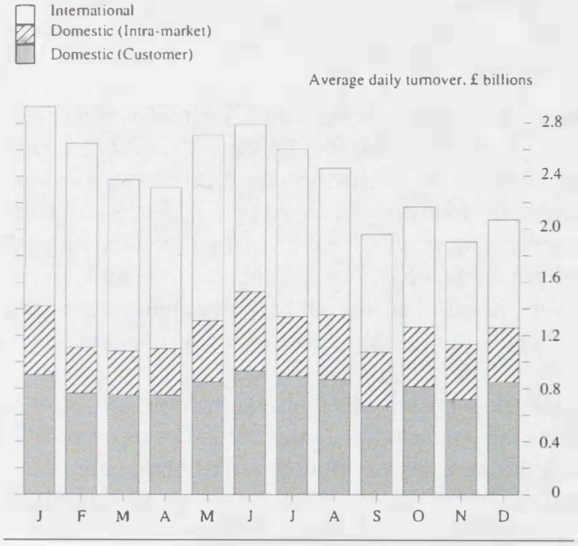
(b) Including issues by overseas financing subsidiaries.

(c) Shares comprise ordinary shares and preference shares including convertible preference shares. Only those issues which raise new money for the issuer are included: therefore the privatisation of the electricity distribution companies in November 1990 is excluded.

Equity turnover

In 1990 domestic equity turnover in London averaged £1¼ billion per day, 20% down from 1989, but virtually the same as in 1988. During the boom year of 1987 domestic equity turnover exceeded an average of £2 billion per day. In 1990 trading of international equities in London averaged £1.2 billion per day, only slightly less than turnover in domestic equities. Domestic equity turnover with customers was fairly stable during 1990 but trading of international equities in London fell quite sharply during the year (see the chart). This reflected lower turnover on the 'home' exchanges of these international equities, particularly in Japan and Germany (Japanese and German stocks together account for about half of international equity turnover in London), rather than London losing business to the 'home' exchanges.

Turnover on the ISE in 1990



Comparative analysis of turnover in different financial centres is difficult for a number of reasons. The largest problem is that the proportion of trading conducted off-market varies greatly between countries. According to a recent survey by the Federation of European Stock Exchanges, over 40% of total trading of equities in the EC may be off-exchange. Some centres (for example, Germany, Italy and the Netherlands) have a high degree of unreported trading, particularly of foreign equities, while the United Kingdom has little off-exchange trading. Other factors complicating comparisons include double-counting and the treatment of intra-market turnover.

On the basis of reported figures, London's International Stock Exchange (ISE) ranks third in the world in secondary market equity turnover (see the table). In the first three quarters of 1990 the ISE accounted for about 8% of estimated global equity turnover of about £4,000 billion compared with shares of about 20% for both the NYSE and the Tokyo Stock Exchange. Turnover on NASDAQ in the United States was about four fifths of that on the ISE in 1990. During the same period, turnover in Frankfurt was about two thirds of that of the ISE.

Equity market turnover (single counted)

£ billions

		1989(a)	1990 Q1	1990 Q2	1990 Q3	1990 Q4
ISE(b)	Domestic	49.4	38.7	40.3	39.8	38.3
	International	21.1	46.9	39.4	34.9	26.6
	Total	70.6	85.6	79.7	74.7	64.9
Federation of German exchanges	Total	57.1	104.3	72.8	70.5	45.7
of which: Frankfurt		*60%*	*66%*	*67%*	*65%*	*67%*
Paris	Total	17.9	19.3	19.5	16.0	12.7
NYSE	Total	235.2	210.2	202.3	182.5	153.5
NASDAQ	Total	65.7	67.6	74.7	58.2	49.6
Tokyo	Total	362.2	233.9	217.4	163.4	123.6

The ISE has the world's largest turnover in international equities. It is estimated that international equity trading on the NYSE, the world's second largest international equity market, is only a quarter that of the ISE.

Sources: Federation of European Stock Exchanges.
Quality of Markets Quarterly.
New York Stock Exchange.
Tokyo Stock Exchange.

(a) Quarterly averages.

