

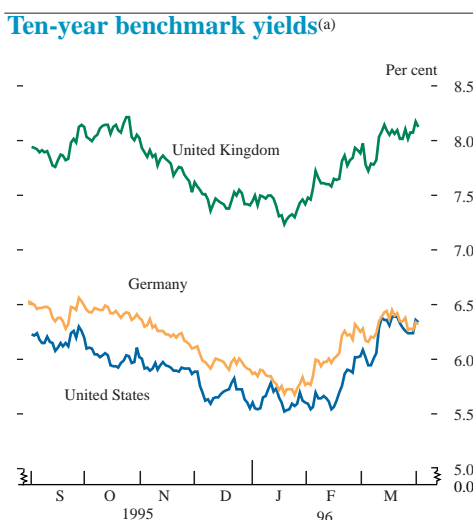
# The operation of monetary policy

- *The year-long rally in international bond markets came to an end in the first quarter, as markets anticipated a turning point in official interest rates. Price volatility implied by options on bonds in major markets also increased.*
- *UK official interest rates were reduced twice in the first quarter, on 18 January and 8 March.*
- *Technical conditions in the money market were difficult at times during the quarter, reflecting in part market anticipation of a cut in rates.*
- *Gilts not only shared in the global rise in yields, but saw spreads widen against continental Europe. Yields on conventional gilts rose by much more than those on index-linked gilts.*
- *Funding in 1995/96 met the Government's remit to the Bank. Successful bids in the three gilt auctions held in the quarter were widely spread. The Government's funding remit to the Bank for 1996/97 was published on 27 March 1996.*
- *Foreign exchange markets were much calmer than bond markets in the quarter. Sterling strengthened a little on balance.*

## International bond and money-market environment

The year-long rally in international bond markets came to an end in the first quarter of this year, even though it became apparent that output in the major overseas economies had hardly expanded at all towards the end of last year. Inflation in these countries continued at around 2% per annum, and official interest rates were cut in a number of countries (see the article on the international environment on pages 146–53). At the start of the quarter, the markets still expected short-term interest rates to fall further. Indeed, average three-month US money-market rates fell from 5.7% in December to 5.4% in January; in Germany the fall was from 3.8% to 3.5%; in France from 5.5% to 4.6%; and in the United Kingdom, from 6.5% to 6.3%. Only in Japan, with a discount rate of just 0.5%, was there any sense that interest rates had reached a low point.

Bond yields at the start of the quarter were around their lowest levels since the peak of the 1993 rally; the US long bond yield had dropped below 6% and ten-year gilt yields were around 7.4%, the lowest since March 1994. Nevertheless, as the quarter progressed, the perception grew in markets that the global cycle of interest rate cuts might be coming to an end. Statements by policy-makers in the three largest economies encouraged this view, as did economic news later in the quarter, particularly data in the United States, suggesting that stronger real growth was under way. The fall in short-term interest rates slowed, and was reversed in the United States; short-term rates implied by futures contracts rose, as did longer money-market rates and bond yields. Equity prices were generally resilient, despite the sharp rises in bond yields, which may suggest that markets revised upwards their expectations of



(a) Gross redemption yields on a semi-annual basis.

future world demand—as does the implied increase in expected future inflation, where this can be derived (as in the United Kingdom). But the rise in bond yields may also reflect concern over the long-term fiscal outlook and a rise in uncertainty as a perceived turning point in the interest rate cycle approached. (Implied volatility<sup>(1)</sup> increased over the quarter in a number of major bond markets.) Comparisons have been made with the worldwide rise in bond yields at the start of 1994, but neither the initial fall in yields nor, so far, the correction have been as large as in that episode.

The first signs that the rally was at an end came not from the real economy, but from the political sphere. Continued delays in setting a US budget acceptable to the Congress resulted in concerns about a technical default by the US government, particularly if the heavy quarterly refunding programme due at the start of February was halted. In the United Kingdom, the reduction in the Government's majority drew attention to the possibility of an early general election. While reductions in official rates in both the United Kingdom (18 January) and United States (31 January) barely moved yields in either bond market, uncertainty grew, over both the political situation and the possibility of further cuts, and implied volatility edged higher, rising to nearly 8.5% in the United Kingdom, and by a similar amount to nearly 7% in the United States.

While signs of nervousness were already evident in bond markets in January, the major turnaround in sentiment came early in February, triggered by an unchanged German discount rate and comments by Bundesbank council members suggesting that German growth would rebound in the second half of 1996, and that there would be no further German easing until January's M3 data were seen. These turned out to be strong (if not quite as strong as market expectations) and the change in sentiment was exacerbated by technical and chart positions; open interest in the bund futures contract had been steadily increasing since the beginning of December 1995. Implied volatility on the bund futures contract jumped by around one percentage point at the start of February.

Growing international expectations of a turn in rates were further supported by remarks by the Japanese Finance Minister Kubo on

**Table A**  
**Interest rates, gilt yields and exchange rates; selected dates<sup>(a)</sup>**

1996	Interest rates (per cent per annum)				Short sterling future (d)	Gilt yields (b) (per cent per annum)				Exchange rates		
	Sterling interbank rates (c)					Conventionals	Index-linked			ERI	\$/£	DM/£
	1 month	3 months	6 months	12 months			Short	Medium	Long			
29 December 1995	61/2	61/2	611/32	65/16	6.09	6.79	7.41	7.66	3.56	83.1	1.5492	2.2200
17 January	61/2	613/32	65/16	69/32	6.05	6.68	7.32	7.66	3.57	83.2	1.5295	2.2390
18 January	69/32	61/4	65/32	61/16	5.72	6.55	7.24	7.61	3.55	83.0	1.5230	2.2376
31 January	69/32	615/64	67/64	65/64	5.89	6.80	7.48	7.80	3.63	83.1	1.5044	2.2411
7 February	69/32	65/32	63/64	61/32	5.81	6.91	7.61	7.94	3.68	84.4	1.5385	2.2728
7 March	63/32	63/64	63/64	63/32	5.91	7.10	7.82	8.14	3.74	83.7	1.5302	2.2619
8 March	63/32	67/64	61/8	67/32	6.10	7.36	8.03	9.30	3.83	83.7	1.5255	2.2634
29 March	6	63/64	61/8	63/8	6.08	7.51	8.13	8.37	3.81	83.4	1.5262	2.2531

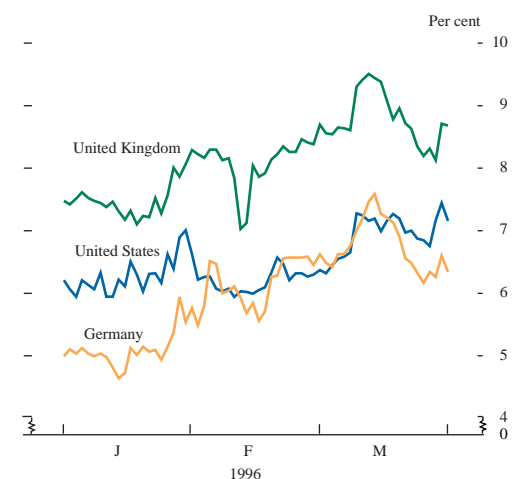
(a) Close-of-business rates in London.

(b) Gross redemption yield. Representative stocks: short—8% Treasury 2000; medium—8½% Treasury 2005; long—8% Treasury 2015; index-linked—2½% Index-Linked Treasury 2016 (real yield assuming 5% inflation).

(c) Middle-market rates.

(d) Implied future rate: June 1996 contract.

(1) The expected standard deviation of annualised movements in the respective government bond futures prices, as implied by options prices.

**Bond market volatility<sup>(a)</sup>**

(a) The expected standard deviation of annualised price movements in the respective futures contracts implied by options prices.

the adverse effect that low rates were having on pensioners' incomes; by further Bundesbank comments suggesting that German short-term rates were already at the correct level for sustainable growth; and by FRB Chairman Greenspan's Humphrey-Hawkins testimony which was also interpreted to suggest that the current level of US short-term rates was consistent with sustainable growth.

