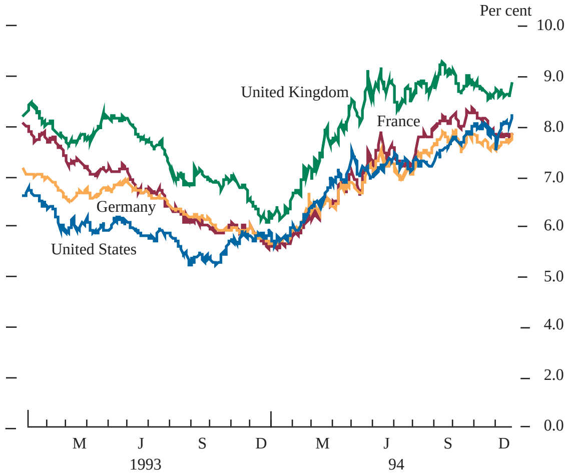
The gilt-edged market: developments in 1994

Yields in bond markets worldwide rose markedly in 1994, reversing much of the previous year's rally. In part the rise reflected faster economic growth in the major economies, accompanied by heightened uncertainty about the outlook for inflation—though other factors were also at work. Trading conditions were occasionally turbulent in the spring, as portfolio adjustments were made. Despite this unfavourable background, gilt-edged funding was successfully maintained. This article, which continues the annual series begun in 1989, describes gilt sales and market turnover, as well as developments in related derivatives markets and the business of the gilt-edged market-makers during 1994.

Gilt yields in 1994

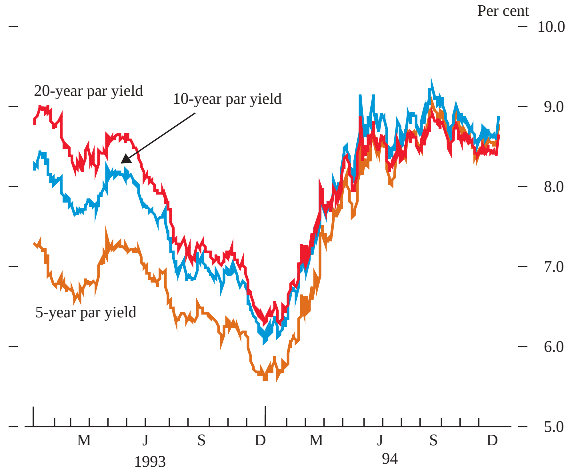
Yields in all major bond markets rose sharply in 1994, particularly following the increase in official US interest rates on 4 February—the first since February 1989. Chart 1 shows the par yields on ten-year bonds in the United Kingdom, the United States, Germany and France. The adjustment in the United Kingdom was relatively rapid so that, reversing the trend towards the end of 1993, the spreads between gilts and other bonds initially increased. They narrowed again in the closing months of the year as gilts outperformed most other markets, following the tightening of UK monetary policy at a relatively early stage in the economic cycle. Despite the falls in both bond and equity prices during 1994, total return indices suggest a return on gilts over 1993 and 1994 taken together of 13.7%, compared with 19.9% for equities.

Chart 1
Ten-year government bond par yields



Within the gilt market, the spread between five-year and twenty-year par yields continued to narrow; the yield curve was inverted at the long end from June, though the extent of the inversion declined in later months (see Chart 2). The gradual changes in interest rate expectations are shown more clearly by the implied forward interest rate curves in Chart 3. The overall picture was consistent with market

Chart 2
Par yields on British government stocks



caution about the inflation outlook, but there were signs that any uncertainty premium on gilts probably declined at the end of the year; this was suggested by the moderation in implied volatility from very high levels (as shown in Chart 5). Real yields—as measured by the return on index-linked gilts—rose in the first half of the year but stabilised thereafter (see Chart 4).