(b) There is a break in the foreign equity turnover and therefore in the total series for the ISE between 1989 and 1990.

German turnover rose particularly sharply at the beginning of 1990, perhaps in response to prospects of unification, but subsequently fell back again to well below the level on the ISE. During 1990 as a whole Frankfurt had about 5% of estimated global turnover. Turnover on the Paris Bourse in 1990 remained about a fifth of that on the ISE and accounted for about 2% of estimated total world turnover.

Turnover on the Tokyo Stock Exchange dropped sharply during 1990, and in the second half of 1990 was less than half the average in 1989. This fall reflects not only the effect of lower stock market prices on figures for the value of turnover, but also a substantial reduction in the number of shares being traded. The share of the Tokyo Stock Exchange in total world turnover fell from 31% in 1989 to 19% in the third quarter of 1990 (just below that of the NYSE).

On most exchanges, turnover in domestic equities predominates, but on the ISE international equity trading accounted for just under half of total turnover in 1990. London's importance as an international equity market reflects several factors. Most importantly, it reflects the attractions of SEAQ International, its liquidity and its low trading costs. London is the largest international equity market in the world, with roughly two thirds of global reported international equity trading in the first nine months of 1990.

The most significant non-UK stocks traded in London are Japanese, which in 1990 accounted for 26% of turnover on London's International Equity Market. German stocks accounted for 23% and American stocks 5%; trading in other European shares comprised the majority of the remainder of foreign equity trading on the ISE.

floating-rate note for £475 million by Superior Tradeable Residential Securities, the largest sterling FRN issue since 1986.

Gross issues of sterling commercial paper[1] totalled £11.7 billion in the fourth quarter, £4.4 billion below the level seen in the previous period, while there were maturities of £12.8 billion. This reduced the amount outstanding at end-December to £4.7 billion, some £1 billion below the end-September peak. The Bank had been notified of 261 sterling commercial paper programmes by the end of the year, and paper has been issued under 216 of these. During the fourth quarter the Bank was notified of 3 medium-term note programmes, taking the total to 8.

Turnover in domestic equities in London was just under £1¼ billion per day during the fourth quarter, only slightly lower than in the preceding quarter, but down by over 20% as compared with the average for 1989 (see the note on page 40). In January 1991, trading averaged £1.1 billion per day, with peaks on 17 January (following the outbreak of hostilities in the Gulf), when turnover exceeded £1.6 billion, and 31 January, when turnover was £2.3 billion.

During the fourth quarter of 1990 turnover in the gilts market averaged £3.8 billion per day, little changed from the level of the third quarter, although there were flurries of activity in early October, in the aftermath of ERM entry, and in late November, when gilts prices rallied on heightened perception of recession.

Cash markets

The ISE has implemented a number of changes aimed at promoting liquidity and has reorganised its junior markets. On 14 January 1991 the previous scheme for classifying shares as alpha, beta, gamma or delta was replaced with a series of Normal Market Sizes (NMS). A stock's NMS is based on the value of customer turnover in the stock over the previous twelve months, and is expressed as a number of shares. Each security is assigned to one of twelve NMS bands.

Market makers are obliged to respect a minimum quote size (MQS) for each stock in which they are registered, which corresponds to the NMS of the stock. A concession is made for those market makers who opt to concentrate on retail trading: their MQS is reduced to 50% of NMS, and applies to all stocks in which they are registered. Trade publication requirements are also linked to the NMS. The basic principle is to require immediate publication for average-sized transactions in liquid shares. Most trades in illiquid stocks, defined as those stocks falling into the two lowest tiers of the NMS scheme (with an NMS of 1000 shares or less), will be published the following day. In all other stocks, publication of large transactions, defined as over three times NMS, will be subject to a 90-minute delay.

In a step to improve the market in many smaller companies' securities, after concerns about intermediaries' withdrawals from the market in 1990, six market makers have undertaken, again from 14 January 1991, to ensure that there are at least two market makers in each illiquid stock. To ensure that the market makers undertaking these obligations have the information needed to fulfill them, all agency crossed bargains in these stocks must be exposed to the market maker quoting the best price.

