Operation of monetary policy

This article covers the three months from July to September 1987.

Review

In the three months under review, which preceded the recent upheaval in equity markets worldwide, there was by and large greater stability in financial markets in the United Kingdom than had been seen earlier in the year. The authorities continued to take account of both the exchange rate and domestic indicators in judging the level of interest rates consistent with the government's aims for money GDP and inflation. By early August, it had become apparent that some rise in interest rates was appropriate and the authorities acted to achieve this. Earlier in 1987 the conjunction of massive demand for sterling from abroad and intense pressure for lower interest rates in the domestic markets had created a dilemma for the authorities. On the one hand, much lower interest rates seemed to be not fully warranted by developments in the domestic economy, where demand and broad money were buoyant, asset prices were strong and the pace of wage increase remained above that in our main competitors. On the other hand, pressures in the exchange market indicated that monetary policy was already tight: a sharp appreciation of sterling would have implied a further tightening, and could have damaged industrial confidence, with adverse consequences for the future productive capacity of the economy. Balancing the evidence, and on the basis that the demand for sterling was in part transient, connected with political developments in the United Kingdom, the authorities intervened heavily in the foreign exchange markets and allowed interest rates to fall. At the start of the period under review interest rates were lower than purely domestic factors alone would have indicated.

The statistics released during the third quarter supported this judgement by confirming the trends perceived earlier. Domestic demand remained buoyant, with strong consumption, a sharp pick-up in industrial investment expenditure and a deterioration in the trade balance. The supply response to demand was good, with output increasing strongly. Although pay settlements and earnings growth had shown signs of edging up and raw material prices had increased, productivity growth continued to be rapid, and the twelve-month change in manufacturers' output prices remained around 3½%. Asset prices were strong, with the FT-Actuaries' all-share index reaching a new record in July, partly under the influence of takeover activity. The rate of increase of broad money on a twelve-month comparison remained high, and credit growth was strong. Lending to persons continued to increase faster than personal incomes, and borrowing by industrial and commercial companies picked up sharply, probably helping to finance the spate of takeover and merger activity. M0, which had been subdued earlier in the year, increased more rapidly in the latest quarter, although its twelve-month growth rate remained within its target band.

Table A
Growth rates of the monetary aggregates[a]
Percentages

	Unadjusted		Seasonally adjusted(b)	
Calendar months	12 months to June 87	12 months to Sept. 87	Apr. 87– June 87	July 87– Sept. 87
M0(c)	+ 4.2	+ 5.2	+1.1	+2.3
Non-interest-bearing M1	+13.5	+ 6.3	+7.1	+1.7
M1	+23.8	+20.4	+7.0	+4.7
M2	+12.0	+10.1	+3.8	+2.3
M3	+19.1	+19.5	+5.0	+4.8
M3c	+20.3	+18.4	+4.4	+4.9
M4	+13.8	+14.9	+4.0	+3.7
M5	+13.5	+14.3	+4.1	+3.5

(a) See the May 1987 *Bulletin*, page 212, for definitions of the broad money aggregates.
(b) Seasonal adjustments constrained over the financial year.
(c) Weekly average.

Table B
Composition of changes in the money stock(a)
£ billions; *seasonally adjusted (financial year constrained)*

	Calendar months	Apr. 87– June 87	July 87– Sept. 87	Level outstanding at end-Sept. 87
1	Non-interest-bearing M1	+ 2.9	+ 0.7	44.6
2	Interest-bearing sight deposits	+ 2.7	+ 3.2	44.5
3	**M1 (= 1+2)**	**+ 5.6**	**+ 4.0**	**89.0**
4	Private sector holdings of time deposits with banks and bank CDs	+ 2.4	+ 4.1	87.4
5	**M3 (= 3+4)**	**+ 8.0**	**+ 8.1**	**176.4**
6	Building society holdings of M3 (increase–)	– 0.9	– 0.8	– 13.2
	Non-bank private sector holdings of:			
7	Building society shares and deposits	+ 3.5	+ 2.5	125.6
8	Building society £CDs and time deposits(b)	+ 0.1	+ 0.7	2.8
9	**M4 (= 5+6+7+8)**	**+10.8**	**+10.5**	**291.6**
10	Non-bank, non-building-society private sector holdings of money-market instruments and national savings in M5	+ 0.8	– 0.1	14.9
11	**M5 (= 9+10)**	**+11.7**	**+10.4**	**306.5**

(a) See the May 1987 *Bulletin*, page 212, for definitions of the broad money aggregates.
(b) Excluding holdings by building societies themselves.

Table C
Counterparts to changes in M3, M4 and M5(a)
£ billions; *seasonally adjusted figures (financial year constrained) in italics*

		Counterparts to M3			Counter-parts to M4	Counter-parts to M5
		Apr. 87– June 87	July 87– Sept. 87	Oct. 86– Sept. 87	Oct. 86– Sept. 87	Oct. 86– Sept. 87
1	PSBR	*+0.8*	*– 0.7*	– 0.9	– 0.9	– 0.9
2	Net purchases (–) of central government debt by the 'private' sector(b)(c)	*–2.5*	*+ 0.9*	– 2.0	– 3.8	– 3.3
3	Net purchases (–) of other public sector net debt by the 'private' sector(b)(c)	*+1.2*	*+ 0.5*	+ 2.3	+ 0.7	+ 0.4
4	External and foreign currency finance of the public sector	*+2.4*	*– 2.0*	+ 0.3	+ 0.3	+ 0.3
5	Public sector contribution (= 1+2+3+4)	*+2.0*	*– 1.3*	– 0.3	– 3.7	– 3.5
6	Sterling lending to the 'private' sector(b)(d)	*+8.6*	*+11.4*	+37.1	+53.0	+53.5
7	Other counterparts(e)	*–2.5*	*– 2.1*	– 8.1	–11.6	–11.6
8	**Total** (= 5+6+7) = change in the aggregate	***+8.0***	***+ 8.1***	**+28.7**	**+37.7**	**+38.4**

(a) See 'Measures of broad money' in the May 1987 *Bulletin* page 217.
(b) For M3 counterparts, the 'private' sector excludes banks; for M4 and M5 counterparts it also excludes building societies.
(c) Transactions in public sector debt instruments included in M5 are necessarily excluded from the M5 counterparts.
(d) Includes changes in Issue Department's holdings of commercial bills and of promissory notes relating to shipbuilding paper guaranteed by the Department of Industry. The M5 counterpart includes 'private' sector holdings of commercial bills.
(e) External and foreign currency transactions and changes (–) in net non-deposit liabilities.