However, at the beginning of March, markets began to anticipate the possibility of a cut in UK official rates, as domestic data releases were taken to increase the prospect of low inflation. Sentiment was particularly influenced by a Purchasing Managers' Index which suggested weakening growth. Rates were cut by 25 basis points on 8 March, but gilts by this stage were unmoved, with even some profit-taking in the short end of the yield curve ahead of the announcement. But events earlier that day were entirely overshadowed by the most influential market event of the quarter; US non-farm payrolls for February rose by 705,000 compared with market expectations around 300,000. The US long bond fell by nearly three points on the data release, with gilts falling in consequence by more than two points. US long-bond yields rose to technical resistance around 6.70%, and implied volatility in the Treasury market increased by 1% to nearly 7.25%, reflecting renewed uncertainty as to the actual and prospective state of the US economy. Hopes for further US rate cuts diminished dramatically, and the money-market futures strip, which had previously implied falling rates out to December 1996, steepened sharply, with losses all along the curve and upward shifts in rate expectations of over 50 basis points in the 1997 contracts.

Bond markets stabilised later in March, although volatility remained high in Treasuries, while returning to pre payrolls data levels in gilts and bunds. With both the Bundesbank and Federal Open Markets Committee (FOMC) leaving rates unchanged at the end of March, markets awaited further evidence of real economic activity to give direction. Ten-year gilt yields finished the quarter at over 8%, compared with around 7.4% at the end of December.

**UK money markets**

The two 25 basis-point reductions in UK official interest rates during the first quarter provide an interesting contrast. The first move—on 18 January—was not generally expected by market participants, whereas that on 8 March was widely discounted. Nevertheless, it was the first move which would appear to have been more readily accepted by the market despite the element of surprise in the precise timing. To judge the state of the market's expectations prior to each cut, a wide variety of sources are available; the most commonly quoted is the three-month futures price. On 17 January, the March 1996 contract, which matured a little over two months from then, was trading at an implied rate of  $6\frac{1}{16}\%$ , reflecting an expectation of one 25 basis-point reduction in official rates by mid-March. That this reduction was not expected imminently can be seen from prices for three-month forward rate agreements (FRAs) prior to the move, which implied three-month rates of  $6\frac{11}{32}\%$  in mid-February, compared to the then current level of three-month rates of  $6\frac{13}{32}\%$ . The monthly Monetary Meeting that had taken place on 17 January was followed the next morning by retail sales and retail price figures for December and market expectations were broadly undisturbed by these events. The

announcement at 9.45 am of a 25 basis-point reduction in rates, to 6.25%, produced a downward shift in the entire futures curve of about  $\frac{7}{32}\%$ . At this point the market's expectation was that three-month rates might reach a trough of  $5\frac{3}{4}\%$  in the third quarter of this year, but this expectation did not hold for long.

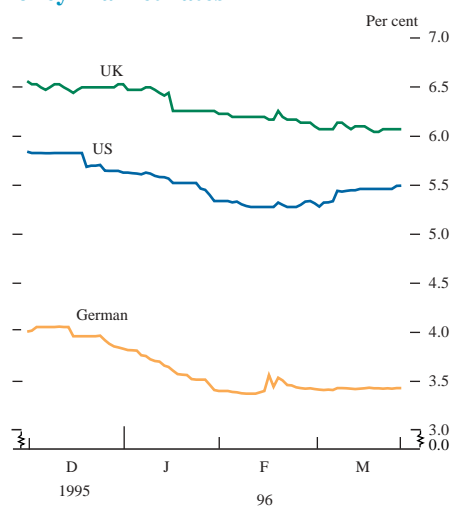
The reduction in rates on 8 March, in contrast, was almost fully priced into the market. The March futures price had been steady for several days at an implied rate of  $6\frac{1}{16}\%$  which, given the tightness of short-dated money up to that point, can be fairly said to represent considerable confidence in an impending cut (the contract actually settled at an implied rate of  $6\frac{1}{8}\%$  on 20 March). Prices in FRAs projected three-month rates of around 6% in the period immediately after that month's Monetary Meeting (on 7 March) and three-month money in the cash market had also declined to  $6\frac{1}{16}\%$  in the days ahead of the announcement. But, whereas in January the money market rallied powerfully on the announcement of the cut, in March the markets were weak before the move and, after a brief bounce immediately after the move, continued to deteriorate. This muted response was partly due to weakening international markets around that time; poor German M3 numbers had been released on 5 March, reducing the prospects of an early reduction in key German rates. In addition, overnight ahead of the reduction in rates to 6%, the latest CBI survey was sufficiently strong to cast some doubt about the merits of a further reduction in rates.

Reaction to the reduction in official rates to 6% on 8 March was, however, overwhelmed later in the trading day and on the following Monday by the international market response to the release on 8 March of exceptionally strong non-farm payroll figures in the United States, described above. Over the course of 8 and 11 March, implied rates from the short-sterling curve rose sharply: by 45 basis points at December 1996 and 60 basis points at December 1997. Although these movements were a somewhat dramatic example of the market's sensitivity to international developments, sentiment was frequently shaped during the quarter by changing prospects for monetary easing elsewhere. Early in the quarter, the weakness of the German economy had led to expectations that German Lombard and discount rates would be reduced in the near future and these expectations were further fostered at times by cuts in the Bundesbank's repo rate, although strong growth in German M3 served to dampen the most bullish expectations. And in the United States, expectations of a reduction in the target for the federal funds rate, which had waned during the quarter, were extinguished by the economic data towards the end of the quarter.

The exchange rate was often a strong influence on the sterling money market during the quarter, but rarely a source of concern. Among domestic influences, the political background was an occasional source of concern. And, although the overall picture of domestic economic activity and inflationary pressures provided support for the market, there were persistent concerns about the significance of rapid growth in the broad monetary aggregates.

By the end of the quarter the short-sterling futures curve was upward sloping throughout, with three-month money expected to rise to  $6\frac{21}{32}\%$  by the end of this year and 8% by the end of 1997. This compares to the end of the previous quarter when three-month rates were expected to reach  $6\frac{5}{32}\%$  and  $6\frac{7}{8}\%$  at the end of 1996 and

**UK, US and German three-month money-market rates<sup>(a)</sup>**



(a) Interbank rates.

1997 respectively. This deterioration in sentiment resembled that seen in the United States over the same period although it was rather greater in the sterling curve. Parallels were drawn by some commentators between developments in the US and UK economies, so that just as the United States was seen to be moving fairly swiftly out of a period of sluggish growth, so the United Kingdom was thought likely to do, at least by the second half of this year. In contrast, with the German economy still seen to be in a period of very slow growth, the curve of three-month German futures rates was still modestly lower for 1996 than it had been at the end of Q4 and implied rates by end-1997 were no more than 28 basis points higher.

**Table B**  
**Influences on the cash position of the money market**

£ billions; *not seasonally adjusted*  
Increase in bankers' balances (+)

	1995/96	1996		
	Apr.–Dec.	Jan.	Feb.	Mar.
<b>Factors affecting the market's cash position</b>				
Under/overfunding (+/-) (a)	3.9	-4.7	-3.8	5.1
Other public sector net borrowing from banks and building societies (-) (b)	0.9	0.5	0.4	-0.1
<i>of which, local authorities' deposits with banks and building societies (+)</i>	<i>0.8</i>	<i>0.2</i>	<i>0.3</i>	<i>-0.4</i>
Currency circulation (-)	-3.1	3.2	-0.3	-1.5
Other	5.1	-6.0	2.3	-1.6
<b>Total</b>	<b>6.9</b>	<b>-7.0</b>	<b>-1.4</b>	<b>2.0</b>
Increase (+) in the stock of assistance	2.3	3.8	-0.7	-3.1
Increase (-) in £ Treasury bills outstanding (c)	9.1	-3.1	-2.1	-1.2
Increase in bankers' balances at the Bank	0.1	—	—	0.1

(a) From 1993/94 central government net debt sales to banks and building societies are included in funding.

(b) From 1993/94 banks' and building societies' transactions in local authorities' and public corporations' listed sterling stocks and bonds are included in funding.

(c) Other than those held outright by the Bank and government accounts but including those purchased by the Bank on a repurchase basis.

Technical conditions in the money market were difficult at times during the quarter, particularly ahead of the March reduction in official rates. Somewhat larger daily shortages, reflecting normal fluctuations in the stock of assistance, coincided with expectations of an easing in official rates, which tended to make market participants less willing to sell paper to the Bank. The Bank responded in a variety of ways. The Treasury bill tender had already been reduced from £1,500 million per week to £800 million during the last quarter of 1995, in anticipation of tighter money-market conditions. The Bank continued the process seen in the previous quarter of increasing the pace at which it injected liquidity during the course of each day and progressively reducing the market's recourse to late-lending operations. The twice-monthly gilt repo facility continued to play an important part in helping to maintain appropriate money-market conditions and the Bank was content to respond to a continued high level of interest in the facility by allowing money allocated to the market through this means to increase from £4 billion at end-December to £5.4 billion in the period from mid-January to early March. At the 13 February rollover, however, the Bank declined to increase the allotment of funds, since its projections of the stock of assistance in the weeks ahead suggested that to do so would not necessarily leave the Bank in a position to maintain appropriate day-to-day money-market conditions over that period.