Chart 3
Implied forward interest rates in 1994

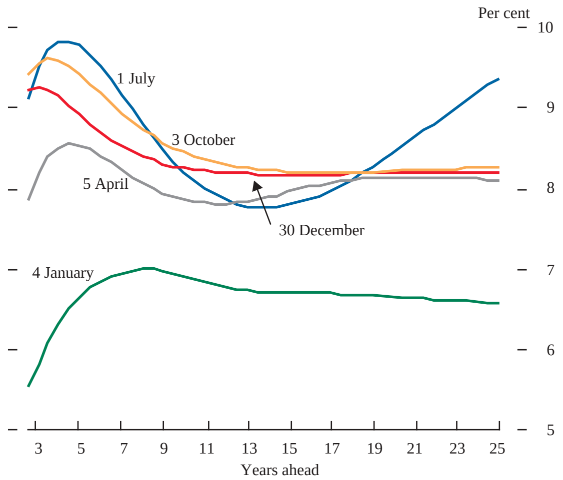
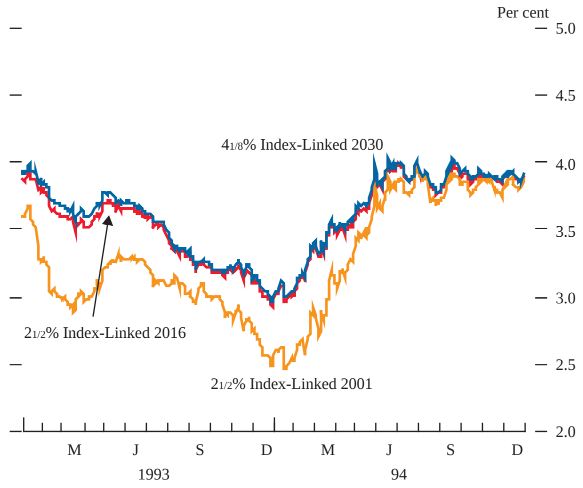


Chart 4
Real yields on British government stocks



Gilt funding requirement

The authorities ended the 1993/94 financial year with overfunding of £2.3 billion (later revised to £3.4 billion) which, together with some £6.8 billion of sales to the monetary sector in 1992/93, was carried forward into 1994/95 to count as funding under the terms of the remit given to the Bank by the Chancellor of the Exchequer.(1) The 1994/95 PSBR was initially forecast at £37.9 billion but was later revised downwards, to £36.1 billion in June 1994 and to £34.3 billion following the November Budget. With £9.0 billion nominal (£9.2 billion cash) of redemptions to refinance in 1994/95, on the basis of the November 1993 Budget projection, total gilt sales of around £37 billion were forecast in 1994/95 for a full fund.

Stocks issued

There were gross issues in 1994 of £30.6 billion and redemptions of £9.3 billion nominal (£9.5 billion cash). Of the gross issues, £7.8 billion were made in the 1993/94 financial year (ie in the first calendar quarter of 1994) and the remaining £22.8 billion in the current financial year.

Four new conventional stocks were created during the year, of which one was a convertible. As in 1993, new ten and five-year benchmarks were issued in the September and October auctions respectively. All new stocks again paid interest free of tax to overseas holders. In addition to issues of new stocks, the authorities continued to reopen existing issues to meet market demand and to maintain liquidity, including in particular by building up large, liquid benchmark stocks in a range of maturities. Five of the ten auctions added to existing stocks.

During 1994, the largest volume of conventional stocks was issued in the 7–15 year range (which accounted for £9.7 billion, or 32% of nominal issuance), followed by the long maturities (in excess of 15 years) with £6.4 billion, or 21% of the total. Short-dated conventional issues (under seven years) accounted for 19%, with £5.8 billion issued.

There were additions to ten of the index-linked issues—with maturities ranging from 2001 to 2024—taking the share of index-linked gilts in the total portfolio to 17.2% (including inflation uplift so as to reflect current repayment obligations). Real yields rose substantially in the first half of the year, but demand for index-linked stocks was steadier than for conventionals in the second half of the year.

Method of stock issuance

In the more difficult market conditions in 1994, auctions naturally provided a proportionally greater contribution to funding. Nevertheless, tap issues were used when market conditions allowed, as part of a continuing mixed approach to funding. Technical reforms were introduced so that when existing issues were auctioned they were for the first time fungible with the parent stock (ie indistinguishable from it from the first day of issue), enhancing their liquidity and making the issues more attractive.