Sterling was easier during late July and August and this, taken together with the continued buoyancy of the domestic indicators, provided the occasion for a rise in interest rates. Market pressures on sterling had abated once the date of the election had been announced, reinforcing the impression that some of the inflows had been speculative. After the election, the further inflows which some commentators had expected did not appear. With the dollar strengthening throughout July and early August, sterling fell back and, with increased worries in the domestic markets about the buoyancy of the economy, money-market rates and gilt yields rose. The weaker tone in the markets, especially for sterling, gave the authorities the opportunity to raise interest rates without prompting renewed upward pressure on sterling. The Bank increased its money-market dealing rates by 1% on 6 August and the commercial banks announced a 1% rise in base rates on the same day.

During the second half of August, the dollar began to weaken again in response to adverse news on the US trade deficit. Sterling rose from $1.58 on 13 August to $1.63 by the end of the month. Though the pound slipped back against the dollar around the time of the G7 meeting in Washington, it remained firm elsewhere. It ended September generally higher than at the beginning of the period under review. Thus by end-September there were signs that the dilemma faced by the authorities earlier in the year was threatening to re-emerge and domestic and external evidence about monetary conditions would need to be balanced carefully.

Monetary aggregates and credit

The figures in this section are seasonally adjusted except for twelve-month growth rates or as otherwise stated.

Over the three months to September the rate of increase of broad money was similar to that in the previous quarter, with M3 continuing to increase more rapidly than M4 and M5. Among the counterparts to broad money growth, lending increased more during July to September than in the previous quarter while the public sector counterparts were more contractionary. The twelve-month growth rate of sterling lending to the private sector by banks and building societies taken together has remained around 20% this year, though lending by banks alone has been rising at a higher percentage rate, particularly in the third quarter. The growth of M0 has picked up, with notes and coin growing by 3.8% during the six months to September following the fall in the first quarter of the year. Despite this acceleration, M0 remains within its 2%–6% target band, having increased by 5.2% over the year to September.

M3 has continued to increase at a higher percentage rate than M4, with the twelve-month growth rates in September standing at 19.5% and 14.9% respectively. The rapid increase in the building societies' deposits with banks continues to inflate the growth rate of M3 relative to M4, and accounts for over 3 percentage points of the rise in M3 over the past year. The faster rise of M3 than of M4 also reflects the sectoral pattern of liquidity increases. The deposits of businesses, whose liquid assets are predominantly bank deposits, have risen faster than those of the personal sector, whose deposits are more evenly distributed between banks and building societies. Retail inflows to building societies grew by only 2% over the quarter and were

Table D
Comparison of inflows to banks and building societies
£ billions; *seasonally adjusted (calendar year constrained)*

	1985 Year	1986 Year	Q4	1987 Q1	Q2	Q3
Building society retail inflows (net, including interest credited)	13.4	12.3	3.5	3.1	3.5	2.5
Change in personal sector sterling deposits with banks(a)	4.9	8.4	0.4	2.1	2.7	2.0

(a) Includes changes in the deposits of some securities dealers up to 1986 Q3 (see the December 1986 *Bulletin*, page 478).

Table E
Mortgage lending
Percentage changes on a year earlier; *figures in italics are quarterly growth rates, seasonally adjusted at an annual rate*

	Banks	Building societies	Total	
1986				
Q1	24.7	17.8	17.7	*16.5*
Q2	25.8	18.3	18.5	*19.9*
Q3	23.6	20.0	19.8	*23.7*
Q4	22.1	19.6	20.0	*20.8*
1987				
Q1	25.2	18.4	20.7	*16.6*
Q2	29.3	16.3	20.2(a)	*17.7*
Q3	33.3	13.8	18.6(a)	*18.4*

(a) Partly estimated.

Table F
Sectoral contributions to the growth of the broad aggregates and credit in the twelve months to September 1987(a)

	Persons	ICCs	Building societies	Other OFIs
Holdings of M3				
Percentage growth	9.7	23.4	62.0	33.7
Contribution to M3 growth(b)	5.3	5.9	3.4	4.9
Holdings of M4				
Percentage growth	10.9	23.8	—	33.6
Contribution to M4 growth(b)	8.2	3.7	—	2.9
M3 credit				
Percentage growth	22.3	18.9	7.1	37.7
Contribution to M3 credit growth(b)	9.3	6.9	0.2	6.9
M4 credit				
Percentage growth	17.1	19.7	—	37.7
Contribution to M4 credit growth(b)	11.5	4.3	—	4.1

(a) Rows may not add to growth rates of the aggregates given in other tables because of rounding.
(b) Percentage points.

particularly weak in September, possibly owing to the second calls on the TSB and Rolls-Royce share issues but also to a fall in the interest rate competitiveness of societies relative to the banks which occurred in August. Faced with weak retail inflows, and with some societies constrained by the ceiling on wholesale funding allowed under the 1986 Building Societies Act, societies have been unable to respond fully to the strength of mortgage demand, and have suffered a substantial loss of market share to the banks, who have been particularly aggressive in marketing mortgages in recent months. Building societies accounted for only about half of net new mortgage lending in the third quarter, compared with almost three quarters a year earlier.

The position of the building societies does not seem to have slowed the rate of increase in total mortgage lending. In fact, on a quarterly basis total lending on mortgage to persons has accelerated a little this year. A similar pattern was seen in 1986 when lending peaked in the third quarter, so that the twelve-month growth rate of mortgage lending has declined to around 18%. This is rather less than figures recorded earlier this year, but remains well above the growth of personal disposable income, following the pattern of the last four years. Lending for consumption is growing at about 18% per annum, again close to the average rate over the past four years. This high trend rate of growth reflects changes in payments mechanisms, for example the more widespread use of credit cards to finance transactions, as well as the longer-term adjustment of personal sector portfolios to the removal of constraints on borrowing. Fluctuations in the rate of borrowing around the trend have in part reflected the pattern of consumption; lending for consumption weakened around the end of 1986, coinciding with a pause in the growth of consumers' expenditure, and has picked up since.

Trends established over the last few years have also continued on the asset side of the personal sector's balance sheet, so that the twelve-month growth rates of persons' deposits with banks (10.3%) and with building societies (11.7%) have changed little during 1987. Since 1985, persons' deposits with banks and building societies have grown at similar rates, whereas in the previous three years the societies' deposits had increased more rapidly than those of the banks. It is difficult to explain this change in trend by reference to interest rate differentials alone; it may be that societies have been more affected by competition from share sales and unit trusts. Personal sector deposits included in M4 rose by 11% in the twelve months to September, much slower than M4 as a whole.