Some commentators interpreted the increased size of the shortages in the run up to the March Monetary Meeting (they averaged £1.35 billion in the week before the meeting against an average for the quarter as a whole of £870 million) as an attempt to restrain the market's interest rate expectations. However, the cause of the increased daily shortages was the intractability of many of the shortages and the fact that very short-term bills were offered to the Bank or that assistance was taken in the form of substantial (overnight) late lending which significantly increased shortages in following days. Immediately following the reduction in rates on 8 March, conditions eased as the bills offered for purchase in daily operations increased in maturity and recourse to late lending was reduced. And this easing of conditions resulted in a reduced demand for funds from the gilt repo facility, with the total amount outstanding falling back to £4.9 billion on 7 March and £3.1 billion on 21 March.

The Bank also made one technical change to its bill dealing rates at the time of the reduction in rates on 8 March. Although Minimum Lending Rate was reintroduced for the day at  $\frac{1}{4}$  percentage point below its level on 18 January, the rates at which the Bank purchased short-term bills in its daily operations were reduced by

only  $\frac{3}{16}\%$  (from  $\frac{6}{8}\%$  to  $\frac{5^{15}}{16}\%$ ). This was necessary since the Bank's bill dealing rates are rates of discount, whereas the interbank rates that the Bank seeks to influence are simple yields. In consequence, as the level of rates falls, the Bank's discount rate needs to fall by a slightly smaller amount. Experience has shown that money-market management is easier if the dealing rates are kept closely aligned with the aim for interbank rates.

## Underperformance of the gilt market against Europe

Gilts significantly underperformed core European bond markets over the quarter, with the bulk of the widening in the spreads coming in March. At ten years, gilts had initially yielded around 160 basis points more than bunds, until mid-February, when the spread briefly dipped below 150 basis points as hopes for further German discount rate cuts diminished. But this level was not held and, with political uncertainties increasing in the United Kingdom (including those resulting from the release of the Scott report), the spread began to widen again. There was further underperformance in the gilt market with concern over the possible PSBR and balance of payments effects of bovine spongiform encephalopathy (BSE) at the end of March.

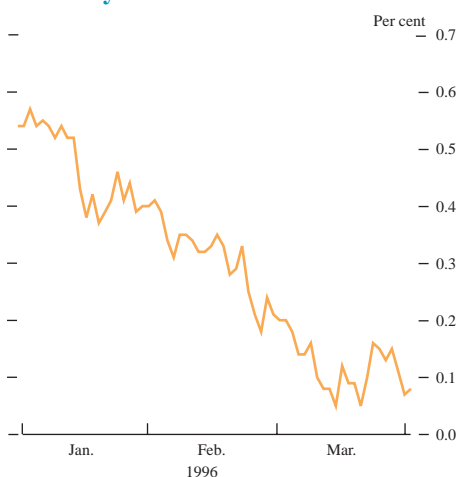
At the height of BSE concerns, the ten-year gilt/bund spread widened to over 180 basis points, wider than at any time since immediately after the United Kingdom's exit from the exchange rate mechanism in September 1992. Spreads at shorter maturities moved even more strongly, with the five-year gilt/bund spread widening to around 235 basis points from under 200 basis points at mid-February, and the two-year spread widening by over 50 basis points in the same period to 300 basis points. The greater underperformance at the short end of the UK yield curve may also have reflected uncertainty over the course of economic policy in the run up to, and beyond, a general election. Supply effects may also have played a role; there was no UK ten-year conventional gilt issuance in the first quarter of this year but there were two short gilt auctions. German issuance by contrast (both government and corporate) in the first quarter was concentrated at ten years, with just one five-year auction.

Underperformance was greater against French OATs as spreads between bunds and OATs narrowed. At the beginning of the year the ten-year OATs had yielded 60 basis points more than bunds; but by the end of March the spread had fallen to under 20 basis points. Anticipation of European monetary union may be an increasing influence on gilt/bund/OAT spreads. The OAT market was also supported by a period of relative political stability following last year's elections and industrial action, a stronger franc and by Banque de France rate cuts.

## Gilt funding

Gross sales of gilts during the final quarter of the financial year totalled £10.4 billion, bringing the total for the financial year as a whole to £30.7 billion. The increased pace of funding in the final quarter reflected the extra auction added to the original schedule (of two per quarter) at the time of the upwards revision to the gilt sales target announced in the November Budget. Table C shows the evolution of the gilt sales target during the year; as can be seen, the final total of £30.7 billion gilt sales represented a small underfund on the Budget target. The current estimate for the cumulative

### Ten-year yield spread of France over Germany<sup>(a)</sup>



(a) Yield on French government 7 $\frac{1}{4}\%$  2006 stock less that on German government 6% 2006 stock.

### Table C The 1995/96 PSBR funding requirement and outturn

£ billion

	Original remit	Summer forecast	Budget forecast	Outturn
PSBR forecast/outturn	21.5	23.6	29.0	32.1
Net change in official reserves	—	—	—	-0.2
Gilt redemptions	4.1	4.1	4.1	4.1
Under/overfund from 1994-95 (a)	—	1.6	1.4	1.4
<b>Funding requirement</b>	<b>25.6</b>	<b>29.3</b>	<b>34.6</b>	<b>37.5</b>
<b>Funded by</b>				
Assumed/outturn net national savings inflow	2.5	2.5	3.0	5.3
Net sales of other public debt etc	—	0.2	0.5	-0.5
<b>Gilt sales required for full funding</b>	<b>23.1</b>	<b>26.6</b>	<b>31.1</b>	<b>32.7</b>
<b>Actual gilt sales</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>30.7</b>

(a) Overfunding outturn known only after the original remit was published.

**Table D**  
**Issues of gilt-edged stock**

	Amount issued (£ millions, nominal)	Date issued	Price at issue (per £100 stock)	Yield at issue	Cover (a) at auctions	Tail (b) at auctions (basis points)	Yield when exhausted	Date exhausted (c)
<b>Auctions</b>								
8% Treasury 2000	3,000	1.2.96 (d)	£105.00000	6.76 (e)	1.96	2		
8% Treasury 2021	3,000	29.2.96 (d)	£98.53125	8.14 (e)	1.48	5		
7% Treasury 2001	3,000	28.3.96 (d)	£96.78125	7.71 (e)	2.64	4		
<b>Taps</b>								
4½% Index-Linked 2004	150	24.1.96	£116.81250	3.30 (f)			3.51 (g)	7.2.96
2½% Index-Linked 2013	100	24.1.96	£143.06250	3.49 (f)			3.65 (g)	7.2.96
2½% Index-Linked 2003	100	23.2.96	£174.00000	3.48 (f)			3.69 (g)	14.3.96
2½% Index-Linked 2024	150	23.2.96	£118.87500	3.67 (f)			3.67 (g)	23.2.96
2½% Index-Linked 2009	150	19.3.96	£161.81250	3.76 (f)			3.77 (g)	27.3.96
2½% Index-Linked 2020	150	19.3.96	£139.68750	3.84 (f)			3.85 (g)	27.3.96

(a) Total of bids divided by the amount on offer.

(b) Difference in gross redemption yield between the weighted average of successful competitive bids and the lowest accepted competitive bid.

(c) Taps are exhausted when the issue is no longer operating as a tap.

(d) Details of the stock to be auctioned are announced nine days, and the auction is held on the day, before the stock is issued.

(e) Gross redemption yield, based on price at issue.

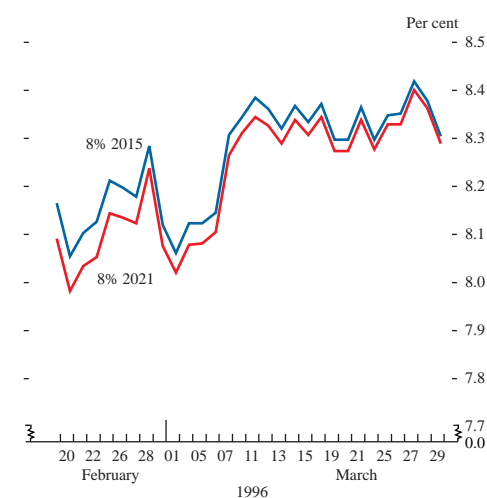
(f) Real rate of return, based on price at issue and assuming 5% inflation.