As in 1993/94, the authorities announced in March that, because of the large PSBR, auctions would be held at broadly monthly intervals. Auctions were normally held on the last Wednesday of the month. Also as in the previous year, no auction was held in August (in part because of the progress with funding), or in November (because of the Budget); an auction was held instead in early December.

Table A
Auction details

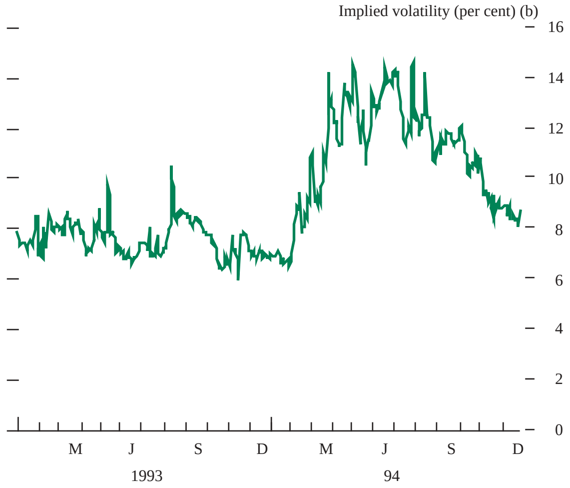
Stock	Status	Auction date	Amount £ millions	Average yield per cent	Cover	Tail (a) (basis points)
6 1/4% 2010	New	26 January	2,750	6.38	1.21	2
7% 2001 A	Tranche	23 February	2,500	6.75	1.48	6
Floating Rate 1999	New	30 March	2,500	(b)	2.28	—
6% 1999	Fungible	27 April	2,000	7.46	1.70	1
7% Convertible 1997	New	25 May	2,000	6.83	1.93	4
Floating Rate 1999	Fungible	29 June	2,000	(b)	2.72	—
6 1/4% 2010	Fungible	27 July	2,000	8.29	1.29	1
8 1/2% 2005	New	28 September	2,000	8.90	1.74	1
8% 2000	New	26 October	2,500	8.82	1.20	2
8 1/2% 2005	Fungible	7 December	2,000	8.64	1.34	2

(a) Calculated on a yield basis.
(b) The rate of interest is reset on a quarterly basis by reference to money-market rates.

The ten auctions held over the year were for a total of £22.25 billion nominal, some 73% of the total stock issued (see Table A). The amounts auctioned ranged between £2 billion and £2.75 billion. The average level of cover, at 1.69 times, was marginally higher than in the previous year despite the difficult trading conditions. ‘When issued’ trading continued to contribute usefully to price discovery. In contrast to other government bond markets where auctions had to be cancelled on occasion during periods of market disturbance, gilt auctions were undertaken as planned. This was possible partly because issues could be tailored to some degree to cater for the particularly turbulent conditions in the early part of the year. Floating Rate Treasury Stock 1999 was issued in March, and reopened in June, to meet demand at short maturities where liquidity was being held; cover was 2.28 and 2.72 times at these auctions.

(1) Details of the funding remit were given in the article on the operation of monetary policy in the May 1994 *Quarterly Bulletin* (see pages 112–13). The remit is also set out on page 11 of ‘Gilts and the Gilt Market: Review 1993–4’, available from the Bank’s Gilt-Edged and Money Markets Division.

Chart 5
UK implied bond market volatility(a)



(a) Derived from the closing price of the option on LIFFE's long gilt future.
(b) The annualised standard deviation of continuously compounded returns.

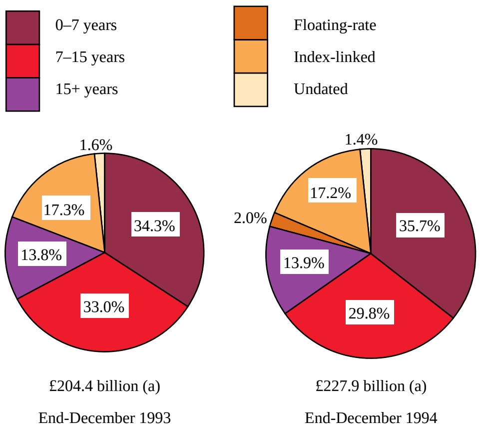
In May, 7% Treasury Convertible Stock 1997 was auctioned, convertible into 9% Treasury Stock 2012; this provided embedded options to a highly uncertain market (see Chart 5). At the time of the auction, the yield on the convertible was around 50 basis points below that on the nearest comparable stock.