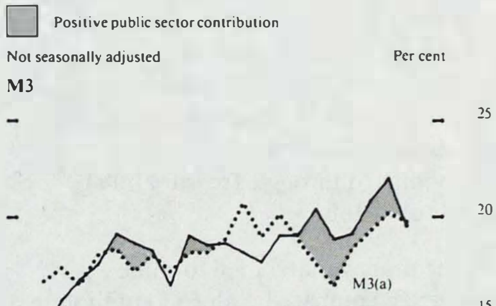
In contrast, deposits by industrial and commercial companies (ICCs) have grown very quickly, and in the third quarter ICCs accounted for half the total increase in M3 deposits. ICCs' deposits accelerated during 1986, rising by 30% during the year; since then the twelve-month change has fallen back a little and now stands at 24%. This rapid rise reflects the strength of companies' income and profits, and perhaps the effects of stock market activity. In the third quarter, the strong rise in companies' bank deposits may have been associated with very large receipts from capital issues, perhaps only partly offset by expenditure on takeovers (including a considerable number abroad) and a continued increase in investment expenditure.

Table G
UK monetary sector: sterling and foreign currency deposits of, and lending to, the non-bank private sector
£ billions; *seasonally adjusted*(a)

	1986	1987			
	Year	Q4	Q1	Q2	Q3
Sterling deposits					
Other financial institutions	+ 5.6	+ 2.2	+ 6.4	+ 1.5	+ 2.0
Industrial and commercial companies	+ 8.3	− 0.4	+ 1.6	+ 3.0	+ 4.1
Persons	+ 8.4	+ 0.4	+ 2.1	+ 2.7	+ 2.0
Total	+22.4	+ 2.2	+10.1	+ 7.2	+ 8.1
of which, transit items allocated to ICCs	*− 2.0*	*− 1.0*	*− 0.5*	*+ 1.4*	*− 0.7*
Sterling lending					
Other financial institutions	+10.9	+ 3.3	+ 3.0	+ 2.8	+ 2.2
Industrial and commercial companies(b)	+ 9.1	+ 5.0	+ 0.1	+ 1.5	+ 4.5
Persons	+10.1	+ 2.2	+ 3.7	+ 4.3	+ 4.6
Total	+30.1	+10.4	+ 6.8	+ 8.6	+11.4
of which, transit items allocated to ICCs	—	*+ 0.7*	*+ 0.3*	*− 0.9*	*+ 0.5*
Foreign currency deposits					
Other financial institutions	+ 4.4	+ 2.2	+ 0.4	+ 1.9	+ 2.7
Industrial and commercial companies	+ 3.0	− 0.2	+ 0.9	− 1.2	− 0.7
Persons	—	—	+ 0.2	− 0.2	—
Total	+ 7.5	+ 1.9	+ 1.4	+ 0.5	+ 2.0
Foreign currency lending					
Other financial institutions	+10.7	+ 0.6	+ 5.2	+ 3.8	− 1.2
Industrial and commercial companies	− 3.1	− 0.1	+ 2.1	+ 0.7	− 0.1
Persons	+ 0.7	—	+ 0.1	+ 0.1	+ 0.2
Total	+ 8.2	+0.6	+ 7.4	+ 4.6	− 1.1

(a) Seasonal adjustments constrained over the calendar year.
(b) Includes Issue Department take up of commercial bills and guaranteed shipbuilding paper.

Contribution of public sector counterparts to annual growth rates



(a) M3(a) and M4(a) exclude contributions of public sector counterparts to each aggregate. M4(a) partly estimated.

In view of heavy receipts from equity issues and the probable strength of profits, the large increase in ICCs' bank borrowing in the third quarter is somewhat surprising. It may have reflected the financing of takeovers and mergers both at home and overseas, and an increase in investment may also have added to companies' financing needs.

Sterling lending to non-bank financial institutions in the third quarter, £2.2 billion, was below the recent trend (though the figures for the latter part of 1986 were boosted by the transfer of some of the banks' mortgage business to non-bank institutions), with the twelve-month rate falling back to around 33%. The rise in sterling bank lending to OFIs in the year to August was widespread, and included large percentage increases in borrowing by, *inter alia,* investment and unit trusts (especially in the three months to August) and by securities dealers, stockbrokers and market makers (especially in the period around 'Big Bang' last autumn). Foreign currency borrowing by non-bank financial institutions fell by £1 billion in the latest quarter, possibly reflecting an unwinding of the large rise in such borrowing earlier in the year, when the exchange rate rose sharply. Non-bank financial institutions' sterling bank deposits rose by £12 billion over the last year. £5 billion of this was accounted for by building societies; of the remainder, over £4 billion accrued in the March quarter when—as evidenced by data for investment and unit trusts—the institutions may have hedged their foreign currency investments by borrowing in foreign currency and switching the proceeds into sterling deposits. Since then, the growth of the institutions' sterling deposits, excluding the rise accounted for by the building societies, has been at a relatively modest 13% when expressed at an annual rate. This slower increase may in part reflect the effect on institutional cash-flow of their take-up of capital issues and large increases in the institutions' foreign currency deposits in the past two quarters.

The public sector counterparts had a contractionary effect on money in the third quarter, after having been expansionary in the previous three months. This turn-round reflects benefits to the PSBR from the strong growth of the economy, a much smaller increase in the reserves, and large purchases of government stock by the overseas sector which more than offset net sales by the non-bank private sector. The statistical contribution of the public sector counterpart to the twelve-month growth rates of M3 and M4 is shown in the chart.

The other counterparts to money were also contractionary in the third quarter. The split between the banks' sterling net non-deposit liabilities and their external and foreign currency transactions has been affected by balance sheet restructuring associated with provisioning against third world debt. The contractionary impact of sterling net non-deposit liabilities in the third quarter partly reflects the large Midland Bank rights issue.

Official operations in financial markets

The figures in this and the succeeding sections are not seasonally adjusted unless otherwise stated.

During the three months under review a low CGBR and a small increase in the reserves were more than matched by debt sales, principally of gilt-edged stock, resulting in a net increase in the

Table H
Financing of the public sector

£ billions; *seasonally adjusted (financial year constrained)*

Calendar months	Jan. 87– Mar. 87	Apr. 87– June 87	July 87– Sep. 87	Oct. 86– Sept. 87
Central government borrowing on own account	+1.3	+0.9	−0.5	−0.5
Other public sector borrowing(a)	−0.1	—	−0.1	−0.6
PSBR	**+1.2**	**+0.8**	**−0.7**	**−1.1**
Net sales(−) of central government debt to the non-bank private sector	+1.4	−2.5	+0.9	−1.9
of which: Gilt-edged stocks	*+1.7*	*−1.1*	*+1.1*	*+0.1*
National savings	*−1.0*	*−0.8*	*−0.4*	*−3.0*
CTDs	*+0.8*	*−0.4*	*+0.1*	*+1.3*
Sales(−) of local authorities' and public corporations' net debt to the non-bank private sector	+0.7	+1.2	+0.5	+2.3
External and foreign currency finance of the public sector	+0.8	+2.4	−2.0	+0.3
of which, gilt-edged stocks	*−0.8*	*−1.7*	*−2.3*	*−5.4*
Total financing of the public sector from the non-bank private and overseas sectors	**+2.9**	**+1.2**	**−0.6**	**+0.6**

(a) Includes on-lending from central government to local authorities and public corporations.