The rules on initial public offers were revised with effect from 1 January 1991: at least 5% of such issues are to be made available to independent market makers and, in the case of medium-size offers (£15 million–£30 million), a further proportion may be made available to investors via agency intermediaries. The aim of these changes is to improve flexibility for issuers and to boost liquidity in smaller companies' shares.

November 1990 saw the tenth anniversary of the Unlisted Securities Market (USM) which caters for smaller, developing companies and through which over 800 companies have raised over £4 billion. The entry criteria for the USM and the Official List were changed (in response to EC Directives): the former now requires a two-year trading record, the latter three years. In the same reorganisation, the Third Market was formally closed on 31 December 1990; approximately a quarter of its companies have moved 'up' to the USM.

Derivative markets

Turnover in gilt futures on LIFFE fell by 3,000 contracts per day in the fourth quarter to 18,100 contracts per day, with the seasonal lull in December accounting for the fall. Turnover was highest, at around 45,000 contracts, on 8 October, following ERM entry, and on 22 November on news of Mrs Thatcher's resignation.

Turnover in the short sterling futures contract on LIFFE rose to 35,600 contracts per day in the period under review, up from 28,900 contracts per day in the third quarter. The highest daily turnover in the quarter was 82,300 contracts on 8 October, following ERM entry, the highest figure since May 1990.

In the fourth quarter, total turnover on the London International Financial Futures Exchange (LIFFE) was virtually unchanged from that in the third quarter, but in 1990 as a whole turnover rose by over 40% as compared with 1989. In 1990, LIFFE regained the position as the busiest futures exchange in Europe, having lost its place to MATIF in 1989.

In 1990 as a whole LIFFE's German bund contract took over from the short sterling contract as the exchange's most active (though in the fourth quarter short sterling was again the most heavily traded). As from end-November an

(1) Made under the Bank's notice of 11 January 1990.

identical bund contract has been traded on the DTB in Frankfurt. So far, turnover in DTB's bund contract has been less than 10% of the total on the two exchanges together. LIFFE has introduced a Euro-Swiss franc contract in February and announced it will introduce an Ecu-bond contract in March.

Following the consolidation of financial futures markets in London, with the prospective amalgamation of LIFFE and LTOM into the London Derivatives Exchange (LDE), members of the London Futures and Options Exchange (London FOX) and the Baltic Futures Exchange (BFE) have approved a merger which will consolidate derivatives business in soft and agricultural commodities.

In common with many futures exchanges abroad, the London futures exchanges raised initial margins on futures contracts (the proportion of the value of the contract which must be put up when buying or selling) ahead of the United Nations' 15 January deadline for Iraq to pull out of Kuwait, to provide against a possible increase in volatility.

Settlement

The settlement of equity transactions in the United Kingdom will be improved when the new electronic book entry system, called TAURUS, is introduced. Implementation will be phased to allow a gradual introduction of company securities to the system. TAURUS will remove the need for transfers of paper to effect settlement and is a necessary first step to allow the introduction of rolling settlement and delivery versus payment arrangements, which will follow later. The Companies Act 1989 provided the legal basis for TAURUS by removing the need for share certificates to be used to transfer title. The detailed regulations to implement the provisions of the Act are expected to be published in draft towards the end of February. The changes, when implemented, will bring the United Kingdom into line with best international practice and enhance the competitiveness of London.

The Central Moneymarkets Office (CMO), which has been in operation since 1 October 1990, provides an electronic book-entry transfer system for sterling money-market instruments. Since its inauguration, all new issues of sterling money-market instruments have been successively introduced into the system, and at end-1990 CMO contained 46,000 instruments with a total value of £41 billion (around 40% of the outstanding stock of such instruments). Eligible bank bills accounted for around 35% of the instruments in CMO, bank certificates of deposit 45%, and Treasury bills 13%.

In November, the BIS and G10 central banks published a report on cross-border and multi-currency netting schemes. The report establishes a framework for co-operative central bank oversight of individual netting schemes. The Bank of England is examining, with other central banks, how this should be applied to schemes established in the United Kingdom.