The remaining £8.35 billion nominal of stock was sold on tap to the gilt-edged market-makers (GEMMs), enabling the Bank to respond quickly to demand for stock across a range of maturities and to issue into the rallies which punctuated generally weak conditions.

Stock outstanding and sectoral breakdown of holdings

The total nominal value of gilt-edged stock outstanding rose from £204.4 billion at end-1993 to £227.9 billion at end-1994 (from £190.5 billion to £211.8 billion if the inflation uplift on index-linked stocks is not taken into account). Chart 6 shows the maturity breakdown (at nominal prices) of all gilts at the end of 1993 and 1994. The reduction in the share of 7–15 year stocks partly reflects the fact that one large issue (7% Treasury Stock 2001) became a sub-seven-year issue during the year.

Chart 6
Maturity breakdown of stock outstanding



(a) Nominal.

As a result of the policy of developing benchmark issues, a growing number of stocks have large amounts outstanding (see Table B). By the end of 1994, there were 14 stocks with more than £5 billion nominal outstanding, including two with over £8 billion and a further three with over £7 billion outstanding; two years ago, there were only three stocks with £5 billion or more outstanding. The 14 largest stocks represented, at £90.8 billion, just over 50% of total conventional stock outstanding.

Table B
Large-issue stocks at end-1994

Stock	Original issue date	Nominal amount outstanding £ millions
8% 2003	3 December 1992	8,250
7¼% 1998	23 October 1992	8,150
8¾% 2017	30 April 1992	7,550
8½% 2007	16 July 1986	7,397
7% 2001	29 July 1993	7,200
9¾% 2002	15 August 1985	6,527
6¾% 2004	30 September 1993	6,500
6% 1999	28 October 1993	6,250
8% 2013	1 April 1993	5,800
9% 2008	11 February 1987	5,621
8¾% 1997	9 October 1969	5,550
9% 2000	3 March 1980 (a)	5,358
9% 2012	7 February 1992	5,351
9% 2011	12 July 1987 (a)	5,273

(a) On conversion.

In the February 1994 *Bulletin* article on gilt market developments, the results of the first survey of the beneficial ownership of British government stock were released.(1) A similar survey was conducted in the second quarter of 1994, and the results are set out in Table C. It shows that the distribution of holdings changed little between March 1993 and March 1994. Slight falls in the proportions held by insurance companies, pension funds, the personal and overseas sectors were offset by increases for 'other' financial

Table C
Holdings of gilts by type of investor

	31 March 1993 £ billions	31 March 1993 Per cent	31 March 1994 £ billions	31 March 1994 Per cent
Market value of all gilts	168.1	100.0	216.5	100.0
of which:				
Official holdings	*8.4*	*5.0*	*7.9*	*3.6*
Market holdings	*159.7*	*95.0*	*208.6*	*96.4*
Breakdown of market holdings:		100.0		100.0
Total UK market holdings	**128.2**	**80.3**	**169.4**	**81.2**
of which:				
Other public sector	*0.4*	*0.3*	*0.7*	*0.3*
Industrial and commercial companies	*3.2*	*2.0*	*3.8*	*1.8*
Personal sector	*19.0*	*11.9*	*19.5*	*9.3*
Banks (a)	*9.6*	*6.0*	*17.6*	*8.4*
Building societies	*4.5*	*2.8*	*5.4*	*2.6*
Other financial institutions	*91.5*	*57.3*	*122.4*	*58.7*
of which:				
Insurance companies	*60.2*	*37.7*	*73.7*	*35.3*
Pension funds	*29.1*	*18.2*	*27.0*	*12.9*
Other	*2.2*	*1.4*	*21.7*	*10.4*
Overseas holdings	**31.5**	**19.7**	**39.2**	**18.8**

(a) Includes nominee companies.