Table J
Official transactions in gilt-edged stocks

£ billions; *not seasonally adjusted*

Calendar months	July 86– Sept. 86	Oct. 86– Dec. 86	Jan. 87– Mar. 87	Apr. 87– June 87	July 87– Sept. 87
Gross official sales(a)	+3.0	+4.5	+2.7	+4.0	+2.6
less					
Redemptions and net official purchases of stock within a year of maturity	−0.9	−1.8	−3.3	−2.6	−1.2
Equals net official sales(b)	+2.0	+2.7	−0.7	+1.4	+1.4
of which, net purchases by:					
Monetary sector(b)	*+0.7*	*+0.2*	*+0.3*	*−1.4*	*+0.2*
Overseas sector	*+0.5*	*+0.7*	*+0.8*	*+1.7*	*+2.3*
Non-bank private sector	*+0.8*	*+1.6*	*−1.7*	*+1.1*	*−1.1*

Note: Sales are recorded on a payments basis, so that payments made on partly-paid stocks are entered according to when payments are made rather than according to the time of the commitment to make the payment.

(a) Gross official sales of gilt-edged stocks are defined as net official sales of stocks with over one year to maturity apart from transactions under purchase and resale agreements.

(b) Apart from transactions under purchase and resale agreements.

Table K
Influences on the cash position of the money market

£ billions; *not seasonally adjusted*
Increases in the market's cash (+)

Calendar months	July– Sept. 86	Apr.– June 87	July– Sept. 87	Oct. 1986– Sept. 1987
Factors affecting the market's cash position				
CGBR (+)	+4.0	+4.0	+0.4	+4.6
of which, on-lending to local authorities and public corporations	*+0.3*	*+2.4*	—	*+4.0*
Net sales (−) of central government debt(a)	−3.1	−2.2	−2.0	−6.6
of which: Gilt-edged	*−2.0*	*−1.4*	*−1.4*	*−4.8*
National savings	*−0.9*	*−0.6*	*−0.6*	*−3.0*
CTDs	*−0.2*	*−0.3*	—	*+1.2*
Currency circulation (increase −)	−0.1	−0.4	−0.3	−0.8
Reserves etc	−0.4	+4.6	+0.3	+6.3
Other	−0.3	−0.2	+0.3	+0.4
Total (A)	**+0.1**	**+5.8**	**−1.3**	**+3.9**
Official offsetting operations				
Net increase (+) in Bank's commercial bills(b)	−0.5	−2.3	+0.4	−2.7
Net increase (−) in Treasury bills in market	+0.3	−1.3	+0.9	−1.2
Securities(c) acquired (+) under sale and repurchase agreements with banks	—	−1.1	—	—
Other	+0.2	−1.2	−0.1	−0.3
Total (B)	**—**	**−5.9**	**+1.2**	**−4.2**
Change in bankers' operational balances at the Bank (= A + B)	+0.1	−0.1	−0.1	−0.3

(a) Other than Treasury bills.

(b) By the Issue and Banking Departments of the Bank of England.

(c) Gilt-edged stocks and promissory notes related to guaranteed export credit and shipbuilding paper.

amount of assistance to the money market; this was more than accounted for by the rise during July.

Gross official sales of gilt-edged during the period were £2.6 billion; after allowance for redemptions and official purchases of stock approaching maturity, net sales amounted to £1.4 billion. This was the same net sales total as in the preceding quarter, but the sectoral take-up was quite different. After heavy disposals in the second quarter, the monetary sector began to purchase gilts again in the three months to September. The non-bank private sector showed the opposite pattern of behaviour, disposing of over £1 billion of gilts in the latest quarter after purchasing a similar amount between April and June. The overseas sector made £2.3 billion of purchases in the latest three months, £0.6 billion above the previous record figure in the second quarter of 1987 and exceeding its purchases in the whole of 1986.

Net sales of central government debt exceeded the CGBR by £1.6 billion and largely accounted for the rise of £1.2 billion in assistance provided to the money market. This mainly took the form of a fall in the market's holdings of Treasury bills, much of which occurred in August when the market became nervous about interest rate prospects. In May, the weekly tender had been raised, in stages, from £100 million to £400 million in response to the flow of sterling into the money market arising mainly from official purchases of foreign exchange. During the latest quarter the amount of Treasury bills offered was reduced gradually with the intention of smoothing the profile of the build-up in market assistance expected over the rest of the financial year. Accordingly, the weekly tenders were cut to £300 million from 31 July, £200 million from 4 September, and £100 million from 2 October. In addition to transactions in Treasury bills, a small amount of assistance was provided through purchases of commercial bills. The amount of official assistance outstanding to the money market (other than that provided through dealings in Treasury bills) was £5.4 billion at end-September, compared with £5.1 billion three months earlier, nearly all being provided in the form of eligible commercial bills held outright by the Bank. The level varied during the quarter, however, with total assistance (excluding that conducted through Treasury bills) peaking at around £9 billion on 14 July.

Average daily shortages in the money market fell to some £470 million in the latest quarter, compared with £530 million in the previous three months. Average daily shortages declined sharply after July as money-market flows were in general less unfavourable to the market and with an increase in the proportion of assistance provided through longer-dated bills (reflecting market expectations of higher interest rates), which needed to be rolled over less frequently. Consequently, the average daily shortage fell from some £700 million in July to roughly £300 million in September.

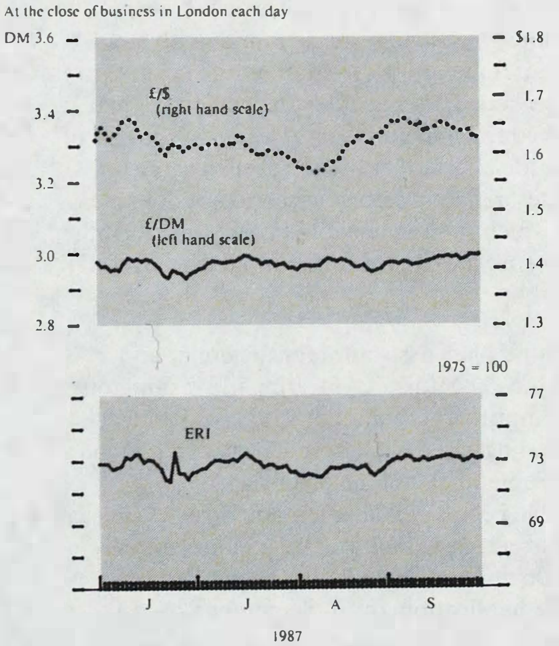
Official reserves

Over the three months to end-September there was an underlying rise in the reserves of $422 million. The reserves rose by roughly $0.5 billion in July and by $0.4 billion in September, but fell by $0.5 billion in August. At the end of September, the reserves stood at $34,808 million, compared with $22,426 million a year earlier.