(g) Real rate of return, based on price at exhaustion and assuming 5% inflation.

underfund carried forward into the new financial year, taking account of the estimated PSBR overshoot, is £2.0 billion.

Three gilt auctions of £3 billion each were held in the first quarter of 1996. Given the targets in the remit, the pattern of auctions earlier in the financial year meant that two of these were of short maturity stock (8% Treasury 2000 in January, 7% Treasury 2001 in March) and one was for a long stock (a new 25-year gilt, 8% Treasury 2021 in February).

**Yields on long gilts<sup>(a)</sup>**



(a) Gross redemption yields.

The market was unsurprised at the extension of the 'old' five-year benchmark (8% Treasury 2000), and to a lesser extent at the extension of the 'new' five-year benchmark (7% Treasury 2001). While some in the market had anticipated a new strippable 2002 stock, it was felt that the existing 2001 gilt was liquid enough to act as a benchmark. Both stocks are very liquid and they have seen good demand both from asset-swapping traders and from the banking/building society sectors. Both gilts have, on occasion, traded tightly in the stock-lending and gilt repo market, becoming difficult to borrow and, with repo rates falling, making the stocks more expensive to acquire. Both auctions were well covered, although the tails were relatively long for short auctions. (A German auction on 22 February also had a long tail, of around 25 basis points.) Long tails can indicate that the price discovery mechanism has not worked well in the immediate run-up to the auction process.

February's auction stock was a new 8% Treasury 2021 issue, the longest maturity and longest duration conventional gilt in issue (excluding small amounts of undated stock). The stock met with demand from domestic institutions such as life assurance companies and pension funds, who need to match long duration liabilities. It also brought the United Kingdom further into line with other major international bond markets such as the United States (where a very liquid 30-year bond is well traded), and Germany (where a long bond experiment has however been less successful, perhaps because of a different institutional savings structure). With the strips<sup>(1)</sup> market expected to begin in the first half of 1997, such a long gilt will provide principal strips of long duration, and the shorter coupon strips will add liquidity all the way along the curve. A

(1) Strips separate a standard coupon bond into its constituent interest and principal payments, so that they can be separately held or traded as zero-coupon instruments. See 'Plans for the official gilt strips facility', Bank of England, January 1996.

## The Government's financing requirement and remit to the Bank of England for 1996/97

Published as part of HM Treasury's *Debt Management Report 1996/97*.

### *The 1995/96 Borrowing Requirement*

As set out in the joint Treasury and Bank of England Report of the *Debt Management Review* (July 1995), from 1996/97, the Government will aim to sell sufficient gilts, of any maturity, Treasury bills and National Savings products to finance the Central Government Borrowing Requirement (CGBR) plus maturing debt and any net increase in the foreign exchange reserves.

Any over or underfund of the PSBR in 1995/96,<sup>(1)</sup> calculated on the previous basis, will be carried forward and incorporated in the target for sales of gilts in 1996/97.

The CGBR for 1996/97 is forecast to be £24.1 billion. Some £11.5 billion of gilts are expected to mature in market hands and need to be refinanced. It is not possible to forecast net changes over the year in the foreign currency reserves and so these are assumed to remain unchanged.

The financing requirement for 1996/97 is therefore currently forecast to be around £35.6 billion, subject to any over or underfunding carried forward from 1995/96 and to any changes in the foreign exchange reserves. Table 7 (of the *Debt Management Report 1996/97*, see below) gives full details of all the financing instruments the Government intends to use to achieve this in 1996/97. The Government does not intend to finance the

1996/97 CGBR through the issue of Treasury Bills or gilts of less than three years maturity.

### *National Savings*

The net contribution of National Savings to financing (including accrued interest) is assumed to be around £3.0 billion (with gross sales of around £10.5 billion). This is not a target, but an estimate based on experience in previous years and forecasts for 1996/97.

### *Other debt sales*

Net sales of central government debt instruments other than gilts and National Savings are expected to make a negligible contribution to financing. In particular, the intention is that net Treasury bill issuance will not contribute to financing the CGBR, although the stock of Treasury bills and the pattern of issuance will fluctuate in the light of the needs of money market management.<sup>(2)</sup>

### *Quantity of gilt sales*

The Bank of England, as the Government's debt manager, will aim to meet the remainder of the financing requirement by selling gilts to the private sector. On the basis of the Budget forecast, this means gilts sales of approximately £32.6 billion, plus or minus any over or underfund carried forward from 1995/96,<sup>(1)</sup> and any net change in the foreign currency reserves.

### *Nature of stocks*

The Government will continue to have available the full range of financing instruments. Within conventional stocks, the Government will aim for liquid benchmark issues in the 5-year, 10-year and long-dated maturity areas. There may also be floating rate gilt issuance. The aim will be to issue index-linked gilts across the maturity spectrum.

In order to build up the liquidity of the gilt strips market, the Government intends issues in 1996/97 of new benchmark stocks in the medium and long maturity areas will be strippable when the market begins. The strippability of new short maturity benchmarks will be kept under review.

### *Pace of gilt sales*

The Bank will aim to sell gilts at a broadly even pace through the year. Within year seasonal fluctuations in the pattern of Central Government expenditure and revenue will be met by other financing means, including changes to the weekly Treasury bill tender.

### **The 1996/97 financing requirement**

(Table 7 in the *Debt Management Report 1996/97*)

£ billions

CGBR forecast	24.1
Expected net change in the official reserves	—
Gilt redemptions	11.5
Under/overfund from 1995/96	.. *
<b>Financing requirement</b>	<b>35.6</b>
<i>Less net financing from:</i>	
Department for National Savings	3.0
Certificates of Tax Deposit (a)	—
<b>Remaining debt sales required</b>	<b>32.6</b>
<i>Made up by net sales of:</i>	
Treasury bills and other short-term debt (b)	—
<i>And gross sales of:</i>	
Ultra-short Conventional Gilts (1–3 years)	—
Short Conventional Gilts (3–7 years)	9.2
Medium Conventional Gilts (7–15 years)	9.2
Long Conventional Gilts (15+ years)	9.2
Index-linked Gilts	4.9

.. not yet known.

\* See footnote (1) below.

- (a) Certificates of Tax Deposits (CTDs) are deposits made by taxpayers with the Inland Revenue in advance of potential tax liabilities. Changes in the level of CTDs act as a financing item for Central Government. The working assumption at the beginning of each year is that the level of CTDs remains unchanged.
- (b) The level of net Treasury bill issuance may fluctuate in-year as a result of money-market operations.

(1) Since the remit was published, the underfunding in 1995/96 has been estimated at £2.0 billion.

(2) Treasury bill issuance is used to drain the money market so as to provide a basis for the Bank of England's open market operations implementing monetary policy.



### *Maturity structure of gilt issues*

Over the year as a whole, the Bank of England will aim to make approximately 15% of its sales in index-linked stocks with the remainder in conventional stocks spread across the maturity ranges, with approximately one third of issues in each of the short (3–7 years), medium (7–15 years) and long-dated (15 years and over) bands.

### *Auctions*

Auctions will constitute the primary means of conventional gilt sales. No index-linked gilt auctions are planned for 1996/97. The authorities plan to hold conventional gilt auctions on a monthly basis, toward the end of each month on the calendar set out below. Up to three dual auctions are planned instead of single auctions, in July and October 1996, and January 1997, subject to confirmation in the quarterly announcement. In the case of dual auctions, the two stocks will be offered in successive auctions on the Tuesday and Thursday of the week indicated.

### **Auction calendar 1996/97**

Wednesday 24 April 1996

Wednesday 29 May 1996

Wednesday 26 June 1996

Tuesday 23 July 1996 and  
Thursday 25 July 1996 <sup>(a)</sup>

Wednesday 28 August 1996

Wednesday 25 September 1996

Tuesday 22 October 1996 and  
Thursday 24 October 1996 <sup>(a)</sup>

Late November/December 1996 <sup>(b)</sup>

Tuesday 28 January 1997 and  
Thursday 30 January 1997 <sup>(a)</sup>

Wednesday 26 February 1997

Wednesday 26 March 1997

(a) If a single auction is held instead of a dual stock auction, it will be on the intervening Wednesday.

(b) This auction date will depend on the timing of the Budget. It will be published in the relevant quarterly auction announcement (see below).

These auction dates may be altered to avoid data releases or monthly monetary policy meetings between the Chancellor and the Governor of the Bank of England.