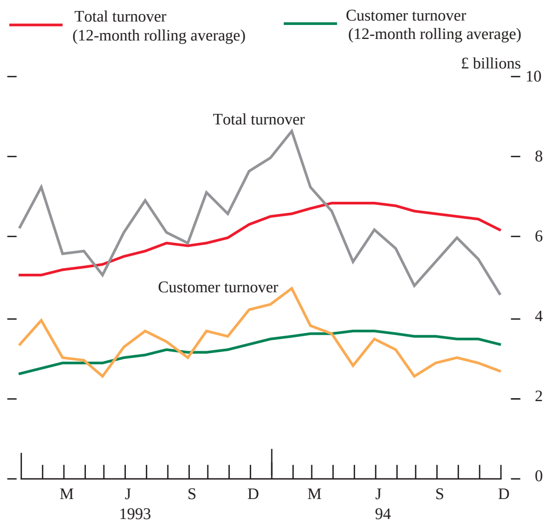
(1) See the February 1994 *Quarterly Bulletin*, pages 55–9; a box in the article explained the nature of the survey.

institutions, including fund managers. Figures on transactions in marketable government debt by value suggest that the overseas sector may have reduced its holding of gilts somewhat since the date of the survey, while most domestic sectors actively increased their holdings, more than offsetting the fall in prices. A further survey is being conducted as at 31 December 1994 and it is planned to repeat this each year. The Bank is very grateful for the co-operation it receives in conducting these surveys.

Turnover in the gilt market

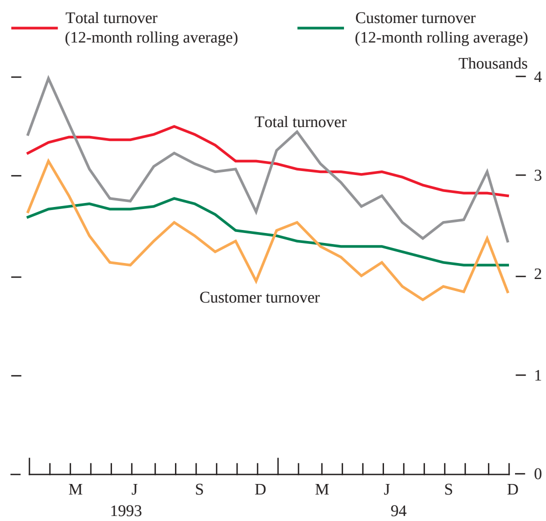
Chart 7 shows total turnover in gilts by value. At £6.1 billion, the daily average during the year was slightly down on that in 1993; it reached a peak in February at £8.6 billion. Average daily customer turnover by value was

Chart 7
Average daily turnover: by value



also little changed from that in 1993, at £3.3 billion; its peak was £4.7 billion in February. The average size of customer deals rose by 8% to £1.5 million; the number of such bargains fell from 2,400 a day to 2,100, with a peak of

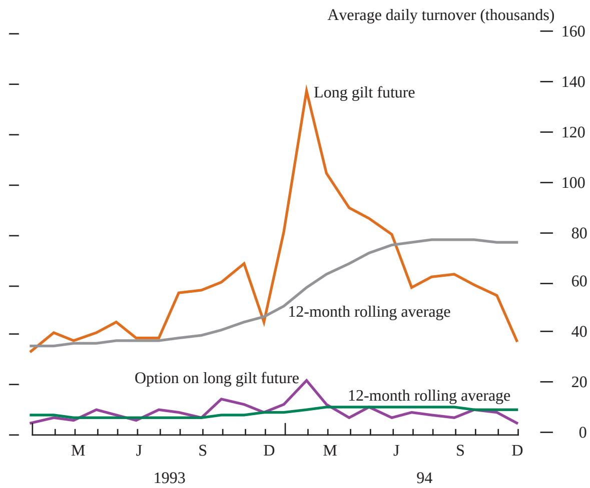
Chart 8
Average daily turnover: bargains



2,500—again in February—compared with a peak in the same month in 1993 of 3,100 (see Chart 8). The value of gilt stock lending increased by 66% in 1994 compared with 1993. The rise was associated with the bearish market outlook, and the average level of outstanding stock lending rose sharply in February, reached £14.3 billion in June, then moderated slightly before rising to a peak of £14.5 billion in December.