Table L
Changes in UK official reserves
$ millions

	1987 July	Aug.	Sept.
Change in reserves	**+ 551**	**− 550**	**+ 443**
of which:			
Net borrowing (+)/payment (−) of public debt	− 5	− 93	+ 63
Valuation change on roll-over of EMCF swap	+ 57	—	—
Underlying change in reserves	+ 499	− 457	+ 380
Level of reserves (end of period)	**34,915**	**34,365**	**34,808**

Sterling exchange rates
At the close of business in London each day



The money and foreign exchange markets

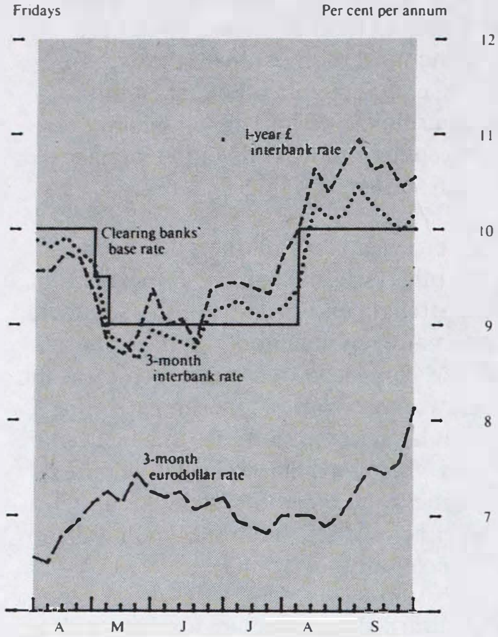
Developments in the money and foreign exchange markets in the third quarter were both less extreme and more mixed than in the first half of the year. In the first six months of 1987, strongly bullish sentiment in both the money and the foreign exchange markets had resulted in a combination of intense downward pressure on interest rates and upward pressure on the exchange rate. Between end-June and end-September the tone of the markets was less bullish. During the period, money-market rates rose by more than one percentage point, while in the foreign exchange market sterling also rose.

There were two main influences on these markets during the quarter: one domestic, the other external. On the domestic front, statistical evidence on the strength and sustainability of demand had an important impact, mainly on the money market but to a lesser extent also on sterling. The second, external, factor was the path of the dollar. Sterling weakened against the strengthening dollar at the end of July but later seemed at times to benefit more than some other currencies when the dollar was relatively weak, perhaps reflecting the openness and breadth of the UK capital markets, but also the higher level of UK interest rates and the strong performance of the economy.

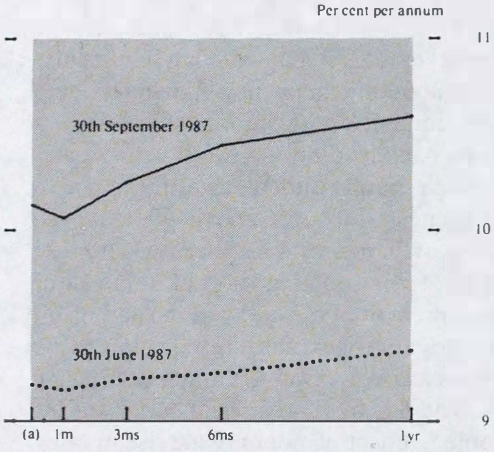
July began with a gently upward-sloping money-market yield curve, with interbank rates from one to six months' maturities at $9\frac{1}{16}$% and the twelve-month rate at $9\frac{5}{16}$%. Banks' base rates were 10% and sterling stood at $1.6205, DM 2.9526 and an ERI of 72.5. With news of a widening of the US trade deficit in May, followed by a favourable reaction to June's PSBR figure, sterling strengthened to $1.6307, DM 2.9943 and ERI 73.5 at the close on 17 July, though money-market rates remained relatively steady, reflecting domestic unease about the buoyancy of demand. Statistics released in the second half of the month showed buoyant retail sales, strong bank lending and much worse than expected trade figures, which sharply undercut sterling and pushed up money-market rates, which rose above $9\frac{1}{2}$% at longer maturities shortly after the trade figures were released. The tendencies towards weaker sterling and higher interest rates were reinforced by the growing strength of the dollar at the end of July. Reflecting these factors, early in August sterling fell below $1.59 for the first time since March and the twelve-month interbank rate rose to around 10%. The money-market yield curve was by then steeply upward-sloping, reflecting not only the rise in rates at longer maturities, but also a fall at the short end. This came about as demand switched from long-dated to shorter-dated paper (with investors attempting to limit any capital loss brought about by a rise in rates). Thus the seven-day interbank rate, which had stood at $9\frac{5}{16}$% on 1 July, had declined to 8% by 3 August.

Earlier in the year, the strength of pressures on sterling and in the money market had forced interest rates lower than seemed warranted by purely domestic evidence of monetary conditions. The weaker tone of the markets in late July/early August presented the opportunity to raise interest rates without prompting renewed upward pressure on sterling. To establish the move to higher rates firmly, on 6 August the Bank's dealing rates in commercial bills were raised by 1% to stand at $9\frac{7}{8}$% in all maturity bands; the commercial banks followed by raising their

Short-term interest rates in London



Sterling interbank rates



(a) For one week.

base rates correspondingly. Although the market appeared to be surprised by the timing, its earlier behaviour had suggested that a rise had been expected. In advance of the June trade figures sterling fell to $1.5645, DM 2.9663 and ERI 71.9 on 10 August, with the twelve-month interbank rate standing above 10½%. In the event, the June trade figures released the next day showed a much smaller deficit than in May and prompted a more positive tone for sterling. In the money market, longer rates fell by about ¼% while rates on short paper rose, as diminished expectations of higher base rates decreased the demand for short-term paper, giving a much flatter yield curve.

With the dollar suffering a sharp setback on news of the US trade deficit for June, the pound moved up, tempered by concern about the next set of money and bank lending figures. When these were announced on 20 August the figures, in particular the lending figures (on which the market tended to concentrate), were worse than had been expected, so that sterling initially fell and money rates edged up. However, the earlier rise in base rates was seen as having tightened policy appropriately; market commentators came to accept that the authorities had acted on a range of indicators, and sterling soon began to recover. By that stage, interest rates abroad had begun to rise, so that sterling's strength was not reflected in much change in domestic money-market rates.

Towards the end of August, lower oil prices undermined sentiment in the foreign exchange markets and, with large outward investment flows and worries about the next set of trade figures, sterling weakened; money rates stayed firm. When July's worse-than-expected trade figures were released at the end of August they had little effect on either the exchange rate or money-market rates, reflecting a further period of dollar weakness—from which sterling benefited more than the other major currencies—and the existing differential favouring UK interest rates.