Each single auction is planned to be for between £2 billion and £3 billion of stock. A dual stock auction will be for between £3 billion and £4 billion of stock in total with individual auctions between £1½ billion and £2½ billion.

At the beginning of each calendar quarter, the Bank of England will announce the intended maturity range of stock to be sold at auctions scheduled to be held that quarter, and confirm whether dual stock auctions will be held. The announcement will also give details of progress to date with the gilt sales, any changes to the

Government's financing requirement and any changes to the gilts auction programme.

The Bank will announce at 3.30 pm on 3 April the maturity ranges for auctions in the first quarter of 1996/97.

Full details of these, and subsequent auctions, will be announced at 3.30 pm on Tuesday of the week preceding the auction.

### *Reviews to the issuance programme*

The issuance programme, and in particular the timing and nature of auctions (ie single or dual stock), the allocation between maturity bands and the allocation between conventional and index-linked gilts, may be varied during the year in the light of substantial changes in the following:

- the Government's forecast of the CGBR;
- the level and shape of the gilt yield curve;
- market expectations of future interest and inflation rates;
- market volatility.

Any revisions will be announced.

### *Tap sales*

The programme of conventional gilt auctions may be supplemented by official sales of stock by the Bank of England 'on tap'. Taps of conventional stocks will be used only as a market management instrument in conditions of temporary excess demand in a particular stock or sector or when there is an exceptionally sharp general rise in the market. In 1996/97, it is envisaged that conventional tap issuance will not constitute more than about 10% of expected total issuance.

In 1996/97, it is envisaged that all index-linked gilts issues will be made through tap sales.

After an auction, the Bank will generally refrain from issuing stocks of a similar type or maturity to the auction stock for a reasonable period and will do so only if there is a clear market management case.

### *Coupons*

So far as possible, coupons on new issues of gilts will be around gross redemption yields at the relevant maturity, at the time of issue.

### *Conversions*

In order to build up the pool of strippable stocks further, the Bank of England may, from time to time, make offers for the conversion of unstrippable stocks into strippable ones of similar maturity. Any programme of conversion offers is unlikely to be extensive. Details of any such offers will be announced in due course, in the light of market conditions.

30-year bond was considered, but the view was eventually taken that a 25-year gilt would be easier to trade and hedge.

The 2021 stock traded at around a 7–8 basis points premium to the longest-existing (dated) gilts ahead of the auction—the new part of the yield curve was inverted, although the premium had slightly narrowed by the end of March to some extent. The auction was covered nearly 1.5 times, with a five basis-points tail (which possibly reflected market uncertainty in pricing a new long bond).

There was no conventional tap issuance in the first quarter. Conventional taps are brought only for purposes of market management, in conditions of temporary excess demand in a particular stock or sector or when there is an exceptionally sharp general rise in the market.

Auctions raised 80% of funding for the year, conventional taps raised 5%, and index-linked taps raised 15%. Within conventional funding, short-dated stocks accounted for 35% of sales, mediums for 33%, and longs for 32%. The composition of funding therefore met the remit to the Bank for 1995/96, which stated that index-linked gilts would constitute approximately 15% of issuance while each maturity band would account for approximately one third of conventional issuance.

Net official sales of gilts during January–March amounted to £9.7 billion. Of this, the monetary sector (banks and building societies) purchased around 40%, somewhat higher than their share in the previous three months and in marked contrast to their overall net sales in the nine months before that. The banks' and building societies' share of total gilt holdings was only 10% at December 1994.<sup>(1)</sup>

Over the financial year as a whole, the bulk of net purchases was by the UK private sector excluding banks and building societies, but including the institutional investors. ONS statistics show that in the final quarter of calendar 1995, institutions increased sharply their net investment in gilts; figures are not yet available for the first quarter of 1996 and not therefore for the financial year. In calendar 1995, institutional net purchases amounted to £14.7 billion. This was below the record levels of 1994, but reflects a continuing significant shift into gilts by pension funds in particular.

On 27 March the Treasury published the *Debt Management Report* including the remit to the Bank of England for 1996/97 (see the box on pages 136–37). The gilt sales requirement for the coming year was forecast to be £32.6 billion but, as noted above, an estimated underfund of £2.0 billion carried forward from 1995–96 will increase this. The Bank will aim to make 15% of sales in index-linked stocks and the remainder by sales of conventional gilts spread across the maturity ranges. The maturity ranges for the stocks to be auctioned in the first three auctions of the new financial year were announced by the Bank on 3 April as 2005–07 (for April), 2020–21 (for May) and 2000–02 for June; it is planned, subject to confirmation, that the last stock should be a floating-rate gilt. The April auction was later specified as of £3 billion of 7½% Treasury Stock 2006.

**Table E**  
**Official transactions in gilt-edged stocks**

£ billions: *not seasonally adjusted*

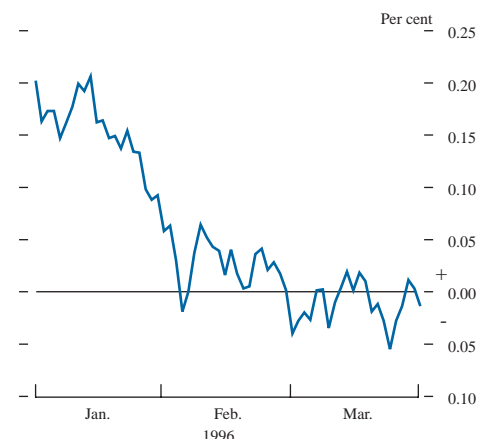
	1995/96	1996		
	Apr.–Dec.	Jan.	Feb.	Mar.
Gross official sales (+) (a)	20.3	0.6	6.4	3.4
Redemptions and net official purchases of stock within a year of maturity(-)	3.4	0.7	—	—
Net official sales (b)	16.9	-0.2	6.4	3.4
<i>of which net purchases by:</i>				
Banks (b)	3.0	-0.6	1.9	1.1
Building societies (b)	-0.8	0.1	1.3	-0.3
Overseas sector	4.1	1.3	0.6	-0.1
M4 private sector (b)	10.5	-0.9	2.5	2.1

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

(b) Excluding transactions under purchase and resale agreements.

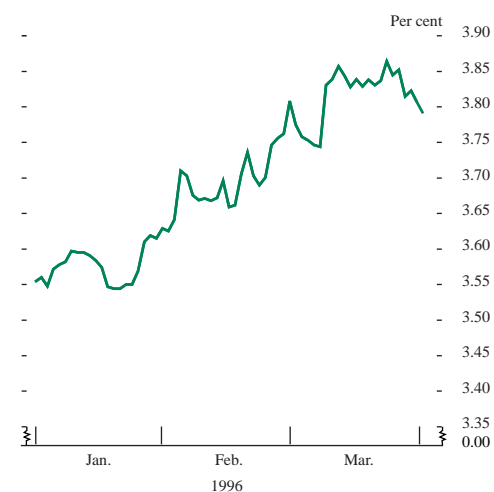
(1) Figures for end-1995 from the Central Gilts Office Survey will be available in June.

### Spread between 2½% Index-Linked 2020 yield and FTSE Actuaries All-Share dividend yield<sup>(a)</sup>

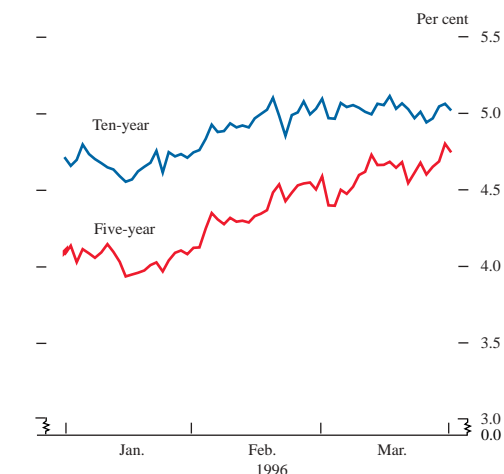


(a) Index-linked yield less dividend yield.

### Yield on British government stock 2½% Index-Linked 2016



### Implied inflation rates five and ten years ahead<sup>(a)</sup>



(a) Implied annualised inflation in the six-month periods beginning five years and ten years ahead.

### Index-linked gilts

The pace of index-linked issuance also increased in the final quarter of the 1995/96 financial year. Prices of index-linked stocks fell during the quarter, while those of equities rose on balance. This brought the dividend yield on equities, which had been 20 basis points higher than the yield on index-linked gilts at the beginning of the year, down to equality by March. This may be explained by two factors—upward revisions to expected economic growth and relative supply. The market may have been expecting few equity rights issues, but greater index-linked supply, at least until the announcement in the remit on 27 March that there will be no index-linked auctions in the financial year 1996/97. This decision was taken after consultation with the gilt-edged market-makers, end-investors and other market participants: while some had been in favour of an experimental auction programme, others believed that a pilot programme would be risky at the current stage of the market's development. Nevertheless, an experimental auction programme in index-linked gilts has not been ruled out for future financial years.