As Chart 9 shows, turnover on LIFFE in gilt derivatives—the long gilt future contract and the option on the future—continued to grow in 1994. Turnover of the future averaged 76,000 contracts daily—64% higher than in 1993 (which itself had been 34% higher than in 1992). The increase was partly the result of increased activity in the early part of the year: average daily turnover reached a high of 137,000 contracts in February. Average daily turnover in the option contract was 16% higher than in 1993. Turnover reached its high, of 21,000 contracts, during the turbulent conditions that prevailed in February, when volumes in the cash and futures markets were also at their peak.

Chart 9
LIFFE gilt derivatives: number of contracts



GEMMs' financial performance

The financial performance of the GEMMs recovered in the final quarter of 1994, after a weaker outturn in the first part of the year, in line with the performance of other market participants. The pattern reflected difficult trading conditions in bond markets worldwide, and followed three years in which the GEMMs had been consistently profit-making. Most, though not all, GEMMs made losses for the year as a whole, but their performance varied markedly over the year. Many of the losses occurred in the first quarter, when bond markets worldwide turned downwards. Smaller losses were made in the second and third quarters of the year. In the final quarter, GEMMs in aggregate returned to profit as the gilt market strengthened; roughly half the GEMMs made a profit in the period.

Despite difficult trading conditions, the number of GEMMs increased from 20 to 22 during the year, with three firms

The development of an open gilt repo market

In the Budget on 29 November, the Chancellor announced that the Bank was issuing a consultative paper on the development of an open gilt repo market. The Inland Revenue issued a separate paper on the potential tax implications of such a market. The development of an open gilt repo market would have important implications for the structure of the gilt market.

In a gilt sale and repurchase (repo) transaction, a seller agrees to sell gilts to a buyer, with a commitment to repurchase equivalent securities at a specified future date (or at call) at a specified price. A repo is therefore a flexible transaction amounting to the borrowing of cash against collateral for one party and stock borrowing for the other.

At present, only the gilt-edged market-makers (GEMMs) may borrow particular stocks, and they have to do so via Stock Exchange money brokers (SEMBs). The main changes proposed are that repo activity should be widened beyond the gilt-edged market-makers, and that stock should not have to be lent or borrowed via a SEMB, although it would be open to a SEMB to provide an intermediation service. The repo market would thus be entirely open.

The Bank believes that these steps should enhance the liquidity and efficiency of the gilt market, increase demand, and so over time reduce the overall interest cost to the government and the taxpayer. They would do so by: enabling all market participants to borrow stock to cover short positions; widening arbitrage opportunities; introducing the price mechanism into stock borrowing; ensuring international investors could use the repo mechanism with which they are familiar, so encouraging greater participation in the gilt market; giving would-be investors in gilts ready access to the sterling money market, using gilts as collateral; extending the range of instruments traded in the sterling money markets (as repo is essentially a form of secured money); promoting greater integration of the money and gilt markets; and enhancing the position of London as a financial centre.

In the Bank's view, it would be of great importance for gilt repo activity to be properly regulated. The Bank's paper therefore set out the arrangements envisaged for prudential supervision and for regulation of the conduct of business. It is not envisaged that any formal change in the structure of supervisory arrangements would be necessary. Prudential supervision, including of capital adequacy, would be the responsibility of an institution's existing supervisor, and gilt repo business would also be subject to the conduct of business arrangements under the Financial Services Act. Any repo activity with retail customers would therefore be covered by the investor protection provisions of that Act.

In its paper, the Bank also outlined steps that might be taken to ensure that a gilt repo market operated in a sound and orderly manner. To consider the arrangements in this area in more detail, it has formed two working groups involving market participants: to consider a master legal agreement for gilt repo transactions; and to formulate a code of best practice which core participants in the repo market would be expected to observe.