In the wake of central bank assistance for the dollar and expectations that the G7 Ministers' meeting in Washington would reaffirm commitment to the Louvre accord and stable exchange rates, sterling eased back from a peak of $1.6645 reached during 8 September, but, helped by a run of better-than-expected economic data, remained very firm against the continental currencies. Conditions eased in the money market, with the three-month rate falling below 10% on 18 September. The publication, on 24 September, of worse-than-expected trade figures for August set sterling back temporarily, but with analysts viewing at least part of the increase as transitory the pound moved up in the dollar's slipstream. This prompted some central bank intervention, but sterling nevertheless continued to rise, ending September at $1.6290, DM 2.9957 and ERI 73.1. In the money market interbank rates ended September in excess of 10% across the maturity range.

The gilt-edged market

The three months under review were generally uncomfortable for the gilt market, with yields rising as the result of worries about overheating in the domestic economy and weak bond markets abroad. Against this background, retail demand for gilts was uneven at best and the market makers acted defensively by

Table M
Issues of gilt-edged stock

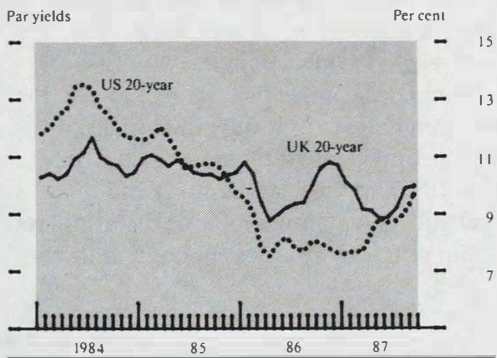
Stock	Amount issued (£ millions)	Date announced	Method of issue	Date issued	Price per £100 stock	Payable per £100 stock: Initial payments (£)	Payable per £100 stock: Further instalments(a) (£)	Redemption yield at issue (per cent)	Date exhausted
3% Treasury 1992	500	10/7	Minimum price tender	15/7	85.50	Fully paid		6.49	23/10
8% Treasury 1991	1200(b)	17/7	Minimum price tender	22/7	97.25	20.00	77.25 (24/8)	8.78	17/9
9% Treasury 2008 'A'(c)	800	15/9	Bid price auction	23/9	94.60(d)	54.60	40.00 (9/11)	9.60(e)	23/9

(a) If not fully paid at time of issue.
(b) Of which £200 million was reserved for the National Debt Commissioners.
(c) The prospectus includes provision for exemption from UK taxation in favour of non-resident holders and for the loan to be available in bearer form.
(d) The lowest accepted price for competitive bids. The non-competitive allotment price was £94.85.
(e) Yield at lowest accepted price for competitive bids.

shortening their own books. Accordingly, the demand for gilts was limited and gross official gilt sales were lower than in earlier months. The second experimental auction of gilt-edged stock was held in September.

The authorities' aim remained that of fully funding the PSBR over the financial year as a whole through debt sales to the non-bank private sector and external and foreign currency finance of the public sector. They began the period with calls secured on 8% Treasury 2002/06 'A' which had been issued on 14 May and exhausted on 24 June. Only one stock was scheduled to mature during the period—3% Treasury 1987, of which £950 million was in market hands. The authorities held some of the £500 million package of tranchettes issued to the Bank at the end of June, together with quantities of other conventional and index-linked stocks.

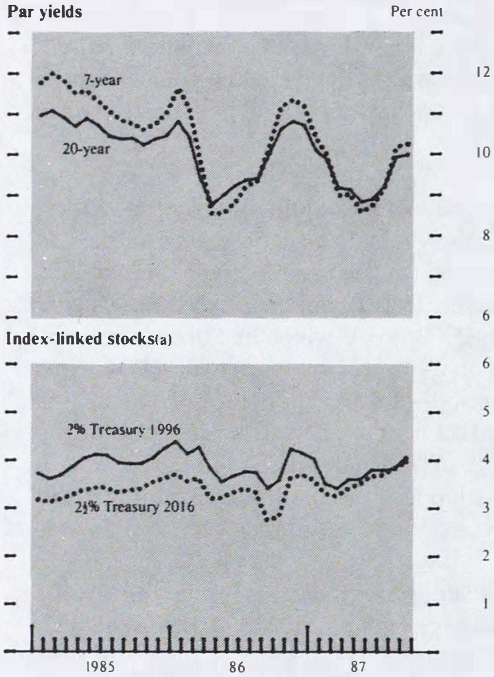
Gross redemption yields on UK and US 20-year government securities



The previous period had ended with the market having lost its sense of direction after the general election, and yields had risen above 9%, compared with around 8½% earlier in June. July began with yields on 5-year gilts around 9⅛% and those on longer stocks only a little higher. Part of the reason for the weakening in the market in the second half of June was that in the immediate post-election period the 'wall of money' from abroad expected in the gilt market had apparently failed to materialise (though the statistics show large overseas purchases of gilts in the third quarter). Gilt prices looked dear when a surge in demand seemed not to appear: they began to drift down again in late June. This bearish trend continued into July, reinforced intermittently by worries about the strength of demand. The opportunity provided by a steadier market in the middle of the month was taken to issue both a partial replacement for the maturing low-coupon stock, £500 million of 3% Treasury 1992, issued on 10 July, and a new high-coupon tap stock, £1000 million of 8% Treasury 1991, on 17 July. In late July, three sets of statistics underlined the buoyancy of the domestic economy. First came news of record bank lending in June and figures showing strong growth in retail sales, followed by the announcement of a much larger than expected current account deficit in May. In response to these figures the market turned down sharply, with yields nudging 9½%. Around the turn of the month, gilts were undermined by a strengthening dollar and rising US bond yields. Under these influences, gilt prices continued to fall, despite an encouraging CBI survey and rumours of gilt buying from Japan. Yields approached 10%, rebounding from that level on news of the rise in the reserves in July. Official sales of the reactivated short tap into the market served to dampen the recovery in prices. The market was set back when the Bank raised its dealing rates in bills on 6 August, closely followed by a rise in banks' base rates. The official move to higher interest rates surprised the gilt market and resulted in yields on short-dated gilts piercing 10%, although long rates remained below that level.

Nervous after the rise in interest rates, the market continued to decline over the next two or three weeks, with news of better-than-expected wholesale prices and a relatively low current account deficit being offset by the effects of statistics showing continued buoyant retail sales and a lower-than-expected PSBR surplus. Figures showing a rise of £4.9 billion in bank lending in July set the market back sharply at the end of the month, taking yields at the short end to around 10½%.