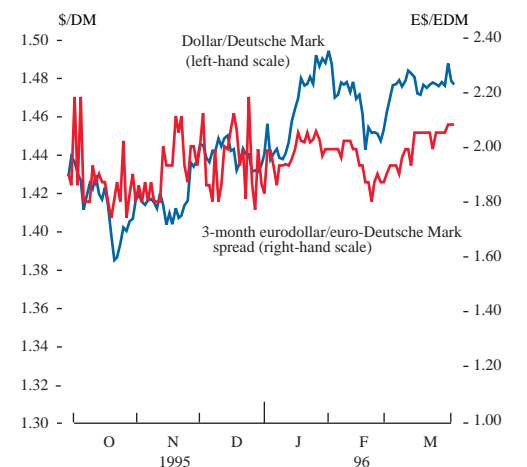
### Market expectations of inflation

Marginal expectations of inflation as derived from gilt yields increased markedly during the first quarter. Calculated expectations of inflation five and ten years hence reached lows of just under 4% and just under 4.6% respectively in the middle of January. However, following the ¼% UK rate cut on 18 January, the market's implied inflationary expectations began an upward trend which continued throughout the quarter. Inflationary expectations also saw a sharp upward movement on the day of the 8 March 0.25% rate cut, but it is difficult to separate the impact of the cut itself from the apparent 'news' about international inflation contained in the exceptionally strong US employment data released on the same day. In the quarter as a whole, nearer-maturity inflation expectations saw larger increases than longer maturities: five-year expectations rose by 0.65% over the quarter to 4.75%, while ten-year expectations increased by just 0.3% to 5.0%. Implied 'expectations' of inflation can include indistinguishably increased risk premia associated with increased uncertainty about future inflation, rather than a rise in mean expectations of future inflation. Given increased uncertainty in bond markets (as proxied by implied volatility in conventional bonds), risk premia may have increased in the first quarter.

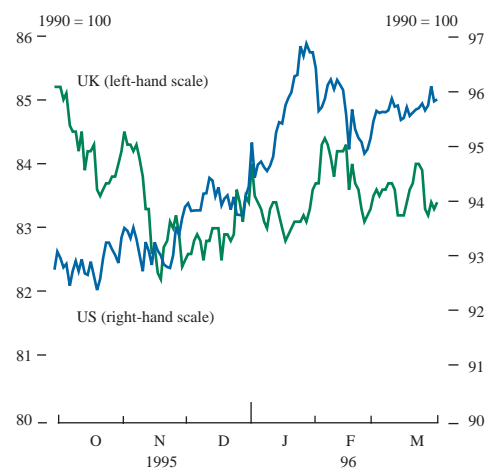
### Foreign exchange markets

Currency markets were generally calmer than government bond markets during 1996 Q1. The US dollar traded in a reasonably narrow range between DM 1.4400–1.4950 and short-run measures of historical (actual) volatility generally remained subdued and below longer-run measures. Similarly, implied volatility on Deutsche Mark/US dollar options continued to decline over the period as a whole to levels last seen in January 1995 (prior to the dollar's precipitous decline in February/March 1995). However, the fact that volatility increased in all the major government bond markets may have served to limit the impact on the foreign exchange markets, with the evolution of the Deutsche Mark/US dollar exchange rate being influenced in the main by short-term interest rate expectations, which moved in favour of the dollar during 1996 Q1.

### Dollar/Deutsche Mark exchange rate and the three-month eurodollar/euro-Deutsche Mark interest rate spread



### UK and US effective exchange rates



The dollar, which started the year at DM 1.4403, strengthened against the Deutsche Mark from 10 January following the release of weaker-than-expected German economic data (December unemployment, pan-German Q4 GDP) which fuelled expectations that German interest rates would be lowered further. The Bundesbank subsequently cut its repo rate steadily over the course of the next three weeks until the downward movement in German money-market rates was halted on 1 February when a fixed-rate repo was introduced at 3.30%. The dollar tested resistance at DM 1.4950 on 1 February (above the dollar's November/December 1995 trading range and its highest level since September 1995), but was unable to breach this level, and retreated slightly the next day after the release of US non-farm payrolls data for January which showed a sharp fall.

In the first week of the New Year, the dollar strengthened against the yen, as market attention continued to focus on Japanese financial fragility when Tokyo financial markets reopened on 4 January. The dollar, which had twice failed to breach resistance at around ¥104.50 in September and November, broke through this level to close at ¥106.05 on that day. And, although it subsequently drifted lower, strong technical support was now apparent at ¥104.50.

Sterling was largely sidelined during January, with sterling's movements generally tracking those of the dollar. Sterling began the year at DM 2.2173 and at 82.9 on the effective exchange rate index. Sterling strengthened with the dollar against the Deutsche Mark from 10 January as market attention focused on the prospects for German monetary policy (although the extent of sterling's appreciation was limited as it slipped below a long-term support line against the dollar at \$1.54). By 17 January, sterling had reached a high of 83.5 on the effective exchange rate index before the release of PSBR and average earnings data, which supported expectations of an interest rate cut, caused it to fall by 0.5 points to 83.0 over the next 24 hours. In the event, sterling reacted calmly to the actual rate reduction on 18 January and it ended the day unchanged at 83.0 on the index. It continued to track the major currencies for the remainder of January and, although it briefly slipped below \$1.50 before the end of the month, it finished up 0.4 points on an effective basis at 83.3 due to the currency's gains against the Deutsche Mark.

In the first half of February, sterling appreciated further against the Deutsche Mark and January's losses against the dollar were also partly reversed. Factors which contributed to sterling's rise were the relative outperformance of UK gilts and the closing of speculative short sterling/long US dollar positions by US investment funds. Sterling reached a high of DM 2.2735 on 7 February, its best level against the Deutsche Mark since October 1995, and 84.4 on an effective basis; the currency also tested resistance above \$1.5390. With the major currencies rangebound, sterling continued to trade around these levels until nervousness ahead of the publication of the Scott report on arms sales to Iraq caused it to weaken slightly. Uncertainty lessened following the report's actual publication on 16 February.

However, sterling subsequently came under pressure as a result of international factors. The dollar weakened abruptly against the yen from 15 February, following comments by Japanese Minister Kubo

which were interpreted as implying that Japanese interest rates might be raised sooner than had previously been expected. The dollar, which had been trading comfortably above ¥106 since late January, fell as low as ¥104 by the close of London trading on 19 February. This helped sterling to reach a six-week high of \$1.5509 but it was unable to hold its ground against the Deutsche Mark, which benefited from flows out of the dollar, amid speculation that January M3 data would be stronger than earlier estimates. Sterling closed at DM 2.2323 (a loss of nearly three pfennigs on the previous day's London close). On 20 February the dollar rallied strongly on reports of yen sales by the Bank of Japan, regaining ¥106 and DM 1.45. But the dollar subsequently drifted as low as ¥103.3 in London trading on 27 February before reports of further intervention by the Bank of Japan helped the dollar to recover to ¥104.5 by the close of London trading. The dollar was unable to make any further progress until the release of a weaker-than-expected Tankan survey on 1 March calmed market fears about an early increase in the Bank of Japan's official rates. The dollar stabilised against the Deutsche Mark from 23 February, following the release of German M3 data for January which were below some market estimates. It recovered back above DM 1.46 on 28 February following the release of higher-than-expected US CPI data for January, which—taken together with the earlier release of strong US housing starts data—were viewed as reducing the chance of any further cut in the Federal Reserve's target federal funds rate. Sterling was aided by the dollar's recovery and the currency ended the month at DM 2.2501 and 83.5 on the ERI.

During March, short-term interest rate expectations continued to move in the dollar's favour and the spread between ten-year US Treasuries and Bunds narrowed further following the release of much stronger than expected US non-farm payrolls data on 8 March. These movements proved to be helpful in supporting the dollar. The US currency moved higher again testing resistance at DM 1.4950 on 11/12 March, but the dollar was again unable to break out of its recent trading range, remaining stuck between DM 1.47–1.48, for the remainder of the month.