The Bank believes that the security of gilt repo transactions would be enhanced by settlement in a book-entry system, and is considering adjustments to the Central Gilts Office service to achieve this.

A final decision on the introduction of an open gilt repo market is due to be taken after the consultation process is complete. A gilt repo market could not begin to operate before all of the preparatory work was completed, and market participants had had time to make the necessary systems and other changes. It could therefore not begin before July 1995 at the earliest. The Bank has emphasised that it does not wish gilt repo activity to develop before any date decided in due course for the implementation of the proposals in its paper in an orderly manner. In the meantime, the arrangements for stock borrowing intermediated by the SEMBs remain in place.

entering the market (two rejoining under new management after a period of absence) and one leaving. Together with significant further injections of capital by existing GEMMs, this added £137 million to the GEMMs' aggregate capital base, more than outweighing the depressing effect of the year's adverse financial performance (see Table D). There was a net increase of £77 million in capital committed to the gilt market, backing the GEMMs' core market-making function and other activities designed to capitalise on and complement this business. The aggregate capital base of the GEMMs more than doubled between the start of 1991 and the end of last year, rising from £395 million to £811 million.

Table D
Capitalisation of gilt-edged market-makers

£ millions

	Oct. 1986–end-1990	1991	1992	1993 (a)	1994 (a)
GEMMs' capital at beginning of period (b)	595	395	432	511	734
Net injections or withdrawals of capital	-38	-12	15	164	137
Operating profits (+)/losses (-) (c)	-162	49	64	59	-60
GEMMs' capital at end of period	395	432	511	734	811

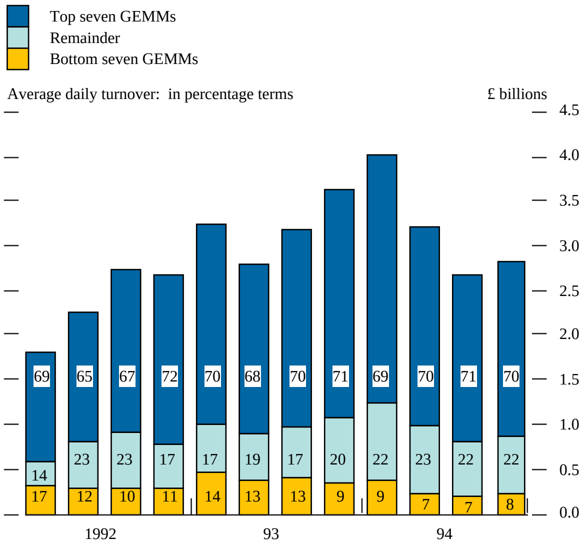
Source: Bank of England.

(a) Data for 1993 have been revised. Data for 1994 are provisional.
(b) Capital base, as set out in the Bank of England's 'Blue Paper' ('The future structure of the gilt-edged market') published by the Bank in 1985 and reproduced in the June 1985 *Bulletin*, pages 250–87.
(c) Net profits/losses after overheads and tax.

The number of Stock Exchange money brokers and inter-dealer brokers (IDBs) remained unchanged, at eight and three respectively.

Retail trade

Chart 10
Distribution of GEMMs' retail turnover[a]



(a) Excluding identified dividend business.

Chart 10 shows GEMMs' retail trade with clients and agency brokers.[1] Competition among the GEMMs to provide the most effective service to investors has remained strong. There is little evidence of increasing concentration at the top end of the market: the share of the top seven firms was broadly unchanged at about 70%, and market share was more evenly spread within this group than three years ago.

(1) The measure of retail trade does not include trade with IDBs, direct trades with other GEMMs and the Bank, and identified dividend business [the sale (purchase) of a stock *cum* dividend and the purchase (sale) of the same stock *ex* dividend to and from the same client].
To offer a better comparison between companies engaged in very similar business activities, the data exclude the two small-deal specialists (one of which was a new entrant in 1994). Small-deal specialists transact a large number of relatively low-value trades.