Gross redemption yields on UK government securities

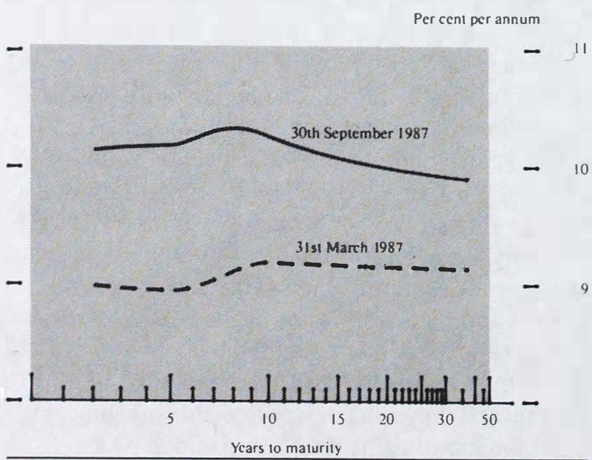


(a) Real yields assuming 5% inflation.

Early in September, a weaker tone for sterling and continued weakness in overseas bond markets contributed to uneasy conditions in the gilt market, and retail demand slackened ahead of the second auction of gilt-edged stock expected later in the month. The details of the auction, for £800 million of 9% Treasury 2008 'A', to be held on September 23, were well received by the market, the tone of which had begun to change around the middle of the month on an improvement in the US dollar and a levelling off in the US bond market. The improvement in sentiment continued with a run of favourable news on the domestic economy, particularly the much lower than expected increase in bank lending in August, so that yields had fallen to around 9½% before the auction.

The market became unsettled just prior to the auction, reflecting uncertainties about the volume of retail demand. The amount of stock on offer in the auction was covered one and a half times, with allocation being at an average yield of 9$\frac{7}{16}$%. The margin of cover, which compared with two and a quarter times coverage at the first auction and typical figures of two and a half times coverage in US auctions, left the market feeling disappointed, and prices began to ease back after the result was announced. The fact that the market had already declined, coupled with the resilience of sterling, moderated the fall which occurred when the poor August trade figures were released the next day. Nevertheless, the news of the much larger than expected deficit took long yields to almost 10% and those at the short end to around 10¼%. The market ended September looking directionless and rather concerned about renewed weakness in bond markets abroad.

Time/yield curves of British government stocks



The uneasy market conditions prevailing during much of the period limited the demand for gilts. Gross official sales in July amounted to £1.4 billion, over a third of which represented calls secured by earlier part-paid sales. After the first half of July, demand for stock waned noticeably, with only £370 million of gross sales in the whole of August. Sales picked up in September, totalling £880 million, about half of which represented the first instalment on the auction stock.

During the period as a whole, gilt yields rose, with the yield on 5-year gilts rising from 9¼% on 1 July to 10$\frac{3}{16}$% on 30 September and those on 20-year stocks increasing from 9$\frac{1}{16}$% to 9¾%. Thus the yield curve rose across the maturity range and ended the period with a downward slope in the longer maturities. Yields on index-linked stock, which had risen during the previous quarter, continued to increase in the three months to September. The real rate of return on Treasury 2½% Index-Linked 2016 rose from 3¾% on 1 July to 4¼% on 30 September (both calculated before tax assuming 5% inflation).

The easier tone to the gilt market was reflected in a decline in turnover during the period under review. Total gilt turnover averaged £3.6 billion per day between July and September—split evenly between intra-market transactions and those conducted with outside customers—as compared with about £5 billion per day in the second quarter. Turnover in the long-gilt futures contracts on the London International Financial Futures Exchange also eased back, averaging some 27,000 contracts per day in the latest quarter as against 30,000 between April and June. During the quarter, the first warrants on gilt-edged stock were issued, mostly by gilt-edged market makers. These instruments allow the purchaser the option to buy ('call') or sell ('put') specified amounts of gilt-edged stock at predetermined prices. By the end of September, call warrants exercisable into £780 million of stock had been issued, while the corresponding figure for put warrants was £330 million.

Table N
Amounts raised in the domestic capital market
£ millions; *not seasonally adjusted*
Net cash raised +

	1986		1987		
	Q3	Q4	Q1	Q2	Q3
UK private sector					
Loan capital and preference shares	+ 474	+ 106	− 777	+ 435	+ 750
Equity capital	+2,288	+2,339	+1,571	+2,133	+7,298
Unit trusts	+1,033	+1,743	+1,726	+1,234	+2,982
Issues on the unlisted securities market	+ 82	+ 145	+ 105	+ 184	+ 453
Local authorities					
Stocks	—	− 25	—	− 14	− 35
Bonds	− 68	− 49	− 25	− 56	− 28
Overseas	+ 39	+ 104	—	+ 11	—

Other capital markets

Equity prices moved ahead strongly following the general election, with the FT-Actuaries all-share index increasing by 8% to 1238 in the first half of July. The market was thereafter unsettled by political tensions in the Gulf, weaknesses in the New York and Tokyo markets and growing nervousness about domestic economic prospects. The rise in base rates on 6 August surprised the market, and the July bank lending figures also gave cause for concern. Equity prices in late July and August also reflected some doubts about the market's capacity to absorb the high level of new issues; the British Airports Authority privatisation at the end of July had been oversubscribed, but there were reports that some rights issues had not been well received, with sizable amounts left with the underwriters. The FT-Actuaries all-share index fell by 10% to 1114 between 16 July and 20 August. This slide was, however, largely reversed during September, as expectations of further rises in interest rates receded and sentiment about the state of the domestic economy improved following the publication of a series of favourable indicators. In addition, earlier fears about the market's ability to digest the new issues diminished. Nevertheless, September ended with the market in cautious mood, reflecting doubts about the sustainability of the current economic upturn.

Net capital issues by listed companies were an unprecedented £8.0 billion in the third quarter, taking the amount raised this year to £11.4 billion, well in excess of the £9.3 billion raised in the whole of last year. Equities again accounted for the lion's share of new issues; the largest were rights issues by Blue Arrow (£838 million), Midland Bank (£692 million) and BPCC (£645 million). Other sizable issues were placings by Thorn EMI (£367 million), Williams Holdings (£322 million) and Pilkington (£266 million), and rights issues by Trafalgar House (£316 million), Ladbrokes (£267 million), Smiths Industries (£223 million) and Siebe (£214 million).

Volatility of UK share prices between Big Bang and end-September 1987

Early this year some companies and market participants formed the view that the Big Bang changes in The Stock Exchange had led to a general increase in the volatility of UK equity prices. In the light of this concern, some work was carried out in the Bank to see whether or not volatility had generally increased in the months following Big Bang. As we do not have a structural model for share price volatility, it is not possible to disentangle the effects of Big Bang from the other factors which might affect volatility. However, a simple comparison was made of the volatility of the prices of a sample of individual stocks and of a market index before Big Bang and in the subsequent period up to the end of September. This study does not indicate that the volatility of share prices was in general higher in the first eleven months following Big Bang. But it must be stressed that this study was an examination of whether volatility has been consistently higher in the period following Big Bang. It did not encompass an examination of whether the extent of the market downturn seen in October was in any way exacerbated by the new market structure in London.