Sterling strengthened with the dollar, reaching DM 2.2670 ahead of the UK rate reduction on 8 March; it ended the day unchanged at 83.7 on the index. After the weekend, sterling weakened slightly, but strong technical support was evident above DM 2.24 (near the 200-day moving average) and it subsequently strengthened against a range of currencies aided by a favourable technical picture. The currency reached a high of 84.1 on the index on 22 March before weakening as attention focused on BSE and the possible implications for the PSBR and the trade balance. But the cutting of long-sterling positions was short lived, and the currency quickly recovered to finish March at 83.4 on the index, compared with January's opening figure of 82.9.

## The gilt repo market

The introduction of gilt repo trading from 2 January this year was the most significant change to the structure of the gilt-edged market since Big Bang in 1986. It is now possible for anyone to repo<sup>(1)</sup> gilts to anyone else for any purpose; and, in parallel, the gilt-lending market has been liberalised, so that gilt holders now have a choice of lending their stock via intermediaries or directly to borrowers. The Bank has been monitoring the development of the new market, which seems so far to be characterised by steady growth. An early development was a fall in the cost of both inventory finance and the ‘covering’ of short positions in particular stocks. Although there are no market-making obligations in gilt repo, several large banks and some discount houses are reported to make two-way prices which extend out to one year. Individual trades have grown in size, and are frequently £100 million or more.

The gilt repo market was facilitated by the decision of the authorities to remove various rules limiting who could borrow stock for what purpose; through the development of a market standard legal agreement and a Code of Best Practice; through adjustments to the service provided by the Central Gilts Office (CGO) settlement system; and by changes to the withholding tax arrangements for gilt dividend (coupon) payments. Most wholesale market participants are eligible to hold their gilts in a CGO STAR account and receive gross dividend payments, subject to quarterly accounting for holders of gilts who are taxable in the United Kingdom. Over 130 such accounts have been opened, in which more than £100 billion of gilts are held. From 4 March, the Bank of New York, Cedel and Euroclear each began offering settlement services as members of CGO, which has added to the range of services available to the gilt market.

### Market structure

Gilt repo is so far predominantly a wholesale professional market. It is believed that about 100 organisations have completed the new gilt repo legal documentation. The main participants are clearing banks, major European banks, the discount houses, gilt-edged market-makers (GEMMs), and international securities houses. More recently, building societies have been among those joining the market. A number of institutional investors—life insurance companies and pension funds—now have gilt repo legal agreements in place, and have started to participate in the market, but most continue to lend their gilts rather than use repo. Non-GEMMs, including banks, are now using the freedom the new market gives them to go short of gilts. A

name-passing broking service in gilt repo is provided by several of the brokers listed by the Bank under Section 43 of the *Financial Services Act*. Lending via intermediaries has continued but there has also been growth in lending directly to the GEMMs and other participants. Some market participants believe that institutional investors will increasingly use repo once they have, or delegate, cash management functions.

One structural change which has resulted from the new market is that there are no longer any stand-alone Stock Exchange Money-Brokers (SEMBs)—the stock-lending intermediaries in the gilt market prior to the advent of open gilt repo—under the Bank’s supervision. They have merged with discount houses, merchant banks or securities houses, or have continued as stand-alone money-brokers under Securities and Futures Authority supervision; one former SEMB wound down its activities and ceased to trade.

### Size of the market

The Bank has begun to collect data on levels of activity in both the repo and stock-lending markets on a quarterly basis. At the end of February, more than 60 participants contributed; these included all major market professionals, but only a cross-section of institutional investors, many of whom are known to be active in stock lending. Although the data collected do not, therefore, give a fully comprehensive view of stock lending, the picture given for repo is thought to be nearly complete.

Table 1 suggests that, measured in terms of outstanding amounts reported, combined gilt repo and stock lending activity had reached around £50 billion<sup>(2)</sup> by the end of

**Table 1**  
**Outstanding amounts<sup>(a)</sup> at end-February by practitioner**

	£ billions		Total (d)
	Banks (b)	Securities houses and others (c)	
Repo	21.3	15.1	36.4
Stock lent	1.9	2.0	3.9
Sell/buy back (e)	1.0	0.3	1.3
<b>Total out</b>	<b>24.2</b>	<b>17.5</b>	<b>41.7</b>
Reverse repo	22.6	11.7	34.2
Stock borrowed	9.1	2.7	11.8
Buy/sell back (e)	1.0	0.6	1.6
<b>Total in</b>	<b>32.7</b>	<b>15.0</b>	<b>47.7</b>

- (a) Transactions entered into, but for which the second leg has not yet settled.  
Transactions are reported gross of other, similar transactions with the same counterparty.  
(b) Including discount houses, and, in some cases, other parts of the banking group.  
(c) Including GEMMs and all other reporters.  
(d) Totals may not sum because of rounding.  
(e) Sell/buy and buy/sell transactions conducted under an annex to the Gilt Repo Legal Agreement are included under repos and reverse repos.

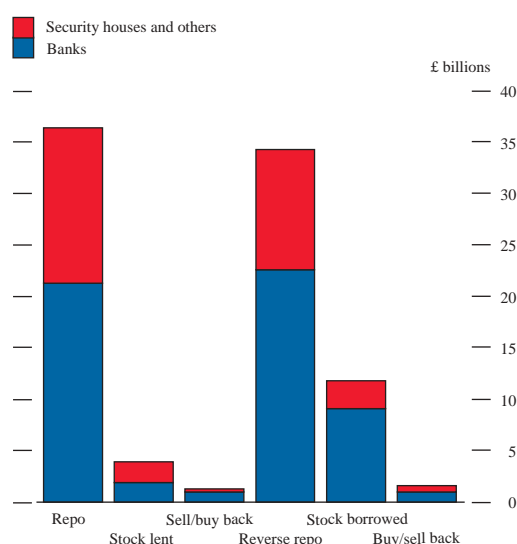
(1) A gilt repo is a sale and repurchase agreement under which Party A sells gilts to Party B with a legally binding agreement to purchase equivalent gilts from Party B at an agreed price at a specified future date.

(2) Each repo must, by definition, give rise to a reverse repo, and each stock loan to a stock borrow, etc. Therefore, differences between the reported totals of each matching pair is an indication that our sample does not capture the whole population of participants using the market. Adding together the larger figure from each pair gives the most complete estimate we can make of the total market size.

February, of which around £36 billion was in gilt repo. The relative totals for repos and reverse repos suggest that the reporting institutions cover nearly all of this market.

In contrast, the £7.9 billion difference between the data reported on gilt stock lending and borrowing illustrates the extent to which some of the main stock-lending institutions are not yet reporting (although several have indicated that they plan to start to do so at the end of May). Stock is borrowed by, among others, the discount houses (which now incorporate some of the former SEMBs), who may then repo, lend or sell it on to other market participants, including the GEMMs. As Table 1 and Chart A show, banks (including discount houses) have a large share of the new gilt repo and stock-lending activity.

**Chart A**  
**Outstanding amounts at end-February by practioner**



This evidence for the growth of the repo market is corroborated by the monetary statistics published by the Bank, which showed that gilt repo contributed to strong rises in both M4 and lending to the M4 private sector in January. It is difficult to estimate the proportion of the rises in M4 and M4 lending carried solely by the emergence of the new market, because to do so would require us to know the extent to which repo business substituted for existing borrowing and lending; these issues are discussed in the *May Inflation Report*. At the end of January, gilt repos and reverse repos outstanding on banks' balance sheets amounted to some £15 billion and £22 billion respectively. Although the repo market continued to expand in February and March, the impact on M4 and lending was modest, as most of the growth was in interbank repo business which is excluded from M4. At the end of March, gilt repos and reverse repos outstanding on banks' and building societies' balance sheets were some £25 billion and £30 billion respectively.<sup>(1)</sup>

Table 2 shows the maturity breakdown of outstanding transactions reported to the Bank. Activity is mainly at shorter maturities, with around 65% of repo transactions reported having a maturity up to one week. But over 18% of repo and over 26% of reverse repo transactions reported are at maturities greater than one month. Stock lending is more concentrated at shorter maturities, which is consistent with the traditional practice of lending stock on call which prevailed prior to the start of gilt repo.

**Table 2**  
**Outstanding amounts at end-February by maturity**

£ billions	On call and next day	2–8 days	9 days–1 month	1–3 months	3–6 months	Over 6 months	Total (a)
Repo	15.2	8.6	6.1	5.3	1.3	—	36.2
Stock lent	3.4	0.1	0.3	0.1	—	—	3.9
Sell/buy back	0.3	0.3	0.3	0.2	0.1	—	1.3
Total out (a)	19.0	9.0	6.7	5.6	1.4	—	41.7
Reverse repo	13.7	7.1	4.5	7.3	1.5	0.1	34.2
Stock borrowed	9.7	0.4	0.6	0.8	0.4	—	11.8
Buy/sell back	0.3	0.4	0.3	0.6	0.1	0.1	1.6
Total in (a)	23.7	7.9	5.4	8.7	1.9	0.1	47.7

(a) Numbers do not always sum because of rounding.

The data collected show that turnover in gilt repo and stock lending during January and February as a whole exceeded £550 billion, or an average of around £12 billion per day, but this average no doubt conceals heavy concentrations in February once the bulk of the new gilt repo legal agreements were in place. Around 80% of reported turnover was under the new gilt repo legal documentation (including documented buy/sell trades), around 20% under stock lending documentation, and less than 1% in undocumented buy/sell trades. The Bank does not regard undocumented transactions as a secure basis for a repo market; the Gilt Repo Code of Best Practice, which was drawn up by a working party of market practitioners and regulators under Bank of England chairmanship, stresses the strong desirability that transactions be conducted under an appropriate legal agreement.

Turnover statistics collected by the London Stock Exchange (LSE) provide some support for the market's perception that the introduction of gilt repo trading has already increased the depth and liquidity of the cash gilt market. Turnover in gilts in the first quarter of 1996 rose to an average daily value of £8.1 billion, compared to £6.2 billion for 1995; as gilt repo trades are transacted off-Exchange, they should not themselves be included in the LSE's data. LSE data also suggest that the average size of gilt trades has increased in the first quarter of 1996: customer bargain sizes averaged £2.0 million, compared with £1.7 million for 1995.

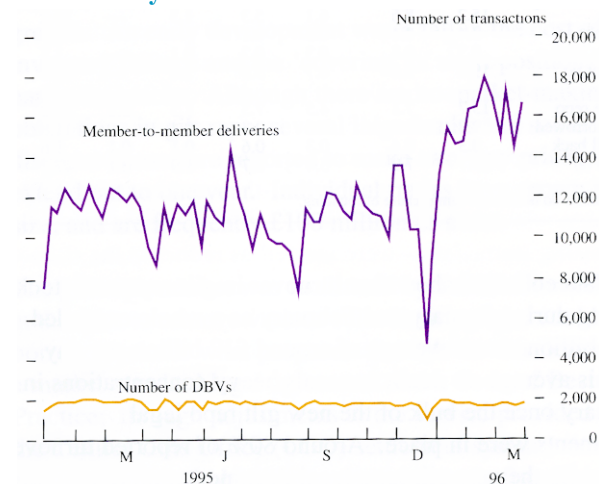
The CGO service has handled the establishment and operation of the new STAR accounts and with the increase in member-to-member deliveries. Adjusting to the extended CGO timetable, however, initially proved difficult for some

(1) The definitions used in the banking statistics differ in some respects from those adopted for reporting to the Bank for market monitoring purposes. For example, the latter are always reported gross, but in the banking statistics offsetting repo and reverse repo obligations may in some cases be reported to the Bank on a net basis. Both sets of statistics, however, are given here including banks' repo liabilities under the Bank of England's twice-monthly repo facility.

market participants. CGO responded to these difficulties by staying open slightly later when necessary to facilitate late deliveries. The Bank has been reviewing with the market how best to instil market discipline and to ensure that delivery instructions are input into CGO as early as possible.

Both member-to-member deliveries and deliveries-by-value (DBVs) have been used to settle repo trades, the latter being frequently used for overnight and one-week trades (see Chart B). An overall decline in DBVs is attributable to reduced intermediation in the stock lending market, in which DBVs were a common means of passing collateral.

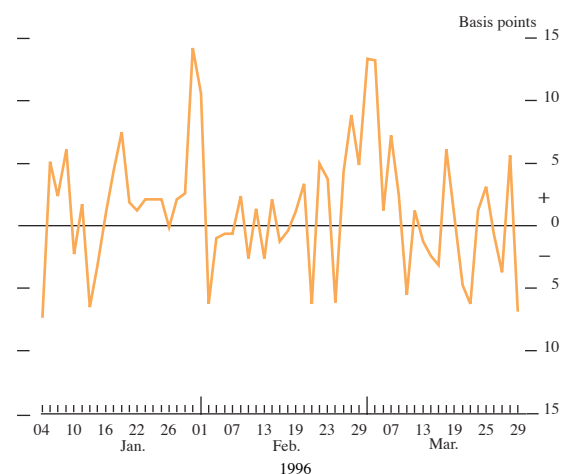
**Chart B**  
**CGO weekly volumes**



**The pricing of gilt repo and stock lending**

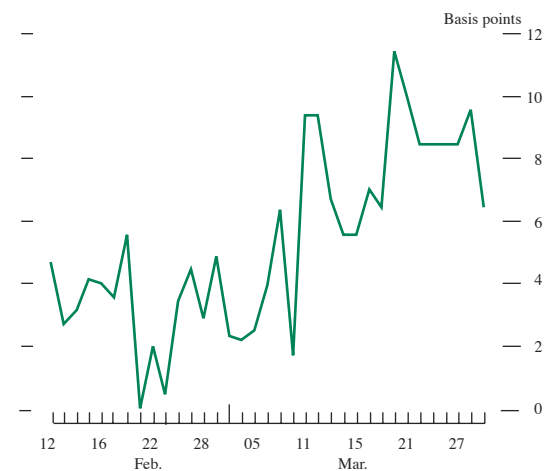
Some market participants think that the repo market will over time attract business from the unsecured interbank market, although figures for January and February show no decline in the latter. Gilt repo is, by definition, secured on gilts, and credit considerations alone suggest that repo rates should be below unsecured interbank rates. Charts C and D show the spreads between rates in the unsecured interbank

**Chart C**  
**Overnight interbank rates minus overnight gilt repo general collateral rates (10.15 am, middle rates)**



market and in the gilt repo general collateral market (that is, a repo of a gilt or a parcel of gilts having no ‘special’ value—see above). Chart D shows the emergence of lower rates in the repo market at a maturity of three months, but there is less evidence of a trend in the divergence of the respective overnight rates.

**Chart D**  
**Three-month interbank rates minus three-month gilt repo general collateral rates (middle rates)**



Repo has reduced the cost of financing gilt holdings for many gilt market participants, particularly the GEMMs. Reduced financing costs should increase the attraction of the gilt market to traders and investors and, over time, help to reduce the borrowing costs of the government. Previously, the rate at which GEMMs might have expected to finance their gilt positions was at least Libor; but they, and other holders of gilts requiring finance, can now repo out their gilts and receive cash at Libid minus a margin.

There has also been a fall in gross stock lending fees to 10 basis points or less compared to around 25 basis points previously. If stock is reversed-in rather than borrowed, the cost is reflected in a loan of cash to the original owner of the stock at an interest rate lower than that for general collateral. The standard discount to general collateral will reflect the implicit fee for borrowing a specific gilt. In repo markets, specific stocks can go ‘special’, meaning that the discount to general collateral is large, reflecting an excess demand for borrowing/reversing-in that particular stock. There has been activity in the specials market, particularly in stocks which had previously been described as occasionally difficult to borrow in the stock lending market; such stocks as, for example, 6% Treasury 1999, 8% Treasury 2000 and 7% Treasury 2001. So far, however, gilt ‘specials’ rates have not been as low as those found in repo markets overseas, this being attributed to the previously-established and efficient network of contacts which has facilitated the supply of stock to the market. Extreme specials rates have been very short lived. Some market participants believe that specials activity will increase as the market develops. The Bank does not discourage specials market activity, but reserves the right to



bring a tap issue of stock for market management purposes if, for example, an issue were squeezed. There has been no evidence of a false or disorderly market in any particular stocks.

The gilt repo and liberalised stock lending markets are still developing. The evidence suggests that repo activity continues to grow steadily, but it is difficult to predict the extent of future growth. Some think that by the end of the year the number of participants may have risen to as many as 200, and daily turnover to perhaps double present levels. It seems that more participants are planning to enter the

market, and that some are gradually concluding the necessary legal agreements. There is talk of the corporate sector becoming involved, and of the possibility of fund managers establishing money funds based on the repo market. The Bank will continue to monitor the market, and stands ready to help where practicable.

Given the depth in trading which has developed, the gilt repo market has already proved a useful addition to the secured money market and to the techniques for borrowing stock, and the generalised ability to short and borrow specific gilts has been welcomed.