Share prices change when investors' perceptions about either the relative prospects for a specific company, or for the economy as a whole, change in response to new information. Share price volatility in any particular period will, therefore, in large part reflect the quantity of new information. It will also be affected by the degree of liquidity in a particular market, because the extent to which a given order which is taken on to the book of a market participant will lead that firm to change its prices will depend upon the liquidity of the market for the particular share.

Big Bang has had four major effects on the equity market. There has been a substantial increase in the number of market makers—there are now thirty-four equity market makers against thirteen jobbers before Big Bang. There has been a marked improvement in the up-to-date price information available to both market participants and investors. In addition, transactions costs have fallen significantly, especially for large investors, and the net effect of this and the other developments has been to increase the turnover in the market very substantially. Average daily turnover of UK equities by customers has increased from £643 million in the first nine months of 1986 to £1,156 million in the first nine months of this year, an increase of 80%, and, if intra-market transactions are included, turnover increased by almost 250%.

It is not self-evident why there should have been a general increase in the volatility of share prices in this environment.

Volatility[a] of equity prices

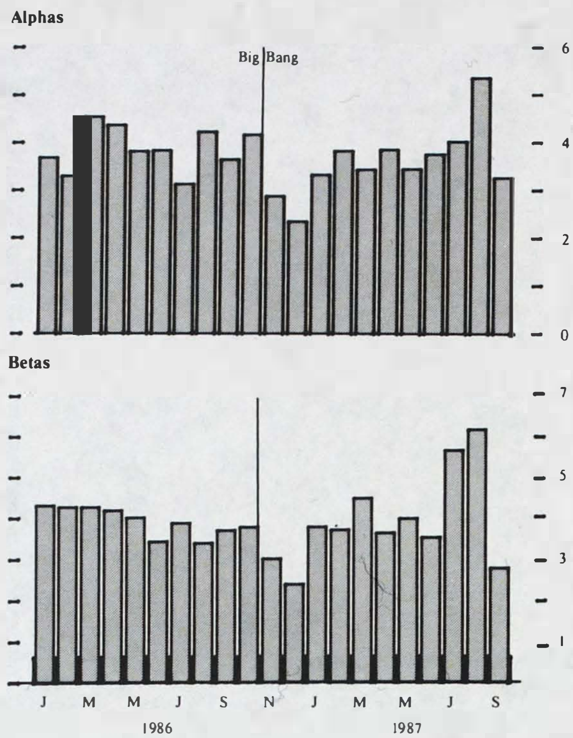
	Alpha(b)	Beta(c)	FT all-share price index
1986 Q1	4.05	4.60	1.89
Q2	4.13	4.43	2.11
Q3	4.01	3.88	2.44
Q4	3.41	3.62	1.50
1987 Q1	3.73	4.29	1.43
Q2	3.86	4.20	1.99
Q3	4.40	5.60	2.89

(a) Standard deviation of weekly percentage price changes. The figures for alphas and betas show the non-weighted average volatility for the sample.

(b) Alphas are the largest and most liquid equities in the market. All FTSE stocks are alphas and other stocks are considered for inclusion in this category if they have market capitalisation in excess of £625 million, turnover of at least £100 million per quarter and ten or more market makers.

(c) Betas have at least four market makers willing to make firm prices.

Average (non-weighted) volatility[a] of the prices of a sample of equities



(a) Standard deviation of weekly percentage price changes.

The greater liquidity will have made price movements caused by large orders smaller. In the more liquid and transparent market, news would tend to be discounted more quickly. Investors can alter their portfolios more easily and more cheaply than was the case before Big Bang. This means that volatility, calculated as the standard deviation of percentage price changes over short periods (hours or days), might be higher because the price movements are concentrated in a shorter period—for example, a 10% change in the price of a share following a news announcement which might have taken place over two days in the old market structure might now take place within a day. But this, rather than in general being a worrying development, would indicate that the market was operating more efficiently—price volatility based on percentage price changes over a longer period, for example a week, should not be affected.

A simple comparison of the volatility, calculated using weekly percentage price changes, of the prices of a random sample of 50 alphas and 50 betas and the FT-Actuaries all-share price index, before and after Big Bang, does not indicate that volatility was increased by the Big Bang changes—see the table and chart. Volatility increased in the third quarter of this year, reflecting the uncertainties in the market that followed the increase in base lending rates and the announcement of the adverse trade and money supply numbers. There was also very substantial volatility in October when there was a fall in prices on all major stock markets.

It should be emphasised that this assessment of volatility is incomplete, in particular because the period since Big Bang is too short for rigorous analysis. The Bank will be undertaking further work in this area, and this will take account of experience in the recent market downturn.

Table P
Amounts raised by sterling bond issues in the eurosterling market
£ millions

	Fixed-rate(a)		FRNs
	UK borrowers	Overseas borrowers	
1986	1,787	1,814	3,700
1987			
Q1	1,403	1,775	250
Q2	1,174	1,231	150
July	210	400	100
August	150	57	100
September	310	—	200
Q3	670	457	400

(a) Of which, £620 million were equity-related in the third quarter.

New issue activity in the eurosterling markets slowed in the third quarter against a background of generally rising medium and long-term interest rates. New issues were £1.5 billion, £1 billion down on the previous quarter, with issues of convertibles more resilient than issues of straight debt. The straight debt issue by Elders IXL for £300 million was, however, the biggest single eurosterling deal so far. A £100 million convertible for Next introduced a new aspect into the euromarkets for a sterling convertible in that it offered existing shareholders first refusal of the issue. There were four FRN issues worth a total of £400 million in total during the quarter, including three mortgage-backed issues and an issue for the Leeds Permanent Building Society, the first building society FRN issued for a year.

International bond issues by UK borrowers in currencies other than sterling amounted to the equivalent of £328 million in the third quarter. This was £200 million down on the previous three months, largely reflecting a sharp reduction in borrowing by industrial and commercial companies. The US dollar was the most popular currency of issue, with three issues worth a total of $300 million (£185 million). The largest was a $150 million fixed-rate issue for British Telecom which was swapped into floating-rate sterling.

Sterling commercial paper

Gross issues of sterling commercial paper were £5,070 million during the third quarter, compared with £3,599 million in the previous three months. Redemptions during the latest three months amounted to £4,680 million, and the total of paper outstanding rose from £1,817 million to £2,207 million. By the end of September, eighty-one programmes had been notified to the Bank and paper had actually been issued under sixty-five of these.